Yes	R1-073829	25214CR454r1 "Corrections to HS-DSCH procedures for CELL_FACH and MIMO"	Nokia Siemens Networks, Nokia	6	CR	(R1-073330) R1-073861	Revised
Yes	R1-073830	25201 CR035r1 (Rel-7, F) "Minor modification related to EDCH in 1.28Mcps TDD"	ZTE, CATT, TD-TECH, Spreadtrum Communications	6	CR	(R1-073450)	Agreed
Yes	R1-073831	25.214 CR456r1 (Rel-7, F) "Correction to Rel-7 E-DPDCH gain factor calculation"	Nokia, Nokia Siemens Networks	6	CR	(R1-073333) R1-073864	Revised
Yes	R1-073832	25.214 CR458r1 (Rel-7, F) "Correction of 64QAM CQI tables"	Ericsson, Philips, Nokia, Nokia Siemens Networks	6	CR	(R1-073338)	Agreed
Yes	R1-073833	Summary of the e-mail discussion on channel coding	NTT DoCoMo	7.3	Discussion/Decision	(R1-073438)	Noted
Yes	R1-073834	Proposed PUCCH slot format considering sounding RS transmission	LG Electronics	7.2.4	Discussion/Decision	(R1-073487)	Not treated
Yes	R1-073835	Outcome from offline discussions on Downlink Control Signaling	Ericsson, Qualcomm, Nokia, Nokia Siemens Networks, Panasonic, Motorola, NEC, Alcatel-Lucent, Samsung, LGE, Nortel, Huawei, TI, Mitsubishi, NTT DoCoMo, KDDI, ETRI	7.2.3	Discussion/Decision		Agreed
Yes	R1-073836	RACH sequence allocation and indication to the cell	Panasonic	7.2.9	Discussion/Decision	(R1-073622)	Noted
Yes	R1-073837	UE Transmit Power Accuracy and Calibration	Motorola	7.4.2	Discussion/Decision	(R1-073407)	Not treated
Yes	R1-073838	25.214 CR462r1 (Rel-7, F) "Correction of MIMO CQI tables	Ericsson, Philips, Nokia, Nokia Siemens Networks	6	CR	(R1-073813)	Email approval until 31/08
Yes	R1-073839	25223 CR046r1 "Introduction of multi-frequency operation for 1.28Mcps TDD"	RITT, CMCC, ZTE, CATT, TD-TECH, Spreadtrum Communications, Alcatel Shanghai Bell	6	CR	(R1-073445)	Technically endorsed
Yes	R1-073840	25224 CR163r1 "Introduction of multi-frequency operation for 1.28Mcps TDD"	RITT, CMCC, ZTE, CATT, TD-TECH, Spreadtrum Communications, Alcatel Shanghai Bell	6	CR	(R1-073446)	Technically endorsed
Yes	R1-073841	Summary of the number of HARQ processes	Panasonic	7.3	Discussion/Decision		Noted
Yes	R1-073842	Notes from uplink control signalling discussions	Ad Hoc Chairman	7.2.4	Information		Agreed
Yes	R1-073843	Way forward for CRC attachment for turbo-coded transport channels	Samsung	7.3	Discussion/Decision		Noted
Yes	R1-073844	Way forward for CQI reporting	Ericsson, CATT, Freescale Semiconductor, Huawei, Icera Semiconductor, LGE, Motorola, Nokia, Nokia Siemens Networks, Nortel, NTT DoCoMo, Panasonic, Philips, Qualcomm Europe, Samsung, Texas Instruments, ZTE	7.2.4	Discussion/Decision	R1-073858	Revised
Yes	R1-073845	Remaining Details on SU-MIMO for E-UTRA	Texas Instruments	7.2.6	Discussion/Decision	(R1-073433)	Noted
Yes	R1-073846	Uplink RS for Small Resource Block Allocation	Qualcomm Europe	7.2.2	Discussion/Decision		Not treated
Yes	R1-073847	Way forward on Physical Channel Segmentation	Nokia Siemens Networks, Nokia, Motorola, Samsung, LGE	7.3	Decision		Noted
Yes	R1-073848	CRC attachment	Motorola	7.3	Discussion/Decision	R1-073852	Revised
Yes	R1-073849	RV and NDI definition	Motorola	7.3	Discussion/Decision		Not treated

Yes	R1-073850	Text change to code block segmentation	Motorola	7.3	Discussion/ Decision	R1-073860	Revised		
Yes	R1-073851	On Guard Interval of LTE TDD FS2	CATT, Ericsson, ZTE, Nokia, Nokia Siemens Networks, Samsung, Huawei	7.2	Discussion/ Decision		Agreed		
Yes	R1-073852	CRC attachment	Alcatel-Lucent, Freescale, Marvell, Motorola, TI, ZTE	7.3	Discussion/ Decision	(R1-073848)	Noted		
Yes	R1-073853	25224 CR166 (Rel-7, A) "Correction to the calculating formula of SIR"	RITT, CMCC, ZTE, CATT, TD-TECH, Spreadtrum Communications, Alcatel Shanghai Bell	6	CR		Agreed		
Yes	R1-073854	25224 CR167 (Rel-6, A) "Correction to the calculating formula of SIR"	RITT, CMCC, ZTE, CATT, TD-TECH, Spreadtrum Communications, Alcatel Shanghai Bell	6	CR		Agreed		
Yes	R1-073855	25224 CR168 (Rel-5, A) "Correction to the calculating formula of SIR"	RITT, CMCC, ZTE, CATT, TD-TECH, Spreadtrum Communications, Alcatel Shanghai Bell	6	CR		Agreed		
Yes	R1-073856	25224 CR169 (Rel-4, F) "Correction to the calculating formula of SIR"	RITT, CMCC, ZTE, CATT, TD-TECH, Spreadtrum Communications, Alcatel Shanghai Bell	6	CR		Agreed		
Yes	R1-073857	LS on the dynamic range of the UE transmission power	RAN4, Motorola	5	LS_in		Noted		
Yes	R1-073858	Way forward for CQI reporting	Ericsson, CATT, Freescale Semiconductor, Huawei, Icera Semiconductor, LGE, Motorola, Nokia, Nokia Siemens Networks, Nortel, NTT DoCoMo, Panasonic, Philips, Qualcomm Europe, Samsung, Texas Instruments, ZTE, Sharp, Interdigital, IPWireless, Nextwave, Mitsubishi, Alcatel-Lucent	7.2.4	Discussion/Decision	(R1-073844)	Agreed		
Yes	R1-073859	Optimising FDD MBSFN for broadcast	IPWireless	9	Discussion		Noted		
Yes	R1-073860	Text change to code block segmentation	Motorola	7.3	Discussion/ Decision	(R1-073850) R1-073863	Revised		
Yes	R1-073861	25214CR454r2 "Corrections to HS-DSCH procedures for CELL_FACH and MIMO"	Nokia Siemens Networks, Nokia	6	CR	(R1-073829)	Agreed		
Yes	R1-073862	25.214 CR460r1 (Rel-7, F) "E-DPDCH scaling when UE is at max power"	Qualcomm Europe	6	CR	(R1-073345)	Revised		
Yes	R1-073863	Text change to code block segmentation	Motorola, Samsung, Ericsson, Qualcomm, Nokia, Nokia-Siemens Networks, LGE	7.3	Discussion/ Decision	(R1-073860)	Agreed		
Yes	R1-073864	25214 CR456r2 (Rel-7,F) "Correction to Rel-7 E-DPDCH gain factor calculation"	Nokia, Nokia Siemens Networks, Philips	6	CR	(R1-073831) R1-073866	Revised		
Yes	R1-073865	25.214 CR460r2 (Rel-7, F) "E-DPDCH scaling when UE is at max power"	Qualcomm Europe	6	CR		Agreed		
Yes	R1-073866	25214 CR456r3 (Rel-7,F) "Correction to Rel-7 E-DPDCH gain factor calculation"	Nokia, Nokia Siemens Networks, Philips	6	CR	(R1-073864)	Agreed		

Yes	R1-073867	Proposed way forward on DL distributed transmission	Ericsson, Motorola, Samsung, NTT DoCoMo, NEC, Huawei, LGE, Philips, Interdigital, Nortel, Qualcomm, Mitsubishi, TI, Alcatel-Lucent, Freescale, Nokia, Nokia-Siemens Networks, ZTE	7.2.5	Discussion/ Decision	R1-073887	Revised		
Yes	R1-073868	[Draft LS] Load balancing use case for eNodeB measurements	Orange, Vodafone, T-Mobile, NTT DoCoMo, Alcatel-Lucent, Ericsson	5	LS_out	R1-073885	Revised		
Yes	R1-073869	Summary of the channel coding session	NTT DoCoMo	7.3	Approval		Noted		
Yes	R1-073870	Notes from offline discussions on PDCCH	Discussion moderator (Ericsson)	7.2.3	Discussion/ Decision		Agreed		
Yes	R1-073871	Maximum number of hybrid ARQ processes	Ericsson, Qualcomm, Nokia, Nokia Siemens Networks, Samsung, Motorola, LG Electronics, Nortel, Philips, NXP Semiconductor	7.3	Discussion/ Decision		Agreed		
Yes	R1-073872	TS 36211 v1.3.0	Ericsson	7.1	TS	(R1-073823)	Endorsed		
Yes	R1-073873	TS 36212 v1.4.0	Qualcomm Europe	7.1	TS	(R1-073821)	Endorsed		
Yes	R1-073874	TS 36213 v1.3.0	Motorola	7.1	TS	(R1-073824) R1-073881	Revised by rapporteur		
Yes	R1-073875	Request to clarify LTE states for physical layer measurements	RAN1, Nokia Siemens Networks	5	LS_out	(R1-073820)	Agreed		
Yes	R1-073876	Way forward on Orthogonal Sequence for DL-RS	Qualcomm Europe, Ericsson, Nortel, Fujitsu, Mitsubishi Elec., NEC, NTT DoCoMo, Sharp, Toshiba Corp.	7.2.1	Decision	R1-073879	Revised		
Yes	R1-073877	25214CR452r2 "CPC preamble and postamble clarification for CQI transmission"	Nokia Siemens Networks, Nokia	6	CR	(R1-073828)	Agreed		
Yes	R1-073878	Outcome of offline discussions on UL RS	Samsung, Ericsson, Panasonic, LGE, Freescale, Texas Instruments, Sharp, Qualcomm, Nokia, NSN, Motorola, Nortel, NTT DoCoMo	7.2.2	Discussion/ Decision		Noted		
Yes	R1-073879	Way forward on Orthogonal Sequence for DL-RS	Qualcomm Europe, Ericsson, Nortel, Fujitsu, Mitsubishi Elec., NEC, NTT DoCoMo, Sharp, Toshiba Corp., Alcatel-Lucent, Motorola, Freescale	7.2.1	Decision	(R1-073876)	Noted		
Yes	R1-073880	LS on Introduction of RAB Combination into 25.993	RAN2, NSN	5	LS_in		Noted - Comments until 31/08		
Yes	R1-073881	TS 36213 v1.3.0	Motorola	7.1	TS	(R1-073874)	Endorsed		
Yes	R1-073882	[DRAFT] LS on UE specific power control parameter	Alcatel-Lucent	5	LS_out	R1-073888	Revised		
	R1-073883	Reply LS on Introduction of RAB Combination into 25.993	RAN1, Nokia Siemens Networks	5	LS_out		Email approval until 05/09		
	R1-073884	Reply LS on Physical Layer Aspects of eMBMS Counting	Ran1, Philips	5	LS_out		Agreed		
Yes	R1-073885	LS on Load balancing use case for eNodeB measurements	Orange, Vodafone, T-Mobile, NTT DoCoMo, Alcatel-Lucent, Ericsson	5	LS_out	(R1-073868)	Agreed		

Yes	R1-073886	Way Forward on Downlink Beamforming	NTT DoCoMo, Vodafone, Orange, T-Mobile, China Mobile, AT&T, Philips, Ericsson, Qualcomm Europe, NEC, Alcatel-Lucent, Fujitsu, Mitsubishi, Sharp, Arraycomm, ITRI, ZTE	7.2.6	Discussion/ Decision			Noted
Yes	R1-073887	Proposed way forward on DL distributed transmission	Ericsson, Motorola, Samsung, NTT DoCoMo, NEC, Huawei, LGE, Philips, Interdigital, Nortel, Qualcomm, Mitsubishi, TI, Alcatel-Lucent, Freescale, Nokia, Nokia-Siemens Networks, ZTE	7.2.5	Discussion/ Decision	(R1-073867)	Agreed	Agreed
Yes	R1-073888	LS on UE specific power control parameter	Alcatel-Lucent	5	LS_out	(R1-073882)	Agreed	

Appendix 31

www.3gpp.org / ftp / tsg_ran / WG1_RL1 / TSGR1_50b / Docs

sort by name/desc	sort by date/desc	sort by size/desc
R1-073895.zip	2007/09/26 10:13	10,5 KB
R1-073896.zip	2007/10/02 7:52	236,6 KB
R1-073897.zip	2007/09/26 10:13	13,2 KB
R1-073898.zip	2007/10/02 19:43	119,1 KB
R1-073899.zip	2007/09/26 10:13	31,3 KB
R1-073900.zip	2007/09/26 10:13	8,7 KB
R1-073901.zip	2007/09/26 10:13	60,6 KB
R1-073902.zip	2007/09/26 10:13	8,8 KB
R1-073903.zip	2007/09/26 10:13	9,7 KB
R1-073904.zip	2007/09/26 10:13	31,4 KB
R1-073905.zip	2007/09/26 10:13	15,4 KB
R1-073906.zip	2007/10/02 19:50	54,3 KB
R1-073907.zip	2007/10/02 19:50	29,4 KB
R1-073908.zip	2007/10/04 19:46	126,4 KB
R1-073909.zip	2007/10/02 19:50	24,4 KB
R1-073910.zip	2007/10/02 19:50	193,1 KB
R1-073911.zip	2007/10/02 19:50	566,8 KB
R1-073912.zip	2007/10/02 19:50	24,3 KB
R1-073913.zip	2007/10/04 19:46	28,3 KB
R1-073914.zip	2007/10/02 19:50	47,1 KB
R1-073915.zip	2007/10/02 19:50	23,6 KB
R1-073916.zip	2007/10/02 19:50	26,4 KB
R1-073917.zip	2007/10/02 19:50	29,4 KB
R1-073918.zip	2007/10/02 19:50	24,6 KB
R1-073919.zip	2007/10/02 19:50	391,1 KB
R1-073920.zip	2007/10/02 19:50	91,2 KB
R1-073921.zip	2007/10/02 19:50	84,6 KB
R1-073922.zip	2007/10/02 20:08	46,6 KB
R1-073923.zip	2007/10/02 20:08	351,2 KB
R1-073924.zip	2007/10/02 20:08	725,5 KB

Samsung Exhibit 1025, Page 806 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-073925.zip	2007/10/02 20:09	1735,5 KB
R1-073926.zip	2007/10/02 20:09	16,1 KB
R1-073927.zip	2007/10/02 20:09	109,5 KB
R1-073928.zip	2007/10/02 20:09	46,4 KB
R1-073929.zip	2007/10/02 20:09	149,9 KB
R1-073930.zip	2007/10/04 19:46	24,8 KB
R1-073931.zip	2007/10/02 16:58	114,3 KB
R1-073932.zip	2007/10/02 18:49	693,7 KB
R1-073933.zip	2007/10/02 18:49	114 KB
R1-073934.zip	2007/10/02 17:34	30,1 KB
R1-073935.zip	2007/10/02 17:34	95,8 KB
R1-073936.zip	2007/10/02 19:20	26,1 KB
R1-073937.zip	2007/10/02 19:20	49,3 KB
R1-073938.zip	2007/10/03 7:23	141,9 KB
R1-073939.zip	2007/10/03 7:24	134,6 KB
R1-073940.zip	2007/10/03 7:24	460,7 KB
R1-073941.zip	2007/10/03 7:24	60,7 KB
R1-073942.zip	2007/10/03 7:24	20,7 KB
R1-073943.zip	2007/10/03 7:24	94,4 KB
R1-073944.zip	2007/10/03 7:24	42,3 KB
R1-073945.zip	2007/10/03 7:24	56,6 KB
R1-073946.zip	2007/10/03 7:24	121,9 KB
R1-073947.zip	2007/10/03 7:24	24,3 KB
R1-073948.zip	2007/10/03 7:24	21,6 KB
R1-073949.zip	2007/10/03 7:24	37,9 KB
R1-073950.zip	2007/10/02 7:06	18,6 KB
R1-073951.zip	2007/10/02 7:06	9,2 KB
R1-073952.zip	2007/10/02 7:06	7,8 KB
R1-073953.zip	2007/10/02 19:39	56,4 KB
R1-073954.zip	2007/10/02 19:39	43,7 KB
R1-073955.zip	2007/10/02 19:05	33,5 KB
R1-073956.zip	2007/10/02 19:05	69,9 KB
R1-073957.zip	2007/10/02 19:05	93,1 KB
R1-073958.zip	2007/10/02 19:05	110,8 KB

Samsung Exhibit 1025, Page 807 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-073959.zip	2007/10/02 19:05	123,3 KB
R1-073960.zip	2007/10/02 19:05	61,8 KB
R1-073961.zip	2007/10/02 19:06	86,8 KB
R1-073962.zip	2007/10/02 19:06	29,5 KB
R1-073963.zip	2007/10/02 19:06	256,6 KB
R1-073964.zip	2007/10/02 19:06	81,3 KB
R1-073965.zip	2007/10/02 19:06	47,8 KB
R1-073966.zip	2007/10/02 19:06	34,6 KB
R1-073967.zip	2007/10/02 19:06	363,2 KB
R1-073968.zip	2007/10/02 19:20	13,4 KB
R1-073969.zip	2007/10/02 19:20	131,8 KB
R1-073970.zip	2007/10/02 19:20	59,1 KB
R1-073971.zip	2007/10/02 19:20	189 KB
R1-073972.zip	2007/10/02 19:20	26,2 KB
R1-073973.zip	2007/10/02 19:20	90,8 KB
R1-073974.zip	2007/10/02 19:20	64,2 KB
R1-073975.zip	2007/10/02 19:20	30,7 KB
R1-073976.zip	2007/10/02 19:20	132,7 KB
R1-073977.zip	2007/10/02 19:20	53,4 KB
R1-073978.zip	2007/10/02 19:21	17,4 KB
R1-073979.zip	2007/10/02 19:21	15,1 KB
R1-073980.zip	2007/10/02 19:21	17,5 KB
R1-073981.zip	2007/10/02 19:50	35,7 KB
R1-073982.zip	2007/10/03 7:24	229,9 KB
R1-073984.zip	2007/10/03 7:24	19,5 KB
R1-073985.zip	2007/10/02 20:47	77,5 KB
R1-073986.zip	2007/10/02 20:47	75,6 KB
R1-073987.zip	2007/10/02 20:47	16,1 KB
R1-073988.zip	2007/10/02 20:47	17,8 KB
R1-073989.zip	2007/10/02 20:47	72,6 KB
R1-073990.zip	2007/10/02 19:50	41,3 KB
R1-073991.zip	2007/10/02 19:50	112,8 KB
R1-073992.zip	2007/10/02 19:51	34,2 KB
R1-073993.zip	2007/10/02 19:51	45,8 KB

Samsung Exhibit 1025, Page 808 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-073994.zip	2007/10/03 7:24	107,1 KB
R1-073995.zip	2007/10/02 20:47	61,4 KB
R1-073996.zip	2007/10/03 7:24	62,2 KB
R1-073997.zip	2007/10/05 19:11	87,4 KB
R1-073998.zip	2007/10/02 20:47	58,6 KB
R1-073999.zip	2007/10/02 20:47	95,5 KB
R1-074000.zip	2007/10/02 20:47	59,8 KB
R1-074001.zip	2007/10/03 7:24	42,2 KB
R1-074002.zip	2007/10/02 20:47	20,3 KB
R1-074003.zip	2007/10/15 9:32	48,6 KB
R1-074006.zip	2007/10/15 9:32	27 KB
R1-074007.zip	2007/10/02 19:51	79,3 KB
R1-074008.zip	2007/10/02 19:51	31,7 KB
R1-074009.zip	2007/10/02 19:51	28 KB
R1-074010.zip	2007/10/02 19:51	70,5 KB
R1-074011.zip	2007/10/02 19:51	52,7 KB
R1-074012.zip	2007/10/02 19:51	93,7 KB
R1-074013.zip	2007/10/02 19:51	39,7 KB
R1-074014.zip	2007/10/02 19:51	23,7 KB
R1-074015.zip	2007/10/02 19:51	58,3 KB
R1-074016.zip	2007/10/02 19:51	46,8 KB
R1-074017.zip	2007/10/02 19:51	484,2 KB
R1-074018.zip	2007/10/02 20:46	27,5 KB
R1-074019.zip	2007/10/06 10:01	69,4 KB
R1-074020.zip	2007/10/02 20:46	13,6 KB
R1-074021.zip	2007/10/06 10:01	9,8 KB
R1-074022.zip	2007/10/06 10:01	21,8 KB
R1-074023.zip	2007/10/02 20:46	99,8 KB
R1-074024.zip	2007/10/02 20:46	74,1 KB
R1-074025.zip	2007/10/02 20:46	32,8 KB
R1-074026.zip	2007/10/05 19:11	23,4 KB
R1-074027.zip	2007/10/02 19:51	37 KB
R1-074028.zip	2007/10/02 19:51	36,3 KB
R1-074029.zip	2007/10/02 19:51	36,2 KB

Samsung Exhibit 1025, Page 809 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074030.zip	2007/10/02 20:46	52,3 KB
R1-074031.zip	2007/10/02 20:46	102,5 KB
R1-074032.zip	2007/10/02 20:46	17,3 KB
R1-074033.zip	2007/10/02 20:46	12,5 KB
R1-074034.zip	2007/10/02 20:46	11 KB
R1-074035.zip	2007/10/02 20:46	261,2 KB
R1-074037.zip	2007/10/02 19:51	18,4 KB
R1-074038.zip	2007/10/02 19:51	17,4 KB
R1-074039.zip	2007/10/02 19:51	17,7 KB
R1-074040.zip	2007/10/02 20:46	12,7 KB
R1-074041.zip	2007/10/03 7:24	118,4 KB
R1-074042.zip	2007/10/02 19:51	17,4 KB
R1-074043.zip	2007/10/02 19:51	105,3 KB
R1-074044.zip	2007/10/02 19:51	21,1 KB
R1-074045.zip	2007/10/02 19:51	21,1 KB
R1-074046.zip	2007/10/02 19:51	37 KB
R1-074047.zip	2007/10/02 19:51	10 KB
R1-074048.zip	2007/10/02 20:46	43,9 KB
R1-074049.zip	2007/10/02 17:34	16 KB
R1-074050.zip	2007/10/02 17:34	35,9 KB
R1-074051.zip	2007/10/02 17:34	82,5 KB
R1-074052.zip	2007/10/02 17:35	533,1 KB
R1-074053.zip	2007/10/02 17:35	322,1 KB
R1-074054.zip	2007/10/03 12:26	15,7 KB
R1-074055.zip	2007/10/03 12:26	51,5 KB
R1-074056.zip	2007/10/02 7:06	10 KB
R1-074057.zip	2007/10/02 7:06	60,8 KB
R1-074058.zip	2007/10/02 7:06	117 KB
R1-074059.zip	2007/10/02 7:06	16,8 KB
R1-074060.zip	2007/10/02 7:06	32,2 KB
R1-074061.zip	2007/10/02 7:06	26,4 KB
R1-074062.zip	2007/10/02 7:06	60,7 KB
R1-074063.zip	2007/10/02 7:06	58,6 KB
R1-074064.zip	2007/10/15 9:32	14,5 KB

Samsung Exhibit 1025, Page 810 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074065.zip	2007/10/02 19:06	294 KB
R1-074066.zip	2007/10/06 10:01	23,4 KB
R1-074067.zip	2007/10/02 19:06	152,2 KB
R1-074068.zip	2007/10/06 10:01	25,2 KB
R1-074069.zip	2007/10/02 21:04	49,3 KB
R1-074070.zip	2007/10/02 19:06	109,3 KB
R1-074071.zip	2007/10/02 19:06	72,9 KB
R1-074072.zip	2007/10/02 19:06	47 KB
R1-074073.zip	2007/10/02 19:21	171,6 KB
R1-074074.zip	2007/10/02 19:06	114,9 KB
R1-074075.zip	2007/10/02 19:06	80 KB
R1-074076.zip	2007/10/02 19:06	54 KB
R1-074077.zip	2007/10/02 19:06	34,1 KB
R1-074078.zip	2007/10/02 19:06	48,1 KB
R1-074079.zip	2007/10/02 19:06	80,2 KB
R1-074080.zip	2007/10/02 19:06	113,3 KB
R1-074081.zip	2007/10/02 19:06	18 KB
R1-074082.zip	2007/10/02 21:04	94,1 KB
R1-074084.zip	2007/10/02 21:04	35,8 KB
R1-074085.zip	2007/10/02 19:06	67,4 KB
R1-074086.zip	2007/10/02 19:06	65,5 KB
R1-074087.zip	2007/10/02 19:07	88,7 KB
R1-074088.zip	2007/10/02 19:07	53,4 KB
R1-074089.zip	2007/10/02 19:07	36,9 KB
R1-074090.zip	2007/10/02 19:07	147,8 KB
R1-074091.zip	2007/10/02 19:21	612,1 KB
R1-074092.zip	2007/10/02 19:21	180,4 KB
R1-074093.zip	2007/10/02 19:21	18,4 KB
R1-074094.zip	2007/10/02 19:21	69,1 KB
R1-074095.zip	2007/10/02 19:21	20,3 KB
R1-074096.zip	2007/10/02 19:21	165 KB
R1-074097.zip	2007/10/02 21:04	129,4 KB
R1-074098.zip	2007/10/02 21:04	50,7 KB
R1-074099.zip	2007/10/02 19:21	70,9 KB

Samsung Exhibit 1025, Page 811 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074100.zip	2007/10/02 19:21	121,4 KB
R1-074101.zip	2007/10/02 19:21	27,4 KB
R1-074102.zip	2007/10/02 19:21	24 KB
R1-074103.zip	2007/10/02 19:21	201,6 KB
R1-074104.zip	2007/10/02 19:21	77,8 KB
R1-074105.zip	2007/10/04 19:46	5,9 KB
R1-074106.zip	2007/10/02 19:21	41,8 KB
R1-074108.zip	2007/10/02 19:21	79 KB
R1-074109.zip	2007/10/02 19:21	51 KB
R1-074110.zip	2007/10/02 19:21	133,7 KB
R1-074111.zip	2007/10/02 7:06	130,3 KB
R1-074112.zip	2007/10/02 7:06	21,3 KB
R1-074113.zip	2007/10/02 7:07	1319,7 KB
R1-074114.zip	2007/10/02 7:07	57,4 KB
R1-074115.zip	2007/10/02 7:07	53,9 KB
R1-074116.zip	2007/10/02 7:07	24,3 KB
R1-074117.zip	2007/10/02 7:07	36,7 KB
R1-074118.zip	2007/10/02 7:07	80 KB
R1-074119.zip	2007/10/02 7:07	20,4 KB
R1-074121.zip	2007/10/02 7:07	21,6 KB
R1-074123.zip	2007/10/02 7:07	16,7 KB
R1-074126.zip	2007/10/02 20:46	57 KB
R1-074127.zip	2007/10/02 20:46	74,3 KB
R1-074128.zip	2007/10/02 20:46	19,1 KB
R1-074129.zip	2007/10/02 20:46	200 KB
R1-074130.zip	2007/10/02 19:51	64,2 KB
R1-074131.zip	2007/10/02 19:51	141,8 KB
R1-074132.zip	2007/10/02 19:51	30,5 KB
R1-074133.zip	2007/10/02 19:52	497,8 KB
R1-074134.zip	2007/10/02 19:52	138,1 KB
R1-074135.zip	2007/10/02 19:52	44,7 KB
R1-074136.zip	2007/10/02 19:52	72 KB
R1-074137.zip	2007/10/02 19:52	47,8 KB
R1-074138.zip	2007/10/02 20:46	92 KB

Samsung Exhibit 1025, Page 812 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074139.zip	2007/10/02 20:46	119,2 KB
R1-074140.zip	2007/10/02 20:46	117,2 KB
R1-074141.zip	2007/10/02 20:46	67,9 KB
R1-074142.zip	2007/10/02 20:46	1338,1 KB
R1-074143.zip	2007/10/02 20:45	170,6 KB
R1-074144.zip	2007/10/02 20:45	560,8 KB
R1-074145.zip	2007/10/02 20:45	891,1 KB
R1-074146.zip	2007/10/02 19:52	644 KB
R1-074147.zip	2007/10/02 19:52	694,7 KB
R1-074148.zip	2007/10/02 19:52	739 KB
R1-074149.zip	2007/10/02 19:52	39,7 KB
R1-074150.zip	2007/10/02 19:52	70,1 KB
R1-074151.zip	2007/10/02 19:52	48,3 KB
R1-074152.zip	2007/10/02 19:52	49,9 KB
R1-074153.zip	2007/10/02 19:52	132,8 KB
R1-074154.zip	2007/10/02 19:21	68,6 KB
R1-074155.zip	2007/10/02 19:22	103,3 KB
R1-074156.zip	2007/10/02 19:22	63,9 KB
R1-074157.zip	2007/10/02 19:22	63,4 KB
R1-074158.zip	2007/10/02 21:04	9,4 KB
R1-074159.zip	2007/10/02 17:35	12 KB
R1-074160.zip	2007/10/02 19:22	20 KB
R1-074161.zip	2007/10/02 19:22	29,1 KB
R1-074162.zip	2007/10/02 19:22	44 KB
R1-074163.zip	2007/10/02 19:22	47,3 KB
R1-074164.zip	2007/10/02 19:22	21,3 KB
R1-074165.zip	2007/10/02 17:35	10,4 KB
R1-074166.zip	2007/10/02 17:35	24,4 KB
R1-074167.zip	2007/10/02 17:35	14,2 KB
R1-074168.zip	2007/10/02 19:22	15,5 KB
R1-074169.zip	2007/10/02 19:22	79,3 KB
R1-074170.zip	2007/10/02 19:22	49,6 KB
R1-074171.zip	2007/10/05 19:11	37 KB
R1-074172.zip	2007/10/05 19:11	28,2 KB

Samsung Exhibit 1025, Page 813 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074173.zip	2007/10/05 19:11	38,2 KB
R1-074174.zip	2007/10/02 20:09	26,5 KB
R1-074175.zip	2007/10/02 20:09	50,9 KB
R1-074176.zip	2007/10/02 20:09	27,7 KB
R1-074177.zip	2007/10/02 20:09	159,5 KB
R1-074178.zip	2007/10/02 20:09	67,4 KB
R1-074179.zip	2007/10/03 9:46	48,7 KB
R1-074180.zip	2007/10/02 20:09	302,2 KB
R1-074181.zip	2007/10/02 20:09	29 KB
R1-074182.zip	2007/10/02 20:09	52,1 KB
R1-074183.zip	2007/10/02 16:58	40,1 KB
R1-074184.zip	2007/10/02 16:58	55,8 KB
R1-074185.zip	2007/10/02 19:22	32,9 KB
R1-074186.zip	2007/10/02 16:58	14 KB
R1-074187.zip	2007/10/02 16:58	29,1 KB
R1-074188.zip	2007/10/02 16:58	15 KB
R1-074189.zip	2007/10/02 16:58	23,6 KB
R1-074190.zip	2007/10/02 21:04	1105,2 KB
R1-074191.zip	2007/10/02 19:07	60,5 KB
R1-074192.zip	2007/10/02 21:04	224,9 KB
R1-074193.zip	2007/10/02 21:04	252,7 KB
R1-074194.zip	2007/10/03 7:24	45,4 KB
R1-074195.zip	2007/10/02 19:07	18,1 KB
R1-074196.zip	2007/10/02 19:07	1215 KB
R1-074197.zip	2007/10/02 19:07	29,4 KB
R1-074198.zip	2007/10/02 19:07	27,2 KB
R1-074199.zip	2007/10/02 19:07	49 KB
R1-074200.zip	2007/10/02 19:07	157,6 KB
R1-074201.zip	2007/10/04 19:46	144,9 KB
R1-074202.zip	2007/10/02 19:07	282 KB
R1-074203.zip	2007/10/02 19:07	202,6 KB
R1-074204.zip	2007/10/02 19:07	398,1 KB
R1-074205.zip	2007/10/02 19:08	536,7 KB
R1-074206.zip	2007/10/02 19:08	36,1 KB

Samsung Exhibit 1025, Page 814 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074207.zip	2007/10/02 19:08	10,1 KB
R1-074208.zip	2007/10/02 19:08	45 KB
R1-074209.zip	2007/10/02 19:08	68,2 KB
R1-074210.zip	2007/10/02 21:04	132,6 KB
R1-074211.zip	2007/10/02 21:03	26,4 KB
R1-074213.zip	2007/10/02 19:08	69,1 KB
R1-074215.zip	2007/10/03 7:24	207,1 KB
R1-074216.zip	2007/10/02 21:03	242,9 KB
R1-074217.zip	2007/10/02 19:08	241,1 KB
R1-074218.zip	2007/10/02 16:58	45,5 KB
R1-074219.zip	2007/10/02 16:59	212,2 KB
R1-074220.zip	2007/10/02 16:59	63,5 KB
R1-074221.zip	2007/10/02 16:59	24 KB
R1-074222.zip	2007/10/02 16:59	140,3 KB
R1-074223.zip	2007/10/02 16:59	374,8 KB
R1-074224.zip	2007/10/02 16:59	146,4 KB
R1-074225.zip	2007/10/02 16:59	28,3 KB
R1-074226.zip	2007/10/02 18:49	204,4 KB
R1-074227.zip	2007/10/02 18:49	21,1 KB
R1-074228.zip	2007/10/02 18:49	25,8 KB
R1-074229.zip	2007/10/02 18:49	57,6 KB
R1-074230.zip	2007/10/02 18:49	64,4 KB
R1-074231.zip	2007/10/02 18:49	55,2 KB
R1-074232.zip	2007/10/02 18:50	29,4 KB
R1-074233.zip	2007/10/02 18:50	36,5 KB
R1-074234.zip	2007/10/02 18:50	34,2 KB
R1-074235.zip	2007/10/02 7:52	107 KB
R1-074236.zip	2007/10/02 20:45	38,7 KB
R1-074237.zip	2007/10/02 20:45	34,5 KB
R1-074238.zip	2007/10/02 20:45	53,1 KB
R1-074239.zip	2007/10/02 20:45	211,8 KB
R1-074240.zip	2007/10/02 20:45	72,7 KB
R1-074241.zip	2007/10/02 20:45	151,6 KB
R1-074242.zip	2007/10/02 20:45	52,8 KB

Samsung Exhibit 1025, Page 815 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074244.zip	2007/10/02 16:59	20,7 KB
R1-074245.zip	2007/10/03 7:24	4,8 KB
R1-074246.zip	2007/10/03 20:14	61,9 KB
R1-074247.zip	2007/10/03 7:24	14,4 KB
R1-074248.zip	2007/10/03 7:24	28,7 KB
R1-074249.zip	2007/10/03 20:14	24,4 KB
R1-074250.zip	2007/10/03 7:25	17,9 KB
R1-074253.zip	2007/10/03 7:25	70,4 KB
R1-074254.zip	2007/10/03 7:25	54 KB
R1-074255.zip	2007/10/03 7:25	97,5 KB
R1-074256.zip	2007/10/03 7:25	31,3 KB
R1-074258.zip	2007/10/02 19:53	25,9 KB
R1-074259.zip	2007/10/02 19:53	53 KB
R1-074260.zip	2007/10/02 19:53	29,9 KB
R1-074261.zip	2007/10/02 19:53	498,2 KB
R1-074262.zip	2007/10/02 19:53	24,3 KB
R1-074263.zip	2007/10/02 19:53	30,1 KB
R1-074264.zip	2007/10/02 19:53	16 KB
R1-074265.zip	2007/10/02 19:53	59,8 KB
R1-074266.zip	2007/10/02 19:53	23,7 KB
R1-074267.zip	2007/10/02 19:53	17,6 KB
R1-074268.zip	2007/10/02 19:53	25,7 KB
R1-074269.zip	2007/10/02 19:53	179 KB
R1-074270.zip	2007/10/02 19:53	451,2 KB
R1-074271.zip	2007/10/02 19:53	98,3 KB
R1-074272.zip	2007/10/02 19:53	89,7 KB
R1-074273.zip	2007/10/02 19:53	51,2 KB
R1-074274.zip	2007/10/02 19:53	17,6 KB
R1-074275.zip	2007/10/02 19:53	41,8 KB
R1-074276.zip	2007/10/02 19:53	18,8 KB
R1-074277.zip	2007/10/02 20:09	307,5 KB
R1-074278.zip	2007/10/02 20:09	182,4 KB
R1-074279.zip	2007/10/02 20:09	37,7 KB
R1-074280.zip	2007/10/02 20:09	129,7 KB

Samsung Exhibit 1025, Page 816 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074281.zip	2007/10/02 20:09	168,1 KB
R1-074282.zip	2007/10/02 20:09	81 KB
R1-074283.zip	2007/10/02 20:09	155,1 KB
R1-074284.zip	2007/10/02 20:09	21,9 KB
R1-074285.zip	2007/10/02 20:09	229,1 KB
R1-074286.zip	2007/10/02 20:10	31,8 KB
R1-074287.zip	2007/10/02 20:10	41,6 KB
R1-074289.zip	2007/10/02 20:10	51,1 KB
R1-074290.zip	2007/10/02 20:10	69,9 KB
R1-074291.zip	2007/10/02 20:10	33,5 KB
R1-074292.zip	2007/10/02 20:10	54,9 KB
R1-074293.zip	2007/10/02 20:10	62,4 KB
R1-074294.zip	2007/10/02 20:10	33,9 KB
R1-074295.zip	2007/10/02 20:10	54,4 KB
R1-074296.zip	2007/10/04 19:46	19,7 KB
R1-074297.zip	2007/10/02 20:10	47,2 KB
R1-074298.zip	2007/10/02 7:07	14,8 KB
R1-074299.zip	2007/10/02 18:50	27,8 KB
R1-074300.zip	2007/10/02 18:50	113,3 KB
R1-074301.zip	2007/10/03 12:15	50,1 KB
R1-074302.zip	2007/10/02 18:50	38,5 KB
R1-074303.zip	2007/10/02 18:50	21 KB
R1-074304.zip	2007/10/02 17:35	18,5 KB
R1-074305.zip	2007/10/05 19:11	37,3 KB
R1-074306.zip	2007/10/02 17:35	32,8 KB
R1-074307.zip	2007/10/02 18:50	256,7 KB
R1-074308.zip	2007/10/02 18:50	127,5 KB
R1-074309.zip	2007/10/02 19:08	44,6 KB
R1-074310.zip	2007/10/02 19:08	42,7 KB
R1-074311.zip	2007/10/02 19:08	315,8 KB
R1-074312.zip	2007/10/02 19:08	528,3 KB
R1-074313.zip	2007/10/02 18:50	35,6 KB
R1-074314.zip	2007/10/02 18:50	294,3 KB
R1-074315.zip	2007/10/02 18:50	54,5 KB

Samsung Exhibit 1025, Page 817 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074316.zip	2007/10/02 19:08	19,2 KB
R1-074317.zip	2007/10/02 19:08	396,9 KB
R1-074318.zip	2007/10/02 19:08	28,1 KB
R1-074319.zip	2007/10/02 19:08	34,6 KB
R1-074320.zip	2007/10/02 19:08	71,5 KB
R1-074321.zip	2007/10/02 19:08	30,3 KB
R1-074322.zip	2007/10/02 19:08	41,5 KB
R1-074323.zip	2007/10/02 19:08	24,9 KB
R1-074324.zip	2007/10/02 19:08	41,3 KB
R1-074325.zip	2007/10/02 19:39	24,5 KB
R1-074326.zip	2007/10/02 18:50	44,5 KB
R1-074327.zip	2007/10/02 18:50	39,1 KB
R1-074328.zip	2007/10/02 18:50	24,8 KB
R1-074329.zip	2007/10/02 18:50	32,7 KB
R1-074330.zip	2007/10/02 18:50	32,4 KB
R1-074331.zip	2007/10/02 18:50	31,2 KB
R1-074332.zip	2007/10/02 18:50	188,9 KB
R1-074333.zip	2007/10/02 18:50	34,3 KB
R1-074334.zip	2007/10/02 18:50	15,3 KB
R1-074335.zip	2007/10/02 19:39	27,3 KB
R1-074336.zip	2007/10/02 19:39	30,2 KB
R1-074337.zip	2007/10/02 19:39	44,2 KB
R1-074338.zip	2007/10/02 19:40	108,5 KB
R1-074339.zip	2007/10/02 19:40	103,1 KB
R1-074340.zip	2007/10/02 18:50	26,1 KB
R1-074341.zip	2007/10/02 18:50	124,1 KB
R1-074342.zip	2007/10/02 18:50	58,4 KB
R1-074343.zip	2007/10/02 18:50	72 KB
R1-074344.zip	2007/10/02 19:40	47,6 KB
R1-074345.zip	2007/10/02 19:40	78,1 KB
R1-074346.zip	2007/10/02 19:40	96,3 KB
R1-074347.zip	2007/10/02 18:50	18,3 KB
R1-074348.zip	2007/10/02 18:50	21 KB
R1-074349.zip	2007/10/02 18:50	23,3 KB

Samsung Exhibit 1025, Page 818 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074350.zip	2007/10/02 19:40	66,4 KB
R1-074351.zip	2007/10/02 18:51	59,6 KB
R1-074352.zip	2007/10/02 18:51	28,8 KB
R1-074353.zip	2007/10/02 18:51	36,4 KB
R1-074354.zip	2007/10/02 19:40	20,3 KB
R1-074355.zip	2007/10/02 19:40	26,2 KB
R1-074356.zip	2007/10/03 7:25	17,9 KB
R1-074357.zip	2007/10/02 18:51	38,9 KB
R1-074358.zip	2007/10/02 18:51	63,9 KB
R1-074359.zip	2007/10/02 21:03	20,7 KB
R1-074360.zip	2007/10/02 19:40	107,4 KB
R1-074361.zip	2007/10/02 19:40	206,2 KB
R1-074362.zip	2007/10/02 20:54	6,9 KB
R1-074363.zip	2007/10/15 9:32	22,9 KB
R1-074364.zip	2007/10/02 17:35	50,2 KB
R1-074365.zip	2007/10/03 10:37	14,3 KB
R1-074367.zip	2007/10/02 18:51	6,1 KB
R1-074368.zip	2007/10/03 7:25	11,6 KB
R1-074369.zip	2007/10/05 19:11	42,2 KB
R1-074370.zip	2007/10/02 19:40	206,3 KB
R1-074371.zip	2007/10/03 7:25	28 KB
R1-074372.zip	2007/10/05 19:11	55,9 KB
R1-074373.zip	2007/10/02 19:40	134,7 KB
R1-074374.zip	2007/10/02 18:51	28,2 KB
R1-074375.zip	2007/10/02 19:40	222,8 KB
R1-074376.zip	2007/10/02 19:40	5,8 KB
R1-074377.zip	2007/10/02 20:44	43,2 KB
R1-074378.zip	2007/10/02 19:40	58,4 KB
R1-074379.zip	2007/10/02 19:40	12,9 KB
R1-074380.zip	2007/10/02 19:40	23,9 KB
R1-074381.zip	2007/10/02 19:40	9,1 KB
R1-074382.zip	2007/10/03 7:25	23,7 KB
R1-074383.zip	2007/10/03 7:25	8,8 KB
R1-074384.zip	2007/10/02 19:22	58,9 KB

Samsung Exhibit 1025, Page 819 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074385.zip	2007/10/02 19:40	65,5 KB
R1-074386.zip	2007/10/02 19:40	150,8 KB
R1-074387.zip	2007/10/02 19:41	77,5 KB
R1-074388.zip	2007/10/02 19:41	151,9 KB
R1-074389.zip	2007/10/02 19:41	65,9 KB
R1-074390.zip	2007/10/02 19:41	198,9 KB
R1-074391.zip	2007/10/04 19:46	62,4 KB
R1-074392.zip	2007/10/02 21:03	56,6 KB
R1-074396.zip	2007/10/02 21:03	290,9 KB
R1-074397.zip	2007/10/02 21:03	185,8 KB
R1-074398.zip	2007/10/02 21:03	496 KB
R1-074399.zip	2007/10/02 19:53	91,6 KB
R1-074400.zip	2007/10/02 19:53	77,6 KB
R1-074401.zip	2007/10/02 19:53	28,3 KB
R1-074402.zip	2007/10/02 19:53	18,6 KB
R1-074403.zip	2007/10/02 19:53	58,8 KB
R1-074404.zip	2007/10/02 19:53	64 KB
R1-074405.zip	2007/10/02 19:53	16,3 KB
R1-074406.zip	2007/10/02 21:03	67,9 KB
R1-074407.zip	2007/10/02 20:12	15,1 KB
R1-074408.zip	2007/10/02 19:54	49,2 KB
R1-074409.zip	2007/10/02 19:54	38,6 KB
R1-074410.zip	2007/10/02 19:54	63,9 KB
R1-074411.zip	2007/10/02 19:54	145,1 KB
R1-074412.zip	2007/10/02 20:10	99,6 KB
R1-074413.zip	2007/10/02 20:10	101,2 KB
R1-074414.zip	2007/10/02 20:10	14 KB
R1-074415.zip	2007/10/02 20:10	60,4 KB
R1-074416.zip	2007/10/02 21:02	33,1 KB
R1-074417.zip	2007/10/02 20:10	27,7 KB
R1-074418.zip	2007/10/02 20:10	25,4 KB
R1-074419.zip	2007/10/02 20:44	62 KB
R1-074420.zip	2007/10/02 20:10	15 KB
R1-074421.zip	2007/10/02 21:02	151,7 KB

Samsung Exhibit 1025, Page 820 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074422.zip	2007/10/02 21:02	219,1 KB
R1-074423.zip	2007/10/02 20:10	31,2 KB
R1-074424.zip	2007/10/02 21:02	13,8 KB
R1-074425.zip	2007/10/02 20:10	93 KB
R1-074426.zip	2007/10/02 20:10	127,9 KB
R1-074427.zip	2007/10/02 20:10	47,2 KB
R1-074428.zip	2007/10/02 20:10	57,8 KB
R1-074429.zip	2007/10/04 19:46	84,8 KB
R1-074430.zip	2007/10/02 20:10	24,1 KB
R1-074431.zip	2007/10/03 7:25	15 KB
R1-074432.zip	2007/10/03 20:14	50,6 KB
R1-074433.zip	2007/10/02 19:41	92,6 KB
R1-074434.zip	2007/10/02 20:10	114,8 KB
R1-074435.zip	2007/10/03 7:25	49,6 KB
R1-074436.zip	2007/10/15 9:32	40 KB
R1-074437.zip	2007/10/03 20:14	17,3 KB
R1-074438.zip	2007/10/15 9:32	22 KB
R1-074439.zip	2007/10/15 9:32	20,4 KB
R1-074440.zip	2007/10/03 12:49	31,6 KB
R1-074441.zip	2007/10/05 19:11	24,6 KB
R1-074442.zip	2007/10/15 9:32	15,8 KB
R1-074443.zip	2007/10/04 19:46	142,9 KB
R1-074444.zip	2007/10/05 19:11	24 KB
R1-074445.zip	2007/10/05 19:11	15,7 KB
R1-074446.zip	2007/10/06 10:01	49,5 KB
R1-074447.zip	2007/10/15 9:32	95,6 KB
R1-074448.zip	2007/10/15 9:32	147,6 KB
R1-074449.zip	2007/10/15 9:32	263,1 KB
R1-074450.zip	2007/10/15 9:32	296,7 KB
R1-074452.zip	2007/10/15 9:32	6,8 KB
R1-074453.zip	2007/10/15 9:32	8,8 KB
R1-074455.zip	2007/10/15 9:32	18,7 KB
R1-074457.zip	2007/10/15 9:32	31,6 KB
R1-074458.zip	2007/10/15 9:32	20,7 KB

Samsung Exhibit 1025, Page 821 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R1-074459.zip	2007/10/15 9:32	14,7 KB
R1-074460.zip	2007/10/15 9:32	7,9 KB
R1-074461.zip	2007/10/15 9:32	33,2 KB
R1-074462.zip	2007/10/15 9:32	59,5 KB
R1-074463.zip	2007/10/15 9:32	31,8 KB
R1-074464.zip	2007/10/15 9:32	70 KB
R1-074465.zip	2007/10/15 9:32	19,9 KB
R1-074466.zip	2007/10/15 9:31	19,5 KB
R1-074467.zip	2007/10/15 9:31	47,1 KB
R1-074468.zip	2007/10/15 9:31	15,1 KB
R1-074469.zip	2007/10/15 9:31	152,6 KB
R1-074470.zip	2007/10/15 9:31	59,4 KB
R1-074471.zip	2007/10/15 9:31	12,7 KB
R1-074472.zip	2007/10/15 9:31	269,5 KB
R1-074473.zip	2007/10/15 9:31	5,9 KB
R1-074474.zip	2007/10/15 9:31	10,6 KB
R1-074475.zip	2007/10/15 9:31	44,6 KB
R1-074476.zip	2007/10/15 9:31	50,5 KB
R1-074477.zip	2007/10/15 9:31	15,6 KB
R1-074478.zip	2007/10/15 9:31	22,3 KB
R1-074479.zip	2007/10/15 9:31	13,2 KB
R1-074480.zip	2007/10/15 9:31	7,7 KB
R1-074482.zip	2007/10/15 9:31	20,5 KB
R1-074483.zip	2007/10/15 9:31	218,7 KB
R1-074484.zip	2007/10/15 9:31	13 KB
R1-074485.zip	2007/10/15 9:31	124,8 KB
R1-074486.zip	2007/10/15 9:31	153,1 KB
R1-074487.zip	2007/10/15 9:31	186,9 KB
R1-074488.zip	2007/10/15 9:31	142,7 KB
R1-074489.zip	2007/10/15 9:35	8,3 KB
R1-074490.zip	2007/10/15 9:31	15,1 KB
R1-074491.zip	2007/10/15 9:31	39,2 KB
R1-074492.zip	2007/10/15 9:31	229 KB
R1-074493.zip	2007/10/15 9:30	62,7 KB

Samsung Exhibit 1025, Page 822 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

	sort by name/desc	sort by date/desc	sort by size/desc
	R1-074494.zip	2007/10/15 9:30	449,9 KB
	R1-074495.zip	2007/10/15 9:30	105,9 KB
	R1-074496.zip	2007/10/15 9:30	7 KB
	R1-074497.zip	2007/10/15 9:30	4,3 KB
	R1-074498.zip	2007/10/15 9:30	52,6 KB
	R1-074499.zip	2007/10/15 9:30	18,1 KB
	R1-074500.zip	2007/10/15 9:30	16,4 KB
	R1-074501.zip	2007/10/15 9:30	16 KB
	R1-074502.zip	2007/10/15 9:30	144,9 KB
	R1-074503.zip	2007/10/15 9:30	171,2 KB
	R1-074504.zip	2007/10/15 9:30	18,2 KB
	R1-074505.zip	2007/10/15 9:30	58,9 KB
	R1-074506.zip	2007/10/15 9:30	5,1 KB
	R1-074507.zip	2007/10/15 9:30	8,3 KB
	R1-074508.zip	2007/10/15 9:30	39,7 KB
	R1-074509.zip	2007/10/15 9:30	30,3 KB
	R1-074510.zip	2007/10/15 9:30	28,4 KB
	R1-074511.zip	2007/10/15 9:30	5,8 KB
	R1-074512.zip	2007/10/15 9:30	20,9 KB
	R1-074513.zip	2007/10/15 9:30	10,7 KB
	R1-074514.zip	2007/10/15 9:30	225 KB
	R1-074516.zip	2007/10/15 9:30	13,6 KB
	R1-074517.zip	2007/10/15 9:30	39,8 KB
	R1-074518.zip	2007/10/15 9:30	45,7 KB
	R1-074519.zip	2007/10/15 9:30	45,5 KB
	R1-074520.zip	2007/10/15 9:29	26,6 KB
	R1-074521.zip	2007/10/17 7:37	13,7 KB
	R1-074522.zip	2007/10/17 7:36	7,8 KB
	Tdoclist_RAN1 #50b(Oct_2007).xls	2007/10/17 8:55	149 KB
	Tdoclist_RAN1 #50b(Oct_2007).zip	2014/11/07 12:42	39,3 KB
	TDoc_List_Meeting_RAN1#50-BIS.xlsm	2017/06/05 1:02	111,6 KB
	TDoc_List_Meeting_RAN1#50-BIS.xlsx	2017/11/07 23:21	127,5 KB
	TDoc_List_Meeting_RAN1#50-BIS.zip	2018/01/10 16:43	166,7 KB

607 items.

Samsung Exhibit 1025, Page 823 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 32



3GPP_TSG_RAN_WG1 Archives
October 2007, Week 1

3GPP_TSG_RAN_WG1@LIST.ETSI.ORG



Options: Use Monospaced Font
Show Text Part by Default
Show All Mail Headers

Message: [<< First] [< Prev] [Next >] [Last >>]
Topic: [<< First] [< Prev] [Next >] [Last >>]
Author: [<< First] [< Prev] [Next >] [Last >>]



Subject: Re: A joint contribution by Nokia Siemens Networks, CATT, Ericsson, Huawei, and Nokia
From: Timo Lunttila <[log in to unmask]>
Reply To: [log in to unmask]
Date: Wed, 3 Oct 2007 00:24:12 +0300
Content-Type: multipart/mixed
Parts/Attachments: text/plain (509 bytes) , R1-074383.zip (9 kB)

I somehow managed to mess the Tdoc... Here the version with the correct one:

BR,
Timo

>-----Original Message-----
>From: Lunttila Timo (NSN - FI/Espoo)
>Sent: 02 October, 2007 21:08
>To: [log in to unmask]
>Subject: A joint contribution by Nokia Siemens Networks, CATT,
>Ericsson, Huawei, and Nokia
>
>Dear all,
>
>Please find attached one joint contribution co-sourced by
>Nokia Siemens Networks, CATT, Ericsson, Huawei, and Nokia:
>
>R1-074383 Proposed way forward for CQI reporting 6.4.5
>
>Br,
>Timo
>
>
>

Samsung Exhibit 1025, Page 825 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

ATOM RSS1 RSS2

Samsung Exhibit 1025, Page 826 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 33



3GPP_TSG_RAN_WG1 Archives

October 2007, Week 3

3GPP_TSG_RAN_WG1@LIST.ETSI.ORG

Options: Use Monospaced Font
Show Text Part by Default
Show All Mail Headers

Message: [<< First] [< Prev] [Next >] [Last >>]
Topic: [<< First] [< Prev] [Next >] [Last >>]
Author: [<< First] [< Prev] [Next >] [Last >>]

Subject: Minutes of RAN1#50b (Shanghai)
From: Patrick Merias <[log in to unmask]>
Reply To: Patrick Merias <[log in to unmask]>
Date: Mon, 15 Oct 2007 11:10:06 +0200
Content-Type: multipart/mixed
Parts/Attachments: text/plain (482 bytes) , text/html (1518 bytes) , Draft_ReportWG1#50b_v010.zip (165 kB) , WG1_50bis_Chairman_Notes_1012.zip (73 kB)

Hello all,

I'm back to home and hope everything went well for you all as well...
As none of us was invited to this Chineese wedding party last friday, the very last minutes of our stay in Purple Mountain Ballroom was a bit of fun...
I know that a few didn't have the time collecting the final notes from Dirk. So I did attached them to this email with my report as per Friday 4:30pm.
I will sent a revised version soon today or tomorrow after having clean-up a few things

Br.

ATOM RSS1 RSS2

Samsung Exhibit 1025, Page 828 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 34

3GPP TSG RAN WG1 Meeting #51 R1-075054
Jeju, South Korea, 5 – 11 November, 2007

Agenda item	**3**
Title:	**Report of 3GPP TSG RAN WG1 #50b v1.0.0 (Shanghai, China, 8 – 12 October, 2007)**
Document for:	**Approval**
Source:	**MCC Support**



Fact Summary

Meeting:	**3GPP TSG RAN WG1 #50b**
Dates:	**8th through 12th October, 2007**
Venue:	**Purple Mountain Hotel, Shanghai, CHINA**
Host:	**Chineese Friends of 3GPP**
Attendees:	**179 delegates**
Documents:	**628 (including some withdrawn and post-meeting artefacts)**

Patrick Mérias
ETSI Mobile Competence Center
F-06921 Sophia Antipolis Cedex
Tel: +33 4 92 94 42 06

Patrick.merias@etsi.org

Samsung Exhibit 1025, Page 830 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Table of contents

Executive summary 3
1. Opening of the meeting 5
1.1 Call for IPR 5
2. Approval of the agenda 5
3. Approval of the minutes from previous meeting 5
4. Liaison statement handling 6
5. Maintenance of R99 - Rel-7 8
6. Evolved UTRA and UTRAN 11
6.1 TDD Frame Structure 11
6.2 Finalization of TS 36.211 12
6.2.1 Downlink reference signals 12
6.2.2 Uplink reference signals 14
6.2.3 Downlink Control Signaling 17
6.2.4 Uplink Control Signaling 23
6.2.5 Mapping of virtual resource blocks to physical resource blocks 29
6.2.6 SSC, PSC 31
6.2.7 RACH 33
6.3 Finalization of TS 36.212 36
6.4 Finalization of TS 36.213 39
6.4.1 Timing synchronization 39
6.4.2 UL/DL Power Control 39
6.4.3 Inter-cell Interference Coordination 41
6.4.4 RACH timing and preamble sequence selection 42
6.4.5 UE Procedures for downlink shared channel 42
6.4.6 UE Procedures for uplink shared channel 47
6.5 Finalization of TS 36.214 48
6.6 UE Categories 48
7. Combination of Higher Order Modulation and MIMO in HSDPA (FDD) 51
8. Enhanced Uplink for Cell_FACH State in FDD 51
9. Study Item on Synchronized E-DCH 53
10. Study Item on Scope of future HSPA Evolution for 1.28Mcps TDD 54
11. Closing of the meeting 56
Annex A: List of participants at RAN1 #50b 57
Annex B: TSG RAN WG1 meetings in 2008 58
Annex C: List of CRs agreed at RAN1#50b 59
Annex D: List of Outgoing LSs from RAN1#50b 60
Annex E: List of Tdocs at RAN1 #50b 61
Annex F: List of actions 62

Samsung Exhibit 1025, Page 831 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Executive summary

3GPP TSG WG RAN1 #50b meeting took place in Purple Mountain Hotel, Shanghai, CHINA.

The meeting started at 9:20 on Monday 8th October and finished at 16:30 on Friday 12th October 2007.

The week was scheduled as follows:

- Monday: Common session on Agenda items 1, 2, 3 and 4 – Parallel session (from the morning coffee break) for Agenda items 5, 7, 8, 9 and 10 chaired by Dirk Gerstenberger and discussions on 6.4.5 chaired by Juho Lee.
- Tuesday: Agenda items 6.1, 6.3, 6.4.2, 6.4.3 and 6.5.
- Wednesday: Agenda items 6.2.3 and 6.2.5 – Parallel session (from 5:30PM) for 6.2.7 and continuing discussions on 6.2.3 (chaired by Stefan Parkvall)
- Thursday: 8:00-9:30AM Continuing discussions on CQI (6.4.5 chaired by Juho Lee) – Parallel session for Agenda item 6.2.4 and continuing discussions on Power Control (6.4.2 chaired by Asbjörn Grovlen) – Common session on Agenda items 6.2.1, 6.2.2 and 6.2.6.
- Friday: Review of the parallel sessions results on CQI and Power Control. Agenda items 6.6, 6.4.1, 6.4.4 and 6.4.6.

The list of action points that required RAN1 close follow-up is listed in Annex F (end of document).

The number of contribution documents for this meeting was 602, and those documents were categorized as followed.

Agenda Item	Input Document	Discussed Document
Liaison statement handling	10	10
Maintenance of R99, Rel4, Rel5, Rel6, Rel7	24	24
Evolved UTRA and UTRAN	526	150
Combination of Higher Order Modulation and MIMO in HSDPA (FDD)	3	3
Enhanced Uplink for Cell_FACH State in FDD	9	9
Other Study Items	13	13

The following set of documents is missing. The corresponding contributions have not been handed over by companies.

R1-073983	Beamforming for E-UTRA	Motorola
R1-074004	HARQ Process Identity for SU-MIMO	Motorola
R1-074005	HARQ Error Conditions for Lost Grants	Motorola
R1-074083	Support of Re-Transmissions for Persistent Scheduling in E-UTRA UL	Samsung
R1-074107	UL code symbol interleaver	Samsung
R1-074212	Consideration on UL power control	LG Electronics

Samsung Exhibit 1025, Page 832 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074214	Separation of CQI report into indexes and values over PUSCH and PUCCH	LG Electronics
R1-074288	Transmission Method of Scheduling Request in E-UTRA Uplink	NTT DoCoMo
R1-074393	On the codeword to layer mapping issue for retransmission	Freescale Semiconductor
R1-074394	Remaining issues in DL MIMO	Freescale Semiconductor
R1-074395	Rank reporting for DL LTE MIMO	Freescale Semiconductor
R1-074481	E-UTRA Power Control Performance Comparison of Feedback Methods	InterDigital Communications LLC
R1-074515	A use case for the eNodeB Measurement "Maximum Tx Power per PRB relative to the rated output power"	Alcatel-Lucent, Orange, T-Mobile

Samsung Exhibit 1025, Page 833 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

1. Opening of the meeting

Mr. Dirk Gerstenberger (RAN1 Chairman) welcomed the participants to the 50th bis RAN WG1 meeting and opened the meeting at 09:20.

Miss Meng Zhao from Huawei Technologies welcomed the delegates on behalf of the Chineese Friends of 3GPP.

1.1 Call for IPR

The Chairman drew attention to Members' obligations under the 3GPP Partner Organizations' IPR policies. Every Individual Member organization is obliged to declare to the Partner Organization or Organizations of which it is a member any IPR owned by the Individual Member or any other organization which is or is likely to become essential to the work of 3GPP.

The attention of the members of this Technical Specification Group is drawn to the fact **that 3GPP Individual Members have the obligation** under the IPR Policies of their respective Organizational Partners to **inform their respective** Organizational Partners **of Essential IPRs they become aware of**.

The members take note that they are hereby invited:

- to investigate in their company whether their company does own IPRs which are, or are likely to become Essential in respect of the work of the Technical Specification Group.
- to notify the Director-General, or the Chairman of their **respective** Organizational Partners, of all potential IPRs that their company may own, by means of the IPR Statement and the Licensing declaration forms (e.g. see the ETSI IPR forms http://webapp.etsi.org/Ipr/).

2. Approval of the agenda

R1-073895	Draft Agenda for RAN1#50b meeting	RAN1 Chairman

Dirk Gerstenberger (Chairman) proposed the agenda for the meeting.

Discussion (Question / Comment):
Decision: The agenda was approved.

3. Approval of the minutes from previous meeting

R1-073896	Draft report of RAN1#50 meeting	MCC Support

The document was presented by Patrick Mérias.

Discussion (Question / Comment): All Rel-7 and Rel-8 (LTE) specs have been made available following last plenary meeting.
Decision: The document is noted and approved.

R1-074447	Draft Report WS GERAN_RAN on GERAN E-UTRAN interworking	MCC

The document was presented by Patrick Mérias for information.

Discussion (Question / Comment): Slight revision of the draft version sent over the email reflector prior to the meeting.
Decision: The document is noted.

Samsung Exhibit 1025, Page 834 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

4. Liaison statement handling

R1-073897	LS on eNodeB measurements	RAN3, Nokia Siemens Networks

The document was presented by Joern Krause from NSN and proposes to concentrate the efforts in the field of eNodeB measurement standardisation on those being necessary to fulfil the nodes inter-working requirements of TS25.913.

Discussion (Question / Comment):
Decision: Document is noted.

R1-073899	Response to LS on neighbour cell list in LTE	GERAN, Nokia Siemens Networks

The document was presented by Joern Krause from NSN. As an action to RAN1, TSG GERAN requests more information on the available time for search of LTE cells in GERAN, both in idle and in connected mode and also if any parameters to be broadcast in the GERAN system information, in addition to the centre frequency of a neighbour cell, are required by the terminal in order to perform measurements on LTE cells.

Discussion (Question / Comment):
Decision: Document is noted. RAN1 will come back during the week on the LS reply to be prepared in R1-074451.

Friday 12th October

Decision is to postpone the reply LS to next meeting

R1-073900	LS on high quality criterion	RAN2, Nokia

The document was presented by Asbjörn Grovlen from Nokia.

Discussion (Question / Comment): RAN1 decides to let RAN4 providing definition of “high quality criterion” to RAN2 for 36.304
Decision: Document is noted.

R1-073901	LS on introduction of radio bearers for MBMS PTP on HS in 34.108	RAN5, Ericsson

The document was presented by Lars Lindbom from Ericsson.

Discussion (Question / Comment):
Decision: Document is noted. Companies are invited to provide their comments to contributor by Thursday. Reply LS shall then be in R1-074452.

Friday 12th October

R1-074452	Reply LS on introduction of radio bearers for MBMS PTP on HS in 34.108	RAN1, Ericsson

The document was presented by Lars Lindbom from Ericsson.

Discussion (Question / Comment):
Decision: Document is agreed.

R1-073902	LTE Home NodeB mobility	RAN3, Vodafone

The document was presented by Prakash Bha from Vodafone.

Discussion (Question / Comment): RAN1 decides to let RAN4 providing the reply to this LS
Decision: Document is noted.

Samsung Exhibit 1025, Page 835 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-073903	Response LS on receiver Performance and Enhanced CELL_FACH state	RAN4, Ericsson

The document was presented by Lars Lindbom from Ericsson and shows RAN4 response on UE receiver performance in enhanced cell FACH scenario. For information to RAN1.

Discussion (Question / Comment): No comment
Decision: Document is noted

R1-073904	Response to LS on Synchronization in Radio Access Networks	RAN3, Orange

The document was presented by Thomas Sälzer from Orange. For information to RAN1.

Discussion (Question / Comment):
Decision: Document is noted.

R1-073905	Handover and Cell Reselection Interruption time	RAN4, Nokia Siemens Networks

The document was presented by Joern Krause from NSN and shows RAN4 plans to develop requirements for LTE handover and cell reselection requirements.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074243	MCCH multiplexing	Philips

The document was withdrawn.

New Incoming LS received on Tuesday 9th October

R1-074480	Reply LS on Request to clarify LTE states for physical layer measurements	RAN2, Nokia Siemens Networks

The document was presented by Joern Krause from NSN.

Discussion (Question / Comment):
Decision: Document is noted.

Samsung Exhibit 1025, Page 836 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

5. Maintenance of R99 - Rel-7

R1-074244	25.211 CR248 (Rel-7, F) Correction to transmit diversity specification in MIMO mode	Philips, NXP Semiconductors, Ericsson	

The document was presented by Matthew Baker from Philips.

Discussion (Question / Comment):
Decision: Document is agreed.

R1-073950	25.213 CR091 (Rel-7, F) "Editorial changes in 25.213 for 16QAM specification"	Ericsson	

The document was presented by Lars Lindbom from Ericsson.

Discussion (Question / Comment): Small typo modification is required (Motorola comment)
Decision: Document is noted and shall be revised in R1-074455.

Friday 12th October

R1-074455 is agreed.

R1-073951	On downlink sync criteria in case of UE DTX/DRX	Ericsson	

The document was presented by Lars Lindbom from Ericsson and proposes to make the generation of downlink synchronization primitives independent of the value of UL_DTX_Active.

Discussion (Question / Comment): Comments from Philips w.r.t the impacts of the proposal (UE sleeping time may significantly reduced …)
Based on the discussed topics, Mr Chairman suggested looking through them during the week and come back later on the proposal.
Decision: Document is noted and shall be revisited.

Friday 12th October

Further discussion still required until next meeting.

R1-074118	Combining Period interrupted by a DTX gap	Qualcomm Europe	

The document was presented by Aziz Gholmieh from Qualcomm and shows how to handle the combining period when it is interrupted by a DTX gap.

Discussion (Question / Comment):
Decision: Document is noted and shall be revised in R1-074456 (to propose a clarification of the UE behaviour as intended in the current specs)

Friday 12th October

R1-074456 is withdrawn as no need for a CR has been identified.

R1-074119	25.214 CR463 (Rel-7,) Timing of CQI vs DTX priority change - Rel 7	Qualcomm Europe	

The document was presented by Aziz Gholmieh from Qualcomm.

Discussion (Question / Comment):
Decision: Document is agreed.

Samsung Exhibit 1025, Page 837 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074121	25.214 CR465 (Rel-7,) Grant Monitoring clarification - Rel 7	Qualcomm Europe	

The document was presented by Aziz Gholmieh from Qualcomm.

Discussion (Question / Comment):
Decision: Document is agreed.

R1-074123	E-DPCCH transmission in compressed frames	Qualcomm Europe	

The document was presented by Juan Montojo from Qualcomm and tries providing common understanding in E-DPCCH transmission in compressed frames.

Discussion (Question / Comment): Philips and Qualcomm to work together on the impacted specs**.**
Decision: Document is noted and off line discussion is required to clarify the specification(s). Intended behaviour is to send the whole E-DPCCH.

Friday 12th October

Related CRs are provided in R1-074518 and R1-074519 and agreed. MCC to remove the blank in "case s" (R1-074518)

R1-074518	25.211 CR0249 (Rel-6, F) "Correction to E-DPCCH transmission"	Philips, Nokia Siemens Networks, Nokia, Alcatel-Lucent
R1-074519	25.211 CR0250 (Rel-7, A) "Correction to E-DPCCH transmission"	Philips, Nokia Siemens Networks, Nokia, Alcatel-Lucent

R1-074364	25.214 CR467 (Rel-7,) Clarification on CQI tables in Rel-7	Alcatel-Lucent	

The document was presented by Elisa Wong from Alcatel-Lucent.

Discussion (Question / Comment): Revision of the CQI tables is required. Include a table that addresses all cases.
Decision: Document is noted and shall be revised in R1-074462.

Friday 12th October

R1-074462	25.214 CR467r1 (Rel-7, F) Clarification on CQI tables in Rel-7	Alcatel-Lucent, Nokia, Nokia Siemens Networks, Ericsson, Philips

The document was presented by Elisa Wong from Alcatel-Lucent.

Discussion (Question / Comment):
Decision: Document is agreed.

R1-073952	Clarification of UE measurements in case of Rx diversity	Ericsson	
R1-074298	UE Measurements and Rx Diversity	Nokia Siemens Networks, Nokia	
R1-074437	Proposed way forward on CPICH measurements with Rx diversity	Vodafone	

The above set of documents shall be revisited after off-line discussion during the week

Friday 12th October

RAN1 is informed that RAN4 discussed also these topics during the week. No further action required.

Samsung Exhibit 1025, Page 838 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074055	25.224 CR0170 (Rel-7,) "EUL power control improvements for 1.28Mcps TDD"	TD-Tech	

The document was presented by (…) from TD-Tech and proposes that non-scheduled E-PUCH adopts DTX mechanism pretty much similar as that used for UL DPCH.

Discussion (Question / Comment): CATT required further off-line discussions
Decision: Document is noted and shall be revisited during the week.

Friday 12th October

Need for more discussions until next meeting

R1-074056	More improvement requirements on dedicated carrier for LCR TDD MBMS	CMCC	

The document was presented by (…) from CMCC and gives a further consideration on the dedicated carrier physical structure to improve the performance for 1.28Mcps TDD MBMS.

Discussion (Question / Comment): IPWireless requested for clarification on the timeline to fulfil these improvements.
Decision: Document is noted.

R1-074111	More physical layer improvements on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, TD Tech, ZTE, Spreadtrum Communications, CATT	

The document was presented by (…) from (…) and introduces an optimized timeslot. In addition, further analysis on spectrum efficiency, larger delay spread for large cell deployment, co-existence and compatibility issues is provided.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074112	25.201 CR037 (Rel-7,) More improvement on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	
R1-074113	25.221 CR148 (Rel-7,) More improvement on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	
R1-074114	25.222 CR141 (Rel-7,) More improvement on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	
R1-074115	25.223 CR049 (Rel-7,) More improvement on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	
R1-074116	25.224 CR171 (Rel-7,) More improvement on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	

R1-074117	Analysis of UE capabilities in 1.28 Mcps TDD MBSFN	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	

The document was presented by (…) from (…) and addresses the support of larger cell size MBMS transmission by analyzing the minimum UE capability parameters (for 1.28Mcps).

Discussion (Question / Comment): Further clarifications requested by IPWireless
Decision: Document is noted. Off-line discussions required during the week. The results shall then be revisited later on.

Friday 12th October

IPWireless, CMCC and the proponents should work together and try to solve the objections. Postponed until next meeting.

Samsung Exhibit 1025, Page 839 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

6. Evolved UTRA and UTRAN

R1-074064	Summary of email discussion on LTE MIMO	Samsung

The document was presented by Juho Lee from Samsung. Despite the limited amount of email discussion on LTE MIMO before RAN1#50bis meeting, the document presents way forwards on topics for further study during the week including:

- CQI definition for support of DL MU-MIMO
- Information about the interfering vectors
- Enhancement of the downlink spatial multiplexing at high speed

Discussion (Question / Comment):
Decision: Document is noted.

6.1 TDD Frame Structure

R1-074432	TDD Frame Structure	IPWireless, NextWave Wireless	

The document was presented by Nick Anderson from IPWireless and reconsiders the reasons why two frame structures arose in recent past. As a conclusion of this paper, proponents recommend that RAN1 contacts RAN4 to request investigating whether alignment of switching points between LTE and UTRA TDD is really necessary.

Should RAN4 conclude that timing alignment of switching points is deemed essential, it is suggested either that RAN1 retains the existence of both FS1 and FS2 or that timing alignment of switching points may be achieved for both UTRA TDD frame variants via the use of a single frame structure with a symbol-level-adjustable UL/DL switching point in conjunction with 5ms or 10ms TDD frames

Should RAN4 conclude that timing alignment of switching points with UTRA TDD is non-essential then RAN1 should focus on TDD FS1 as the common solution.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074459	On optimisation of LTE TDD based on FS2	CMCC, Vodafone, CATT, RITT, Ericsson, Nokia, Nokia Siemens Networks, ZTE, Huawei, Qualcomm Europe	(R1-074365)

The document was presented by (…) from CMCC and proposes that work on an optimized LTE TDD mode based on frame structure type 2 takes Beam forming, UL coverage, Guard period flexibility, Periodicity and Overhead as areas for optimization.

Discussion (Question / Comment): Mr Chairman commented about the challenges trying to get these FS issues solved out within 2 WGs time frame and suggested to use this document as basis for further work. Starting point is definitely to identify the areas on which RAN1 should focus on.
Orange commented on the attractiveness of what the results of RAN1 work should show and highlighted that the coexistence with SCDMA and existence of beamforming was already a good start.
One commented on the necessity for compatibility with existing TDD modes; although it was not clearly stated in the last plenary minutes said Mr Chairman.
Decision: Document is noted.

Proposed conclusion:

- R1-074459 is agreed as the way forward for a single TDD FS based on FS2
    - IPWireless/Nextwave Wireless concerns are noted that

Samsung Exhibit 1025, Page 840 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- there are aspects of FS2 that are not essential for a single TDD mode, e.g. switching point alignment can be achieved in other ways
- removal of TDD FS1 may provide no simplification as FDD FD/HD still uses FS1
  - this is questioned by RITT

- Consider also support for efficient implementation of FDD/TDD dual mode UEs and compatibility with existing UTRA TDD modes as cornerstones for the work
- FDD (full/half duplex) mode is not affected

Nick Anderson (IPWireless) indicated that his understanding of the conclusion was not that RAN1 is endorsing somehow a single frame structure based on FS2 given the concerns that have been raised above and also considering the proposals of R1-074432. Nick therefore requested that the first bullet of the proposed conclusion was clarified to read:

R1-074459 is agreed as the way forward for a single TDD FS **[if]** based on FS2

Although the text was not changed, Nick reconfirmed his previous understanding and requested that this was appropriately written in the minutes.

Friday 12th October

Mr Chairman strongly requested to start an email reflector ad-hoc discussion, moderated by CMCC (Liu Guangy). Document R1-074520 is going to be made available for information by the meeting end.

6.2 Finalization of TS 36.211

The following set of documents has not been treated.

R1-073906	Final details on CDD precoding	Qualcomm Europe	
R1-073937	Comparison Aspects of Fixed and Adaptive Beamforming for LTE Downlink	Alcatel-Lucent	
R1-074171	Summary of Reflector Discussions on TDD FS1: Framing allocations	IPWirless, NextWave Wireless	
R1-074177	Frame configurations for TDD frame structure type 1	IPWirless, NextWave Wireless	
R1-074307	Invariant PBCH Structure	Nokia Siemens Networks, Nokia, Motorola	
R1-074308	Capacity of D-BCH and Benefits of Time Diversity	Nokia Siemens Networks, Nokia	
R1-074309	DL UL allocation options for EUTRA TDD	Nokia, Nokia Siemens Networks	
R1-074394	Remaining issues in DL MIMO	Freescale Semiconductor	
R1-074429	Details on scrambling	Qualcomm Europe	

6.2.1 Downlink reference signals

R1-074066	Summary of Reflector Discussions on EUTRA DL RS	Samsung	

The document was presented by Aris Papasakellariou from Samsung and summarizes the email discussions on DL RS, including:

- RS Power Boosting

Samsung Exhibit 1025, Page 841 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- RS OS in MBSFN Sub-frames
- Number of RS sequences
- Dedicated RS

Discussion (Question / Comment):
Decision: Document is noted.

Conclusions from email discussion:

- RS Power boosting
  - RS power boosting is the same across the operating BW
  - Data/RS power should be signalled to the UE
    - The UE can derive the transmitted data/RS power ratio from the signalled data/RS power ratio in case of 64QAM (signalling need for 16QAM FFS) and/or in case of multiple codewords (SU-MIMO), i.e. no blind transmitted data/RS power ratio estimation in these cases
  - The same RS power boosting is applied to all antennas
- Number of RS Sequences
  - Define 168 pseudo-random sequences
  - Other number of sequences may be considered for closed subscriber groups (Home eNodeB's)
- Dedicated RS
  - The following is agreed as a way forward for dedicated reference signals for DL beamforming in LTE:
    - Define a single dedicated reference signal pattern for FS Type 1
    - The eNB can semi-statically configure a UE to use the dedicated reference signal as the phase reference for data demodulation of a single codeword
    - Dedicated RS are transmitted for a maximum of 1 stream
    - In the case when dedicated reference symbols are configured for a UE:
      - The UE needs to use a maximum of 2 common RS, corresponding to the first two antenna ports
      - Common reference symbols are the phase reference for PDCCH
      - FFS: Only the common reference signal corresponding to the first antenna port is used for deriving CQI
    - Relation to UE capabilities to be determined based on input e.g. from operators
      - At the moment the assumption is that the support of dedicated reference symbols is an optional UE capability, it can be made mandatory for certain UE categories in a later stage for Rel8.

R1-074506	Way forward for dedicated reference symbols for downlink beamforming	Philips, NXP Semiconductors, NTT DoCoMo, Vodafone, AT&T, NEC, Futjitsu, Mitsubishi, Arraycomm, Sharp, Ericsson, CMCC, CATT, RITT, Orange, T-Mobile, Qualcomm	(R1-074245)

The document was presented by Matthew Baker from Philips.

Discussion (Question / Comment):
Decision: Document is noted.

The following set of documents has not been treated.

R1-073909	RS structure for MBSFN subframes	Qualcomm Europe	
R1-073955	RS Structure for Short CP MBSFN	Nortel	

Samsung Exhibit 1025, Page 842 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-073956	Further Discussion on RS Structure Supporting Spatial Multiplexing for MBSFN	Nortel	
R1-073957	RE Mapping of SFBC+FSTD Based TxD for RS Power boosting	Nortel	
R1-073958	Link Level Evaluation on Adaptive Beaming Forming	Nortel	
R1-073959	TxD gain for correlated 8 Tx antennas	Nortel	
R1-073982	4x2 MIMO vs Beamforming Performance	Motorola	
R1-073983	Beamforming for E-UTRA	Motorola	
R1-073984	Dedicated Reference Signals for Beamforming	Motorola	
R1-074067	Downlink reference signal structure for TDD frame structure type 2	Samsung	
R1-074190	Further Consideration on RE Mapping for 4Tx PDSCH	LG Electronics	
R1-074246	Dedicated reference symbol pattern	Philips	
R1-074277	Views on Beamforming Using Dedicated RS for E-UTRA Downlink	NTT DoCoMo	
R1-074310	Issues regarding MBSFN subframes	Nokia, Nokia Siemens Networks	
R1-074311	On remaining MBSFN RS issues	Nokia, Nokia Siemens Networks	
R1-074312	Dedicated Reference Signal for TDD FS2	Nokia, Nokia Siemens Networks	
R1-074367	Downlink reference signal sequences	Ericsson	
R1-074445	Way Forward on Full use of Power and Bandwidth in DL PDSCH	Samsung, LGE	
R1-074450	Power Scaling and DL RS boosting	Samsung	(R1-074065)

6.2.2 Uplink reference signals

R1-074068	Summary of Reflector Discussions on EUTRA UL RS	Samsung	

The document was presented by Aris Papasakellariou from Samsung and summarizes the email discussion on UL RS including the DM RS for the PUSCH and PUCCH and the SRS.

Discussion (Question / Comment):
Decision: Document is noted.

Conclusion from email discussion:

UL DM RS

- Computer Generated Sequences for 1-2 RBs
  - Way forward in R1-074509 (merge of all proposals) is agreed.
- PUCCH RS Sequence Hopping (same for ACK/NAK and/or CQI)
  - One bit in D-BCH indicates whether sequence hopping is enabled or not.
  - The selection applies to both PUCCH and PUSCH (not necessarily the same hopping pattern).
  - If hopping is disabled, the sequence group is indicated (5 bits for 30 groups).
  - If hopping is enabled, the signaling of the hopping pattern is FFS (e.g. on D-BCH or cell-specific).
- PUSCH Sequence Grouping
  - One sequence per group for allocations of up to 5 RBs

SRS

Samsung Exhibit 1025, Page 843 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- SRS parameters
  - The D-BCH signals the sub-frames with SRS transmission
    - FFS what else is signalled, e.g. signal comb
  - The cyclic shift of the SRS sequence is indicated by 3 bits
- SRS position/symbol: one of the two alternatives to be selected (depends on RAN4 feedback on power ramping)
  - the 1st SC-FDMA sub-frame symbol
  - the last SC-FDMA sub-frame symbol

R1-074509	Way forward on computer generated DM RS sequencer	LGE, Motorola, Nokia, Nokia Siemens Networks, Qualcomm, Sharp, TI	

The document was presented by Jari Lindholm from NSN1 and presents 1 PRB and 2 PRB sequence set proposal for LTE.

Discussion (Question / Comment):
Decision: Document is noted and way forward is agreed.

The following set of documents has not been treated.

R1-073910	CGS sequences for UL RS	Qualcomm Europe	
R1-073911	SRS multiplexing structure	Qualcomm Europe	
R1-073912	Hopping of UL DM-RS	Qualcomm Europe	
R1-073932	UL Sounding RS Control Signaling for Antenna Selection	Mitsubishi Electric	
R1-073934	Uplink Reference Signal Sequence Allocation	Toshiba	
R1-073938	Design of Non-CAZAC CG Sequences for Small RB Allocations in E-UTRA UL	SHARP	
R1-073939	A Proposed Way Forward for Selection of UL DM RS CG Sequences for Small RB Allocations in E-UTRA UL	SHARP	
R1-073960	UL RS for UL MU-MIMO	Nortel	
R1-073985	Proposal for UL DM RS for 1 and 2 RB Allocation	Motorola	
R1-073986	Evaluation of Proposals for UL DM RS for 1 and 2 RB Allocation	Motorola	
R1-073987	Multiplexing of SRS and PUSCH	Motorola	
R1-073988	Views on Remaining Issues on UL DM RS	Motorola	
R1-073989	Views on Remaining Issues on UL SRS	Motorola	
R1-074057	Sequence Grouping Method for UL RS	Huawei	
R1-074058	Resource-specific cyclic shift hopping	Huawei,ZTE	
R1-074069	Sounding RS Multiplexing in E-UTRA UL – Interaction with PUCCH	Samsung	
R1-074070	Link Adaptation Using DM RS for UL VoIP Transmissions	Samsung	
R1-074130	Design of of CG Sequences for Small RB Allocations in E-UTRA UL	Texas Instruments	
R1-074132	Uplink Reference Signal Sequence Assignments in E-UTRA	Texas Instruments	

Samsung Exhibit 1025, Page 844 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074133	Interference between Sounding Reference Signal and Random Access Preamble	Texas Instruments	
R1-074134	Uplink Reference Signals in Support of High-Speed UEs	Texas Instruments	
R1-074135	Sufficient Number of Sequences for PUSCH with Proposed High-Speed UE RS Structure	Texas Instruments	
R1-074183	Multiplexing of PUCCH and Sounding RS	Fujitsu	
R1-074191	Frequency hopping operation for UL sounding RS	LG Electronics	
R1-074192	Comparison of the proposals for CG UL DM RS	LG Electronics	
R1-074223	Multiplexing of Sounding RS and PUCCH	ZTE	
R1-074224	Hybrid combination of CG sequences for 1 and 2 RB UL DM RS	ZTE	
R1-074265	UL Sounding RS Design for E-UTRA	Alcatel-Lucent	
R1-074278	Sequence Hopping for Uplink RS	NTT DoCoMo	
R1-074279	Sounding RS Structure in E-UTRA Uplink	NTT DoCoMo	
R1-074280	Assignment Scheme for Sounding Reference Signals in E-UTRA Uplink	NTT DoCoMo	
R1-074281	Necessity of Multiple Bandwidths for Sounding Reference Signals	NTT DoCoMo	
R1-074282	Multiplexing Scheme of Sounding RS in E-UTRA Uplink	NTT DoCoMo	
R1-074313	Open SRS issues	Nokia Siemens Networks, Nokia	
R1-074314	On selection of computer generated DM RS sequences	Nokia Siemens Networks, Nokia	
R1-074315	Cyclic Shift Hopping and DM RS Signaling	Nokia Siemens Networks, Nokia	(R1-073644)
R1-074316	UL sounding reference signal for EUTRA TDD	Nokia, Nokia Siemens Networks	
R1-074332	Impact of prioritizing PUCCH ACK/NACK transmission over SRS	Nokia Siemens Networks, Nokia	
R1-074368	PUSCH sequence hopping patterns	Ericsson	
R1-074396	Comparison of Computer Generated sequences for E-UTRA uplink	Panasonic	
R1-074397	Further consideration on uplink RS hopping and grouping	Panasonic	
R1-074398	Frequency dependent PUSCH DM-RS generation method with considering eNB-specific allocation	Panasonic	
R1-074399	Sounding RS position and relation with PUCCH	Panasonic	
R1-074431	Bandwidth Allocation for the SRS	Freescale Semiconductor	
R1-074443	Comparison of Computer-Generated Sequence Proposals for UL DM RS	Texas Instruments	(R1-074131)
R1-074449	Computer Generated Sequence Comparison	Qualcomm Europe	
R1-074471	Coverage impact of shortened ACK/NACK format	Ericsson	
R1-074474	Summary of companies views regarding multiplexing between PUCCH and S-RS	LG Electtronics	
R1-074486	F-QPSK based CG UL DM RS for 1RB and 2RB	LG Electronics	
R1-074503	RB mapping for odd number of RB	Motorola, Nokia, Nokia Siemens Networks, TI, Qualcomm, Philips, Samsung	

Samsung Exhibit 1025, Page 845 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

6.2.3 Downlink Control Signaling

R1-074369	E-mail summary taking you forward on downlink control signaling	Ericsson	

The document was presented by Stefan Parkvall from Ericsson and provides a summary of e-mail discussion on downlink control signalling, that includes:

- PHICH coding for the case of 4 Tx antennas
- Relation between reference signals and control signaling for the multi-antenna case
- Association between PHICH and uplink transmission
- PHICH duration in MBSFN subframes
- PHICH configuration ("Chicken-and-egg problem")
- CCE-to-RE mapping

Discussion (Question / Comment):
Decision: Document is noted.

Conclusions from email discussion:

PHICH coding for 4 Tx antennas

- SF=4 with modified TX diversity scheme as baseline
    - Discuss offline the proposals in R1-073961 and R1-074483
- Extended CP: FFS SF=2 or SF=4

Relation between RS and control signaling for multiple antenna ports

- The PCFICH/PDCCH/PHICH is transmitted on the same set of antenna ports as the PBCH, i.e., if N antenna ports are used for the PBCH, N antenna ports are used for L1/L2 control signaling.

Association between PHICH and uplink transmission

- Discuss in the ad hoc session

PHICH duration in MBSFN subframes, semi-statically configured

- Supported PHICH durations in MBSFN subframes: 1 and 2 OS
- Supported PHICH durations in non-MBSFN subframes: 1 and 3 OS

CCE-to-RE Mapping

- Indexing
    - Time-first indexing
- Interleaving
    - Include unused CCE in interleaving process
    - Interleaving method (candidates proposed: PBRI, QPP, CRRI, Costas)
        - BW agnostic interleaver design

Samsung Exhibit 1025, Page 846 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Based on a generic and compact description, applying to REs remaining after PCFICH and PHICH
- All CCE [from one control channel] should be approximately evenly distributed over 1st n OFDM symbols, i.e. proportionally to the number RE available for PDCCH
- If consensus cannot be reached on a interleaving scheme, agree on evaluation criteria (e.g. metrics (frequency diversity, interference randomization) and interleaving lengths). Selection interleaving scheme at next meeting.
- Don't make a too big affair out of this…

R1-074483	Downlink ACK/NACK Transmit Diversity	Samsung	(R1-074074)

The document was presented by (…) from Samsung and extends previous discussions on CDM for ACK channel by introducing I/Q multiplexing, as well as the transmit diversity scheme of CDM+SFBC for 2Tx case. For 4 Tx case, the paper proposes to use rate ¾ orthogonal SFBC together with SF3 CDM, so that PA balance is satisfied for each repetition.

Discussion (Question / Comment):
Decision: Document is noted.

R1-073961	Spread factor for 4 Tx PHICH	Nortel	

The document was presented by (…) from Nortel and concludes that LTE downlink PHICH channel should adopt SF = 4 with modified SFBC+FSTD as transmit diversity for 4-tx system. The alternative PHICH mappings proposed should be used to map multiple PHICH channels in order to mitigate power imbalance on each antenna.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074199	DL PHICH structure	LG Electronics	

The document was presented by Joon Kui Ahn from LGE and discusses antenna mapping of PHICH for 4 TxD case. The paper suggests selecting between spreading factor 2 and 4 for PHICH antenna mapping for 4 TxD case and proposes a frequency zone based PHICH to RE mapping approach

Discussion (Question / Comment):
Decision: Document is noted.

CCE to RE Mapping

R1-074226	Generic interleaver for PDCCH	Huawei	

The document was presented by Mattias Wennström from Huawei and analyses four proposed interleavers for CCE to RE mapping. As a conclusion of the paper, it is proposed to adopt the Costas method for generating the interleaver sequence for the CCE to RE mapping.

Discussion (Question / Comment):
Decision: Document is noted.

R1-073981	BCH/SCH Transmission for Odd number of RB	Motorola, Nokia, Nokia Siemens Network	

The document was presented by Amitava Ghosh from Motorola and lays down a recommendation in which BCH (a transport channel) not be mapped to an integer number of RBs but just use the center subcarriers similar to SCH.

Samsung Exhibit 1025, Page 847 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Discussion (Question / Comment):
Decision: Document is noted. Topic shall be revisited after off-line discussion.

Friday 12th October

R1-074503	RB mapping for odd number of RB	Motorola, Nokia, Nokia Siemens Networks, TI, Qualcomm, Philips, Samsung	

The document was presented by Amitava Ghosh from Motorola and proposes a revision of TS 36.211.

Discussion (Question / Comment):
Decision: Document is agreed.

TDD specific

R1-074081	Interpretation of CCFI for EUTRA TDD	Samsung	

The document was presented by (…) from Samsung and lists a few way forwards addressing the interpretation of CCFI.

Discussion (Question / Comment):
Decision: Document is noted.

R1-073914	DL Control channel span	Qualcomm Europe	

The document was presented by Juan Montojo from Qualcomm and discusses issues to transmit a PDCCH for different formats (30, 40 and 60-bits payload) for different number of CCE concatenations and for different power boosting schemes.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074186	CCFI contents for LTE TDD with FS2	CATT	

The document was presented by (…) from CATT.

Discussion (Question / Comment):
Decision: Document is noted.

The following set of documents has not been treated.

R1-073913	PDCCH formats and contents	Qualcomm Europe	
R1-073915	Details on DL resource allocation	Qualcomm Europe	
R1-073916	On the size of the CCE	Qualcomm Europe	
R1-073917	PHICH details	Qualcomm Europe	
R1-073918	Issues with SU-1 transmissions	Qualcomm Europe	
R1-073919	D-BCH capacity	Qualcomm Europe	
R1-073940	Proposal of location of PHICH and CCE	SHARP	

Samsung Exhibit 1025, Page 848 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-073990	Support of Precoding for E-UTRA DL L1/L2 Control Channel	Motorola	
R1-073991	Requirement for DL PMI Signaling	Motorola	
R1-073992	PHICH Transmission for 1 Tx Antenna	Motorola	
R1-073993	PCFICH Transmission for 1 Tx Antenna	Motorola	
R1-074488	Interleaver design for Mini-CCE to RE Mapping	Motorola	(R1-073994)
R1-073995	Downlink Resource Allocation Mapping for E-UTRA	Motorola	
R1-073996	Search Space definition for L1/L2 Control Channels	Motorola	
R1-073997	E-UTRA Downlink L1/L2 Control Channel Configurations	Motorola	
R1-073998	Efficient Structure for Aggregating 12[3]48 Downlink Control Channel Elements	Motorola	
R1-073999	PDCCH Formats for DL Scheduling Assignments	Motorola	
R1-074000	PDCCH Formats for UL Scheduling Grants	Motorola	
R1-074001	PMI Downlink Signaling for E-UTRA	Motorola	
R1-074002	MU-MIMO PHICH Assignment	Motorola	
R1-074003	LTE Control channel configuration signaling and DRX	Motorola	
R1-074004	HARQ Process Identity for SU-MIMO	Motorola	
R1-074005	HARQ Error Conditions for Lost Grants	Motorola	
R1-074006	Transport Block and MCS mapping for RB Allocation	Motorola	
R1-074059	Control Signaling of MBMS Single-Cell Transmission	Huawei	
R1-074060	UL index in UL schedule grant for LTE TDD	Huawei	
R1-074071	Downlink Link Adaptation and Related Control Signaling	Samsung	
R1-074072	Downlink PMI indication for SU-MIMO	Samsung	
R1-074073	PHICH linking to downlink CCE	Samsung	
R1-074075	Further Considerations of CDD Precoding for High-speed UEs	Samsung	
R1-074076	Subset selection for precoding	Samsung	
R1-074077	PHICH structure in MBSFN subframes	Samsung	
R1-074078	Configuration of PDCCH Monitoring Set	Samsung	
R1-074079	Comparison of Downlink Resource Allocation Indication Schemes	Samsung	
R1-074080	PHICH/PDCCH to RE mapping	Samsung	
R1-074082	Short UL Grant Size in E-UTRA	Samsung	
R1-074083	Support of Re-Transmissions for Persistent Scheduling in E-UTRA UL	Samsung	

Samsung Exhibit 1025, Page 849 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074084	Transmission of Scheduling Units in E-UTRA DL	Samsung	
R1-074085	CCFI to RE Mapping for One Transmitter Antenna	Samsung	
R1-074086	CCFI to RE mapping for multiple TX antennas	Samsung	
R1-074136	Choice of CRC Length for PDCCH	Texas Instruments, Nokia, Nokia Siemens Networks	
R1-074137	Consideration of Supportable TF for E-UTRA DL	Texas Instruments	
R1-074160	DL Control Channel Structure: CCE Aggregation and Blind Detections	NEC Group	
R1-074161	Compact DL Assignment and its Resource Allocation Signalling	NEC Group	
R1-074162	DL Unicast Resource Allocation Signalling using L1L2 control channels	NEC Group	
R1-074163	Downlink ACK/NACK signalling for E-UTRA	NEC Group	
R1-074164	DL Multiplexing for Persistent and Dynamic scheduling	NEC Group	
R1-074165	Control channel format for DBCH, PCH and RACH response	NEC, Nokia, Nokia Siemens Networks, Motorola	
R1-074166	Low overhead PDCCH format for BCCH, PCH, RACH response	NEC Group	
R1-074167	Control Channel Multiplexing	NEC Group	
R1-074174	On the TDD UL Grant Channel	IPWirless, NextWave Wireless	
R1-074175	Dimensioning of TDD PHICH	IPWirless, NextWave Wireless	
R1-074176	Dimensioning of TDD Control Signalling	IPWirless, NextWave Wireless	
R1-074185	Signaling of MBSFN Subframe Allocations	Alcatel-Lucent	
R1-074194	Downlink control signaling for SU-MIMO	LG Electronics	
R1-074195	DL control channel configurations	LG Electronics	
R1-074196	Restriction of UL/DL subframe ratio considering PUCCH in TDD	LG Electronics	
R1-074197	Downlink PHICH repetition factor in 1 Tx case	LG Electronics	
R1-074198	Mapping Relation comparisons for PHICH	LG Electronics	
R1-074200	On the implementation of rank overide using codeword DTX	LG Electronics	
R1-074201	Interference Randomization Techniques for PHICH	LG Electronics	
R1-074218	CCE allocation scheme in PDCCH for efficient blind detection	ZTE	
R1-074221	DL Resource Allocation Signaling Indication Scheme	ZTE	
R1-074225	Considerations on DL signaling for support of SU- and MU-MIMO	ZTE	
R1-074227	MIMO precoding information in PDCCH	Huawei	
R1-074236	Multiplexing of PDCCHs of Multiple Ues in E-UTRA Downlink	KDDI	
R1-074237	Hybrid FDM/CDM Based Multiplexing for ACK/NACK Signals in E-UTRA Downlink	KDDI	

Samsung Exhibit 1025, Page 850 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074238	Rotational CDM for L1/L2 Control Channel Signaling in E-UTRA Downlink	KDDI	
R1-074239	An Evaluation of the Rotational CDM for L1/L2 Control Channel	KDDI	
R1-074240	System-Level Evaluation of the Rotational CDM for L1/L2 Control Channel	KDDI	
R1-074247	Discussion of PDCCH message formats	Philips, NXP Semiconductors	
R1-074248	Proposal for resource allocation signalling on PDCCH	Philips, NXP Semiconductors	
R1-074249	Signalling for UL resource allocation	Philips, NXP Semiconductors	
R1-074250	PDSCH timing for power saving for paging in idle mode	Philips	
R1-074259	Signaling Resource Allocations in DL Control Channel	Alcatel-Lucent	
R1-074283	Investigation on Control Information Bits in PDCCH	NTT DoCoMo	
R1-074284	Semi-static Configuration of Non-adaptive and Adaptive ARQ in E-UTRA Downlink	NTT DoCoMo	
R1-074285	Investigation on PMI Indication Schemes for Single-User MIMO Precoding in E-UTRA Downlink	NTT DoCoMo	
R1-074317	Reducing the decoding complexity of the PDCCH	Nokia, Nokia Siemens Networks	
R1-074318	Control channel to RE mapping	Nokia, Nokia Siemens Networks	
R1-074319	Signaling PCH, RACH response and dynamic BCH	Nokia, Nokia Siemens Networks	
R1-074320	Considerations on the CCE sharing for uplink and downlink allocation grants	Nokia, Nokia Siemens Networks	
R1-074321	Downlink resource assignments structure for LTE	Nokia, Nokia Siemens Networks	
R1-074322	DL-CCH formats	Nokia, Nokia Siemens Networks	
R1-074323	Downlink Control signaling considerations for EUTRA TDD	Nokia, Nokia Siemens Networks	
R1-074324	Multi-TTI Uplink Grants for TDD	Nokia, Nokia Siemens Networks	
R1-074325	MBMS single-cell p-t-m related control signaling	Nokia, Nokia Siemens Networks	
R1-074360	UE and CCE specific scrambling codes for low complexity blind detection of downlink control signaling	Mitsubishi Electric	
R1-074370	CCE to RE Mapping	Ericsson	
R1-074371	MIMO related DL control signalling	Ericsson	
R1-074385	ACK/NACK Index Mapping for Uplink Transmission for E-UTRA	InterDigital Communications LLC	
R1-074393	On the codeword to layer mapping issue for retransmission	Freescale Semiconductor	
R1-074400	Transport format signalling and padding overhead	Panasonic	
R1-074401	PDCCH payload formats and sizes	Panasonic	
R1-074402	PDCCH Signalling for retransmission of downlink persistent scheduling	Panasonic	
R1-074403	Comparison between FDM and CDM+FDM for DL L1/L2 control channel multiplexing	Panasonic	
R1-074404	DL ACK/NACK modulation and UL HARQ behaviour	Panasonic	
R1-074405	Assignment of Downlink ACK/NACK channel	Panasonic	

Samsung Exhibit 1025, Page 851 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074406	System level analysis for CCE aggregation size dependent transport format signalling	Panasonic	
R1-074407	Resource allocation and transport format signaling	Panasonic	
R1-074434	Semi-static, dynamic and hybrid CCE aggregation	Panasonic	
R1-074463	Investigation on Throughput Performance of MU-MIMO in E-UTRA Downlink	NTT DoCoMo	(R1-074286)
R1-074469	MU-MIMO Codebook Selection and Signaling Considerations for E-UTRA	InterDigital Communications LLC	(R1-074386)
R1-074472	Interleaver Design for CCE-to-RE Mapping	LG Electronics	(R1-074193)

R1-074499	Outcome of off-line discussion on DL control signaling	Ericsson	

The document was presented by Stefan Parkvall from Ericsson.

Discussion (Question / Comment):
Decision: Document is noted and endorsed. The alternative 1 as described on slide 5 of R1-074499 is in line with the working assumption on PHICH outside the interleaver.

R1-074505	Way forward on DL Control channel multiplexing	NEC, Nokia, Nokia Siemens Networks	

The document was presented by Thanh Bui from NEC

Discussion (Question / Comment):
Decision: Document is noted. R1-074505 describes the alternative 2 as described on slide 5 of R1-074499 (PHICH being part of the interleaving process. It is decided to revisit this proposal at next meeting.

Friday 12th October

R1-074508	Way forward on 4-Tx Transmit Diversity for PHICH Channel	Nortel, LGE, Alcatel-Lucent, Broadcom	

The document was presented by (…) from Nortel.

Discussion (Question / Comment):
Decision: Document is noted and way forward is agreed.

6.2.4 Uplink Control Signaling

R1-074372	E-mail summary taking you forward on uplink control signaling	Ericsson	

The document was presented by Stefan Parkvall from Ericsson and summarizes the results of e-mail discussion on uplink control signalling, including:

- Simultaneous transmission of ACK/NAK and CQI on PUCCH
- Scheduling request design
- PUCCH for TDD
- FS2-specific issues
- PUCCH resource indication
- Control on PUSCH

Discussion (Question / Comment):
Decision: Document is noted.

Samsung Exhibit 1025, Page 852 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Control on PUSCH

R1-074331	Avoiding PUSCH error situations caused by DL allocation grant signalling failure	Nokia Siemens Networks, Nokia	

The document was presented by Timo Lunttila from NSN and addresses the open question: how to avoid problems caused by the DL allocation grant failure.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074270	Mulplexing of PUCCH with PUSCH in E-UTRA UL Transmission	Alcatel-Lucent	

The document was presented by Fang-Chen Cheng from Alcatel-Lucent and discusses the mapping of the UL Control Signalling and its impact to the performance degradation of the PUSCH.

Discussion (Question / Comment):
Decision: Document is noted. Discussion should continue over email and results expected at next meeting.

PUCCH A/N indication

R1-074009	UL ACK/NACK Implicit Mapping	Motorola	

The document was presented by Nory Ravikiran from Motorola and provides several recommendations regarding the implicit mapping of UL ACK/NACK including accommodation for high-speed UEs.

Discussion (Question / Comment):
Decision: Document is noted.

Conclusion:

- For non-persistent scheduling, the ACK/NACK index is implicitly tied to the lowest CCE index used to construct the PDCCH
    - Relation between ACK/NACK index and CAZAC & cover sequence (TBD)
    - Discussion on which modifications needed for TDD should take place

PUCCH for TDD FS1

R1-074181	Maximum number of ACK/NAK per TTI for TDD FS1	IPWirless, NextWave Wireless	

The document was presented by Huiheng Mai from NextWave Wireless and proposes to restrict the maximum number ACK/NAK per UE per TTI to be 8.

Discussion (Question / Comment):
Decision: Document is noted.

Conclusion:

- A maximum of 8 ACK/NAK bits per TTI per UE in TDD FS1
    - This is under the assumption that achievable DL user peak rate is not reduced

R1-074182	TDD PUCCH	IPWirless, NextWave Wireless	

Samsung Exhibit 1025, Page 853 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

The document was presented by Huiheng Mai from NextWave Wireless and discusses methods of increasing the number of channel bits on PUCCH in order to overcome the current PUCCH physical channel structure limitation for carrying CQI with multiple ACK/NACK with reasonable coding rate.

Discussion (Question / Comment):
Decision: Document is noted.

Conclusion:

- A PUCCH structure with higher per-user channel capacity than the current 20-bit design is required for TDD to carry multiple ACK/NACK plus CQI

PUCCH for TDD FS2

- Hopping:
  - Hopping always enabled. Revisit decision after discussion on FS2 coverage optimisation.
- Hopping boundary (subframe split):
  - 5/4 and 4/4 split for normal and extended CP, respectively

Scheduling request

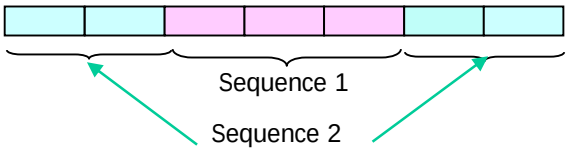
R1-074333	Scheduling Request supporting High Doppler	Nokia Siemens Networks, Nokia	(R1-073654)

The document was presented by Jari Lindholm from NSN

Discussion (Question / Comment):
Decision: Document is noted.

Conclusion on transmission of scheduling request

- Size of the scheduling request
  - 2 states: Either UE requests to be scheduled or (in case of no transmission) does not request to be scheduled
- On-Off Keying based on ACK/NACK design
  - The length 7 sequence is split into two orthogonal sequences, length 3 and length 4



- Compatibility with ACK/NACK transmission from different UEs
- Different cyclic shifts or orthogonal covers can be assigned for scheduling requests and ACK/NACK

R1-074097	Multiplexing CQI and ACK/NAK Transmission in E-UTRA UL	Samsung	

The document was presented by Aris Papasakellariou from Samsung and considers ACK/NAK and CQI multiplexing options for simultaneous transmission in the PUCCH.

Samsung Exhibit 1025, Page 854 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Discussion (Question / Comment):
Decision: Document is noted.

The following set of documents has not been treated.

R1-073907	UL control details for TDD	Qualcomm Europe	
R1-073920	Joint coding of CQI and ACK	Qualcomm Europe	
R1-073921	Support of ACK repetition in the UL of E-UTRA	Qualcomm Europe	
R1-073935	CAZAC sequence allocation for PUCCH	Toshiba	
R1-073941	Improved Flexibility/Performance CQI+ACK/NACK coding in the E-UTRA uplink	SHARP	R1-074493
R1-073942	Different target quality for rank	SHARP	
R1-073962	Further discussion on DL/UL signaling channel supporting rank adaptation for high mobility UE	Nortel	
R1-074007	PUCCH Transmission with SRS	Motorola	
R1-074008	UL ACK/NACK Resource Provisioning	Motorola	
R1-074010	Uplink transmission of CQI and Ack/Nack	Motorola	
R1-074011	Repetition of UL ACK/NACK on PUCCH	Motorola	
R1-074012	Scheduling Request Mechanism for EUTRA Uplink	Motorola	
R1-074013	CQI Coding Schemes	Motorola	
R1-074014	Multiplexing of Ack/Nack and data for UL	Motorola	
R1-074015	Persistent Scheduling of PUCCH resources	Motorola	
R1-074016	Uplink Control Signaling with Persistent Scheduling	Motorola	
R1-074061	Multiplexing of scheduling request indicator	Huawei	
R1-074062	PUCCH channel structure of TDD FS 2	Huawei	
R1-074063	Relation between UL ACK/NACK and DL CCE	Huawei	
R1-074087	SU-MIMO PMI feedback and Compression	Samsung	
R1-074088	CQI Reporting for MU-MIMO	Samsung	
R1-074089	Performance of single CQI feedback for 2CW SU-MIMO	Samsung	
R1-074091	Selection of orthogonal cover Walsh codes for high speed UL ACK/NACK channels	Samsung	
R1-074092	Slot-level UL ACK/NACK Cyclic Shift/Orthogonal Cover Remapping	Samsung	
R1-074093	Simultaneous UE transmission of UL ACK/NAK and CQI	Samsung	
R1-074094	Cyclic shift and orthogonal cover allocations for UL ACK/NACK	Samsung	
R1-074095	UL ACK/NACK resource indication for DL persistent scheduling	Samsung	

Samsung Exhibit 1025, Page 855 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074096	UL RB mapping and slot level re-mapping for ACK/NACK and CQI	Samsung	
R1-074098	ACK/NAK Repetitions in E-UTRA UL	Samsung	
R1-074138	Separate Rank and CQI Feedback in PUCCH	Texas Instruments	
R1-074139	Simultaneous ACK/NAK and SR Transmission in Uplink	Texas Instruments	
R1-074140	ACK/NAK Performance in PUCCH with Timing Offset and Near-Far Effect	Texas Instruments	R1-074487
R1-074141	Simultaneous CQI and ACK/NAK Transmission in Uplink	Texas Instruments	
R1-074142	Sounding Reference Signal In Support of Scheduling Request in E-UTRA	Texas Instruments	
R1-074168	CQI + ACK/NACK transmission in PUCCH	NEC Group	
R1-074169	PUCCH allocation for ACK/NACK transmission	NEC Group	
R1-074170	Detail of ACK/NACK and CQI transmission without data transmission	NEC Group	
R1-074187	PUCCH details for ACK transmission LTE TDD with FS2	CATT	
R1-074188	PUCCH details for CQI transmission LTE TDD with FS2	CATT	
R1-074202	Methods for PUCCH and SRS simultaneous transmission	LG Electronics	
R1-074203	Way forward on PUCCH and SRS simultaneous transmission	LG Electronics	
R1-074204	Error case handling in case of DL control channel failure	LG Electronics	
R1-074205	Scheduling Request (SR) design considering PUCCH structure	LG Electronics	
R1-074206	Considerations on UL ACK/NACK operation	LG Electronics	
R1-074207	Control signalling error requirement depending on eNode B DTX detection	LG Electronics	
R1-074228	Completing the 2 TX codebook	Huawei	
R1-074241	Uplink Data-non-associated Control Signaling in E-UTRA	KDDI	
R1-074242	Scheduling Request Channel in E-UTRA Uplink	KDDI	
R1-074251	Vector quantisation with successive refinement for MIMO feedback	Philips	
R1-074252	CQI reporting for TDD	Philips	
R1-074267	Adaptivity for UL HARQ Transmissions	Alcatel-Lucent	
R1-074268	On the Time Duration Field in the Uplink Scheduling Grant	Alcatel-Lucent	
R1-074271	On the Need for VoIP Coverage Enhancement for the E-UTRA UL	Alcatel-Lucent	
R1-074272	Multiplexing ACK/NAK with CQI	Alcatel-Lucent	
R1-074276	Multiplexing the Scheduling Request in the Uplink	Alcatel-Lucent	
R1-074287	On ACK/NACK and CQI Transmission Method in PUCCH	NTT DoCoMo	
R1-074288	Transmission Method of Scheduling Request in E-UTRA Uplink	NTT DoCoMo	
R1-074289	Basic Method for CQI Feedback in E-UTRA	NTT DoCoMo	

Samsung Exhibit 1025, Page 856 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074290	Investigation on Performance of PUCCH in Coverage-limited Conditions	NTT DoCoMo	R1-074464
R1-074326	Comparison of single-sequence and multi sequence modulation on PUCCH	Nokia Siemens Networks, Nokia	
R1-074327	ACK/NACK+CQI transmitted on PUCCH	Nokia Siemens Networks, Nokia	
R1-074328	Benefits of resource-specific cyclic shift randomization on PUCCH	Nokia Siemens Networks, Nokia	
R1-074329	ACK/NACK Channelization	Nokia Siemens Networks, Nokia	
R1-074330	Implicit Mapping of ACK/NACK resources	Nokia Siemens Networks, Nokia	
R1-074334	On CQI coding in PUCCH	Nokia Siemens Networks, Nokia	(R1-073660)
R1-074335	Repeated transmission of ACK in TDD FS2 PUCCH	Nokia, Nokia Siemens Networks	
R1-074336	Multiple ACK transmission in PUCCH for TDD FS2	Nokia, Nokia Siemens Networks	
R1-074337	CQI and CQI+ACK transmission in PUCCH for TDD FS2	Nokia, Nokia Siemens Networks	
R1-074373	Control Signalling for Half Duplex FDD in LTE	Ericsson	
R1-074408	Ack/Nack repetition and Implicit Resource Allocation for PUCCH	Panasonic	
R1-074410	Mapping position of control channel for Uplink Shared Channel	Panasonic	
R1-074411	Cyclic shift hopping patterns for uplink ACK/NACK	Panasonic	
R1-074412	Ordering of the implicit resource allocation table for UL ACK/NACK	Panasonic	
R1-074413	Variable Phase Definition of the Reference Signal for CQI in PUCCH	Panasonic	
R1-074414	Clarification of Implicit Resource Allocation of Uplink ACK/NACK Signal	Panasonic	
R1-074435	Signaling of Frequency Hopping for UL Transmission	Alcatel-Lucent	
R1-074438	PUCCH details for TDD FS2	Nokia, Nokia Siemens Networks	
R1-074464	Investigation on Performance of PUCCH in Coverage-limited Conditions	NTT DoCoMo	(R1-074290)
R1-074487	ACK/NAK Performance in PUCCH with Timing Offset and Near-Far Effect	Texas Instruments	(R1-074140)
R1-074493	Improved Flexibility/Performance CQI+ACK/NACK coding in the E-UTRA uplink	SHARP	(R1-073941)

Friday 12th October

R1-074491	Proposed way forward on ACK/NACK channelization	Panasonic, Nokia, Nokia Siemens Networks, Samsung, Texas Instruments	(R1-074409)

The document was presented by Seigo Nakao from Panasonic and proposes the allocation of cyclic shift and orthogonal cover for UL ACK/NACK for the case of 18 ACK/NACK channels in an RB.

Discussion (Question / Comment):
Decision: Document is noted and the way forward is agreed. Table 1 is an example for the ACK/NACK channelization. Table 2 is to be included in TS 36.211.

Samsung Exhibit 1025, Page 857 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

6.2.5 Mapping of virtual resource blocks to physical resource blocks

R1-074019	Downlink DVRB email reflector summary	Motorola	

The document was presented by Brian Classon from Motorola and provides feedback from email discussion w.r.t open issues for the DL including:

- how to assign the Nd PRB-pairs a VRB-pair is mapped to
- which mapping to use for Nd=3
- should we remove Nd=3

Discussion (Question / Comment):
Decision: Document is noted and following statement is agreed:

- Mapping#1 agreed for Nd=3

R1-074417	VoIP capacity comparison between Nd=2 and Nd=3 for DL distributed transmission	Panasonic	

The document was presented by Akihiko Nishio from Panasonic and provides a system level comparison for the VoIP capacity between Nd=2 and Nd=3.

The paper concludes that 8~9% VoIP capacity gain of Nd=3 vs. Nd=2 is observed and justifies the necessity of Nd=3.

Discussion (Question / Comment):
Decision: Document is noted.

R1-073922	PDSCH distributed transmissions	Qualcomm Europe	

The document was presented by Juan Montojo from Qualcomm and shows the performance difference for a narrowband VoIP application (7.95kbps) requiring a single RB pair as a resource allocation. It provides a comparison of the DL VoIP capacity for Nd=2 and Nd=12 with the assumption that the results for Nd=3 are expected to be in between those.

The paper concludes that the VRB to PRB mapping option with Nd=3 does not provide any additional value.

Discussion (Question / Comment):
Decision: Document is noted.

Conclusion: The two previous contributions showed quite different results and opposite conclusions and the discussion didn't bring any in light how this could be explained. Status quo situation!!

R1-074021	Uplink SCH Hopping Configuration email reflector summary	Motorola	

The document was presented by Brian Classon from Motorola.

Discussion (Question / Comment):
Decision: Document is noted. Some additional discussions are still required to check whether Intra-subframe hopping should be able to be turned off on a UE specific basis.

R1-074495	Way forward for LFDMA with hopping in PUSCH	Samsung, Qualcomm	

The document was presented by Miss Heo Youn from Samsung

Discussion (Question / Comment):
Decision: Document is noted. Way forward shall be revisited after off-line discussion.

Samsung Exhibit 1025, Page 858 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Friday 12th October

R1-074517	Way forward for LFDMA with hopping in PUSCH	Samsung, Qualcomm, Ericsson, LGE, Motorola, NEC, Nortel, NTT DoCoMo, Nokia, Nokia Siemens Networks, Panasonic, ZTE	(R1-074495)

The document was presented by Miss Heo Youn from Samsung

Discussion (Question / Comment):
Decision: Document is noted.

Agreement on the way forward for Uplink LFDMA hopping as follows:

- The indication to a particular UE to transmit in FSS (not hopped) or FH mode signalled in uplink grant (1bit)
  - 0 : No hopping, 1 : Hopping
- Semi-static configuration of two hopping modes on a cell specific basis (signalled by D-BCH)
  - Inter-subframe hopping only
  - both intra and inter-subframe hopping
- N is the maximum amount of bandwidth (resources) which can be allocated to a hopping UE
  - N= N_RB /M
    - N_RB = total number of RBs used for PUSCH transmission.
    - Maximum M value is [2-4].
- UE can change RB(s) with uplink grant in (re)transmission
  - FFS if it can be done without obeying hopping sequence
  - Additional bits related to hopping may be included in the UL grant (FFS)
- Hopping schemes : FFS
  - Cyclic shift hopping + mirroring (R1-074209, LGE)
  - Sub-band hopping (R1-074157, NEC)
  - Pattern based hopping (R1-074222, ZTE, CATT, Huawei)
  - Combination of mirroring and hopping (R1-074495, Qualcomm, Samsung)
  - …

The following set of document has not been treated.

R1-073923	UL hopping for frequency diverse scheduling	Qualcomm Europe	
R1-073963	On the need of Nd=3 for the diversity VRB mapping	Nortel	
R1-073964	UL RB hopping for PUSCH	Nortel	
R1-074017	DL Distributed Transmission for Nd=3	Motorola	
R1-074018	A simple example of dynamic DVRB signaling	Motorola	

Samsung Exhibit 1025, Page 859 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074020	UL Resource Allocation for Frequency-diverse (hopping) Allocations	Motorola	
R1-074099	UL LFDMA with hopping in PUSCH	Samsung	
R1-074100	Uplink time domain hopping for E-UTRA TDD	Samsung	
R1-074154	Cell-specific Mapping of VRBs to PRBs for Downlink Distributed Transmission	NEC Group	
R1-074155	DL Distributed Resource Signalling for EUTRA	NEC Group	
R1-074156	Performance Evaluation of FH Schemes for EUTRA Uplink	NEC Group	
R1-074157	Frequency Hopping Pattern for EUTRA Uplink	NEC Group	
R1-074208	DL LVRB allocation approach	LG Electronics	
R1-074209	Frequency hopping method for PUSCH	LG Electronics	
R1-074219	Distributed Transmission in E-UTRA Downlink	ZTE	
R1-074222	The Intra-TTI frequency hopping scheme in PUSCH	ZTE, CATT, Huawei	
R1-074229	Performance evaluation of cell-specific mapping of distributed virtual resource blocks in downlink	Huawei	
R1-074253	DVRB to PRB mapping for EUTRA downlink	Philips	
R1-074258	Distributed Virtual Resource Block Mapping for Persistent Resource Allocation as VoIP	Alcatel-Lucent	
R1-074275	VRB addressing for localized and distributed DL transmission	Alcatel-Lucent	
R1-074291	Usage of Remaining Resource Elements in Resource Blocks Multiplexed with PBCH and SCH	NTT DoCoMo	
R1-074292	Control Signaling for Uplink Frequency Hopping in E-UTRA	NTT DoCoMo	R1-074465
R1-074338	On the impact of LTE DL distributed transmission	Nokia, Nokia Siemens Networks	
R1-074361	Distributed VRB mapping over 3 PRBs	Mitsubishi Electric	
R1-074416	DVRB-pair to PRB-pair assignment and signaling for DL distributed transmission	Panasonic	
R1-074418	Views on mapping within distributed PRB-pair for Nd=3	Panasonic	
R1-074419	Mapping within distributed PRB-pair for Nd=3	Panasonic	
R1-074465	Control Signaling for Uplink Frequency Hopping in E-UTRA	NTT DoCoMo	(R1-074292)

6.2.6 SSC, PSC

R1-074022	Cell Search E-mail Reflector Summary	Motorola	

The document was presented by Amitava Ghosh from Motorola and summarizes the email discussions on following 3 topics:

- Radio frame timing detection
- Choose the number of codes for SCH1 and SCH2 so that the number of hypothesis is 340.
- Choose the scrambling sequence based on (II).

Samsung Exhibit 1025, Page 860 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Discussion (Question / Comment):
Decision: Document is noted.

R1-074498	Way Forward for Secondary SCH Mapping and Scrambling	TI, Motorola, Huawei, LGE, Nortel, Qualcomm, Sharp, ETRI	

The document was presented by Eko Onggosanusi from TI.

Discussion (Question / Comment):
Decision: Document is noted and way forward is agreed.

The following set of documents has not been treated.

R1-073924	Scrambling of SSC	Qualcomm Europe	
R1-073925	Details for SSC specification	Qualcomm Europe	
R1-073943	Proposed Scrambling sequences for S-SCH with embedded frame timing derivation	SHARP	
R1-073944	System information mapping for the SSC	SHARP	
R1-073965	Scrambling code design for SSCH	Nortel	
R1-073966	Short Sequences for S-SCH	Nortel	
R1-074023	Optimisation of P-SCH Indices for Synchronous Network Operation	Motorola, Nokia, Nokia Siemens Network	
R1-074024	Evaluation of Scrambling Methods for S-SCH	Motorola	
R1-074025	Indication of Frame Boundary Using S-SCH	Motorola	
R1-074052	Comparison of S-SCH mapping Methods	ETRI	
R1-074053	S-SCH Scrambling Methods	ETRI	
R1-074143	Secondary SCH Mapping and Scrambling	Texas Instruments	
R1-074211	Flexibility of detecting 40ms P-BCH boundary	LG Electronics	
R1-074220	Remaining Issues on SSC Design	ZTE, RITT, CATT	
R1-074230	Scrambling and information encoding for the S-SCH	Huawei	
R1-074293	Investigation on P-SCH Specific Scrambling Sequences for S-SCH	NTT DoCoMo	
R1-074339	Transmission of P-BCH, P-SCH and S-SCH on dedicated MBMS carrier	Nokia, Nokia Siemens Networks	
R1-074374	Scrambling of the Secondary Synchronization Signal	Ericsson	
R1-074433	P-BCH TTI boundary detection using BPSK on S-SCH	InterDigital Communications LLC	
R1-074485	SSCH Mapping to Group ID and Frame Timing	Marvell Semiconductor	(R1-073898)
R1-074502	SSC mapping and scrambling method	LG Electronics	(R1-074210)

Samsung Exhibit 1025, Page 861 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

6.2.7 RACH

R1-074026	Random Access E-mail Reflector Summary	Motorola	

The document was presented by Amitava Ghosh from Motorola

Discussion (Question / Comment):
Decision: Document is noted.

Conclusion:

- Root Zadoff-Chu allocation (Revisit after offline discussion)
  - Pair-wise allocation with the selection method […]
- PRACH slot configuration for FDD indicated with 4 bits as in the table below:

RA slot configuration	RA period (sub-frames)	RA sub-frames
0	20	1
1	20	4
2	20	7
3	10	1
4	10	4
5	10	7
6	5	1
7	5	2
8	5	3
9	10	1, 4, 7
10	10	2, 5, 8
11	10	3, 6, 9
12	2	0
13	2	1
14	1	0
15	20	9

- PRACH slot configuration for TDD FS1 indicated with 3 bits as in the table below:

Slot allocation #	M_T	N_F	f_{PRACH} (P= 5m)	f_{PRACH} (P=10ms)
0	1	1	1 / 5.0ms	1 / 10ms
1	1	2	1 / 2.5ms	1 / 5.0ms
2	1	3	1 / 1.7ms	1 / 3.3ms
3	1	5	1 / 1.0ms	1 / 2.0ms
4	1	10	1 / 0.5ms	1 / 1.0ms
5	2	1	1 / 10ms	1 / 20ms
6	3	1	1 / 15ms	1 / 30ms
7	4	1	1 / 20ms	1 / 40ms

  - FFS what to do with the 4th bit
  - For TDD (FS1, FS2) multiple PRACH frequency access slots in one sub-frame are supported

Samsung Exhibit 1025, Page 862 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- FFS where to place the PRACH in the subframe

- Exact cyclic shift values
  - Working assumption in the table below

N_{CS} Configuration	Set 2
0	13
1	15
2	18
3	22
4	26
5	32
6	38
7	46
8	59
9	76
10	93
11	119
12	167
13	279
14	419
15	839

- PRACH for 1.4 MHz
  - Solution (e.g. changed numerology, ACK/NAK avoidance) to be decided at next meeting, based on inputs.
- Cyclic shift restriction: Not multiples of N_{CS}
- Start of random access burst for FDD
  - For FDD, the start of the random access burst shall be aligned with the start of an uplink sub-frame.

R1-074494	Proposed way forward for PRACH sequence ordering discussion	Panasonic, TI, Huawei, LGE, NTT DoCoMo	(R1-074420)

The document was presented by Pierre Bertrand from TI

Discussion (Question / Comment):
Decision: Document is noted.

R1-074180	PRACH Slot Configuration for TDD FS1	IPWirless, NextWave Wireless	

The document was presented by Nick Anderson from IPWireless and addresses TDD specific design aspects and proposes a configuration scheme for TDD FS1.

Discussion (Question / Comment):

Samsung Exhibit 1025, Page 863 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: Document is noted.

R1-074147	Cyclic Shift Values for E-UTRA PRACH	Texas Instruments, LG Electronics	

The document was presented by Pierre Bertrand from TI.

Discussion (Question / Comment):
Decision: Document is noted.

Friday 12th October

R1-074514	Way forward proposal on PRACH sequence ordering	TI, LGE, Huawei, Alcatel-Lucent, Nokia, Nokia Siemens Networks, Panasonic, NTT DoCoMo	

The document was presented by Miss Jing Jiang from TI.

Discussion (Question / Comment):
Decision: Document is noted and way forward is agreed.

The following set of documents has not been treated.

R1-074027	RACH Slot Configurations for FS1	Motorola	
R1-074028	RACH for 1.4MHz System Bandwidth	Motorola	
R1-074029	Comparison of Different Proposals for Ncs	Motorola	
R1-074101	Cyclic Shift Restrictions for RACH in Small, Medium and Large Cells	Samsung	
R1-074102	Determination of the Cyclic Shift Amount, Ncs	Samsung	
R1-074144	Random Access Slot Configurations	Texas Instruments	
R1-074145	Sequence ordering for PRACH in E-UTRA	Texas Instruments, LG Electronics, Huawei	
R1-074146	Comparison of Hybrid methods for PRACH sequence ordering	Texas Instruments	
R1-074148	Cyclic Shift Configuration and Sequence Ordering in Support of High-Speed Random Access	Texas Instruments	
R1-074231	Comparison of proposals for values of cyclic shift increment Ncs	Huawei	
R1-074294	On PRACH Structure for 1.4-MHz System Bandwidth	NTT DoCoMo	
R1-074295	PRACH Multiplexing Method and Slot Configuration for E-UTRA Uplink	NTT DoCoMo	
R1-074340	Sequence ordering and other RACH issues	Nokia Siemens Networks, Nokia	
R1-074392	Specification of Formula for Restricted Cyclic shift Set	LG Electronics, Nokia, Nokia Siemens Networks, Texas Instruments	
R1-074421	PRACH sequence index ordering	Panasonic	
R1-074422	Limitation of RACH sequence allocation for high mobility cell	Panasonic	

Samsung Exhibit 1025, Page 864 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

6.3 Finalization of TS 36.212

CRC

R1-074441	CRC Bit Order: Way Forward	Nokia Siemens Networks, Nokia, Motorola, Ericsson, Samsung	

The document was presented by Thomas Chapman from NSN and proposes that the LTE specification 36.212 is simplified by adopting natural CRC bit order.

Discussion (Question / Comment):
Decision: Document is noted and proposed way forward agreed.

R1-074341	CRC Bit Order: Simulation Results	Nokia Siemens Networks, Nokia	

Decision: Document is noted as an attachment to R1-074441.

R1-074473	TB CRC generator polynomial	Ericsson, ETRI, ITRI, LGE, Motorola, Nokia, Nokia Siemens Networks, Nortel, Qualcomm, Samsung, ZTE	(R1-074105)

The document was presented by Zhouyue Pi from Samsung and proposes to use different CRC generator polynomials for calculating the CB CRC and the TB CRC.

Discussion (Question / Comment): Concerns on the reliability and accuracy of the proposal CRC generator polynomials
Decision: Document is noted and agreed as working assumption, but it shall be revisited if it is found that second polynomial is not needed.

R1-074375	Error Detection Reliability of CRC	Ericsson	
R1-074448	Generator Polynomial for Transport Block CRC	Qualcomm Europe	

Decision: Documents are noted as attachments to R1-074473.

R1-074376	ID specific CRC on DL-SCH/UL-SCH	Ericsson	

The document was presented by Stefan Parkvall from Ericsson and proposes to include the MAC identity in the CRC calculation for DL-SCH and UL-SCH.

Discussion (Question / Comment):
Decision: Document is noted. Off-line discussion required (to be revisited)

Friday 12th October

Discussion should continue until next meeting

Interleaving and multiplexing

R1-074468	Way forward on Physical Channel Segmentation	Motorola, Nokia, Nokia Siemens Networks, Broadcom, TI, Qualcomm, Nortel, Freescale	

The document was presented by Brian Classon from Motorola and proposes a way forward to overcome the "equal-size" rule that did not take multiple antenna scenarios into consideration. Proposal is that an equal-size rule with even number of modulation symbols per CB be adopted for TBs mapped to multiple layers.

Discussion (Question / Comment):

Samsung Exhibit 1025, Page 865 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: Document is noted and way forward agreed.

R1-074030	Physical Channel Segmentation Considering Multiple Antennas	Motorola	

Decision: Document is noted as an attachment to R1-074468.

TDD HARQ

R1-074173	Summary of Reflector Discussions on TDD FS1: HARQ related	IPWirless, NextWave Wireless	

The document was presented by Huiheng Mai from NextWave Wireless and summarizes the email discussion on number of HARQ processes and HARQ timing, and corresponding way forward.

Discussion (Question / Comment):
Decision: Document is noted.

Conclusion:

- Way forward for UL and DL is agreed.
- Discussion on actual DL/UL allocations is not restricted by this.
- If eNodeB processing times change for FDD, this should be revisited for TDD as well.

R1-074446	TDD HARQ timing	IPWirless, NextWave Wireless	(R1-074179)

The document was presented by Huiheng Mai from NextWave Wireless.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074345	HARQ in TDD (FS 1)	Nokia, Nokia Siemens Networks	

The document was presented by Che Xiangguang from Nokia and discusses the processing time requirements that relate to efficient HARQ operation with FS1 in TDD.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074346	HARQ in TDD (FS 2)	Nokia, Nokia Siemens Networks	

The document was presented by Che Xiangguang from Nokia and discusses the processing time requirements that relate to efficient HARQ operation with FS2 in TDD.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074178	Implementation of Idle Period in TDD FS1	IPWirless, NextWave Wireless	

The document was presented by Huiheng Mai from NextWave Wireless and proposes to adopt method B (as described in paper) to implement the IP for TDD FS1. This method matches the coded bits only to the channel bits that are not in the IP and thereby provides equal error protection amongst all code blocks.

Discussion (Question / Comment):
Decision: Document is noted and proposal is agreed.

Samsung Exhibit 1025, Page 866 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Number of HARQ processes

R1-074269	Number of HARQ Processes	Alcatel-Lucent	

The document was presented by Henry Ye from Alcatel-Lucent and addresses the question whether the eNode B's processing time should be chosen as 2 ms or 3 ms and proposes to adopt 7 HARQ processes in order to shorten the total round trip HARQ delay.

Discussion (Question / Comment): Nokia had concerns with 2ms processing time and asked whether having 7 or 8 HARQ processes makes a difference from user perspective.
Decision: Document is noted.

R1-074466	Views on Number of Hybrid ARQ Processes in E-UTRA	NTT DoCoMo, AT&T, KDDI, Mitsubishi Electric, Orange, Sharp, T-Mobile	(R1-074296)

The document was presented by (…) from NTT DoCoMo and presents the contributor's view on the number of HARQ processes in the E-UTRA FDD from the operator viewpoint and then, proposes to add an option with 6 HARQ processes to achieve short latency.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074344	Number of HARQ processes for FDD	Nokia, Nokia Siemens Networks	

The document was presented by Asbjörn Grovlen from Nokia and discusses the processing times for eNB. The paper recommends that the number of HARQ processes in the UL should be 8 with 8 ms between retransmissions.

Discussion (Question / Comment):
Decision: Document is noted. Mr Chairman suggests revisiting this topic at the next meeting and continuing discussion until then.

The following set of documents has not been treated.

R1-073926	Details of control and data multiplexing in PUSCH	Qualcomm Europe	
R1-073927	RE mapping for PDSCH and PUSCH	Qualcomm Europe	
R1-073967	MCS selection for LTE	Nortel	
R1-074031	RV definition	Motorola	
R1-074032	On supporting 1st stage turbo code rate matching	Motorola	
R1-074033	Soft Buffer size per HARQ Process	Motorola	
R1-074034	Bit Scrambling Per Code Block	Motorola	
R1-074103	Performance of orthogonal Hybrid ARQ for multi-user MIMO in E-UTRA uplink	Samsung	
R1-074104	Redundancy Version (RV) Defintion for Turbo code Rate Matching	Samsung	
R1-074106	RV starting point in UL HARQ	Samsung	
R1-074108	HARQ symbol to RE mapping	Samsung	

Samsung Exhibit 1025, Page 867 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074184	Adoption of 2-stage Rate Matching and Modified IR-HARQ	Fujitsu	
R1-074342	RV Definition	Nokia Siemens Networks, Nokia	
R1-074343	BCH Interleaving	Nokia Siemens Networks, Nokia	
R1-074478	One generator polynomial for both transport block CRC and code block CRC	Broadcom	

6.4 Finalization of TS 36.213

6.4.1 Timing synchronization

R1-074109	Radio link monitoring for E-UTRA	Samsung	

The document was presented by Juho Lee from Samsung and takes consideration on how to check the synchronisation status of radio link for E-UTRA taking into account the case of WCDMA. Both the synchronisation primitives and radio link failure procedure are addressed.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074377	On monitoring radio problem detection	Ericsson	

The document was presented by Lars Lindbom from Ericsson and discusses on how the combination of several physical signals and channels might be used for indicating downlink radio problem detection in order to speed up the radio link detection in particular when UEs operates in DRX mode.

Discussion (Question / Comment):
Decision: Document is noted.

The following document has not been treated.

R1-074035	Timing and HARQ	Motorola	

6.4.2 UL/DL Power Control

R1-074439	Summary of Power Control E-mail Discussion	Nokia Siemens Networks	

The document was presented by Jari Lindholm from NSN and summarizes the outcomes of email discussion on UL PC.

Discussion (Question / Comment):
Decision: Document is noted.

Conclusion:

PUSCH formula:

- Po proposed dynamic range is agreed on [-126dBm, 24dBm]
- delta_i (accumulation): Off-line discussion is required
- delta_i (absolute): Off-line discussion is required

PUCCH formula:

Samsung Exhibit 1025, Page 868 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Po proposed dynamic range is agreed on [-130dBm, -96dBm]
- delta_i: Off-line discussion is required

P-PUSCH

- It is agreed that PUSCH formula is used for persistent PUSCH

R1-074041	UE Transmit Power Adjustment for LTE	Motorola	

The document was presented by Nory Ravikiran from Motorola and outlines options that enable LTE UEs to accurately adjust transmission power. As a conclusion, two options are compared and it is proposed that RAN1/4 investigate various alternatives that further define how option 2 can be specified in the E-UTRA specifications.

Discussion (Question / Comment):
Decision: Document is noted. Draft LS to RAN4 shall be made in R1-074484 (Motorola) on transient behaviour for power adjustment in a slot in different subframes.

Friday 12th October

R1-074484	LS on UE transmission power adjustments	RAN1, Motorola, Panasonic

The document was presented by Robert Love from Motorola

Discussion (Question / Comment):
Decision: Document is agreed. LS can be sent to RAN4.

R1-073930	Details on UL Power Control	Qualcomm Europe	

The document was presented by Juan Montojo from Qualcomm and covers open issues related to the specification of UL power control for E-UTRA.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074039	Power setting for persistent scheduled PUSCH	Motorola	

The document was presented by (…) from Motorola and proposes power control scheme for persistent PUSCH.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074470	Uplink Power Control for E-UTRA – Comments on Open Issues	Ericsson	(R1-074378)

The document was presented by Erik Dahlman from Ericsson.

Discussion (Question / Comment):
Decision: Document is noted. Off-line discussion should go on.

R1-074348	Power control headroom reports for EUTRAN uplink	Nokia Siemens Networks, Nokia	(R1-073676)

The document was presented by Jari Lindholm from NSN and underlines the importance of power control headroom reports, especially in relation to the allocation of the uplink transmission bandwidth and MCS to the different users.

Samsung Exhibit 1025, Page 869 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Discussion (Question / Comment):
Decision: Document is noted.

R1-074038	Path loss and power headroom report for uplink power control	Motorola	

The document was presented by (…) from Motorola.

Discussion (Question / Comment):
Decision: Document is noted. Off-line discussion should go on.

R1-074479	Way forward on DL power control	NEC, Ericsson, Fujitsu, Marvell Semiconductor, Motorola, Panasonic, Philips, Qualcomm, ZTE	(R1-074158)

The document was presented by Thanh Bui from NEC.

Discussion (Question / Comment): Nokia didn't contribute but agrees with the proposed way forward.
Decision: Document is noted. Off-line discussion should go on.

The following set of documents has not been treated.

R1-073968	UL Power Control with Fractional Frequency Reuse for E-UTRA	Nortel	
R1-074037	Sounding Reference Signal Power Setting	Motorola	
R1-074040	EPRE Downlink Requirements	Motorola	
R1-074212	Consideration on UL power control	LG Electronics	
R1-074266	UL Power Control Parameter Values in PUSCH Power Control	Alcatel-Lucent	
R1-074274	Power Control for RACH	Alcatel-Lucent	
R1-074347	Closed loop power control corrections for PUSCH	Nokia Siemens Networks, Nokia	(R1-073675)
R1-074387	E-UTRA Power Control Performance Comparison of Feedback Methods	InterDigital Communications LLC	
R1-074388	Uplink Power Control Procedures and Text Proposal for E-UTRA	InterDigital Communications LLC	
R1-074423	Power control: Function split between Specifications	Panasonic	

R1-074511	Summary of Power Control Discussion	Nokia	

The document was presented by Asbjörn Grovlen from Nokia.

Discussion (Question / Comment):
Decision: Document is endorsed.

6.4.3 Inter-cell Interference Coordination

R1-074477	Way forward on UL ICIC/overload indicator for LTE	Nokia Siemens Networks, Nokia, Ericsson, Alcatel-	

Samsung Exhibit 1025, Page 870 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

		Lucent, T-Mobile	

The document was presented by Joern Krause from NSN.

Discussion (Question / Comment): Comment done stating that multiple simulations from different companies have been performed and results made available for the proposed frame work for further progress.
Motorola and Qualcomm did complain on the retained approach. Due to lack of time, Mr Chairman decided to stop the discussion.
Decision: Document is noted. Off-line discussion is required to understand Motorola concerns. The topic shall be revisited during the week.

Friday 12th October

Discussion should go on until next meeting

The following set of documents has not been treated.

R1-073969	Discussion on the DL interference coordination	Nortel	
R1-074042	Uplink Inter-Cell Power Control: X2 Messages	Motorola	
R1-074235	Improving Inter-Sector Handover User Throughput by Combined Interference Coordination and softer Handover in E-UTRA Downlink	CHTTL	
R1-074264	Support for Semi-Static Inter cell Interference Coordination	Alcatel-Lucent, Nortel Networks	
R1-074349	Overload Indicator handling for LTE	Nokia Siemens Networks, Nokia	
R1-074350	Low load scenarios with CQI-based interference coordination	Nokia, Nokia Siemens Networks	
R1-074379	Reactive and Pro-active Use of Uplink Overload Indication in LTE	Ericsson	
R1-074444	On Inter-cell Interference Coordination Schemes without/with Traffic Load Indication	Ericsson	(R1-074380)
R1-074475	Semi-Static Interference Coordination Method	Alcatel-Lucent	(R1-074263)

6.4.4 RACH timing and preamble sequence selection

R1-074172	Summary of Reflector Discussions on TDD FS1: RACH Timing	IPWirless, NextWave Wireless	

The document was presented by Huiheng Mai from NextWave Wireless but presentation was stopped due to laptop battery failure and RAN1 running out of time.

Discussion (Question / Comment):
Decision: Document should be presented at next meeting.

6.4.5 UE Procedures for downlink shared channel

R1-074501	Summary of CQI Ad-Hoc	Ad-Hoc Chairman	

The document was presented by Juho Lee from Samsung and provides the results of the parallel sessions on CQI.

Discussion (Question / Comment):
Decision: Document is endorsed.

Samsung Exhibit 1025, Page 871 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Here below are the documents that have been treated under this Agenda Item during the parallel sessions and the related conclusions:

CQI generic structure

R1-074047	Way Forward for CQI Reporting	Motorola	
R1-074352	CQI format to facilitate eNode-B link adaptation	Nokia Siemens Networks, Nokia	
R1-074381	Aperiodic CQI reporting	Ericsson	
R1-074424	Discussion on CQI Report Metric (SINR vs TBS)	Panasonic	
R1-074453	Proposed way forward for CQI reporting	Nokia Siemens Networks, Ericsson, Huawei, Nokia, CATT	(R1-074383)

Conclusion:

- CQI index is defined in terms of TBS, MS (QPSK, 16QAM, 64QAM) per n PRBs
  - Value of n is fixed and FFS.
  - Other parameters are FFS.
- A single CQI index corresponds to an index pointing to a value in the CQI table.
  - How many CQI indices per m subframe(s) will be sent to the Node B is FFS.
- What equivalent SINR step size is assumed in the CQI table?
  - Minimum step size = 1dB
  - Other values for the step size FFS.
- Number of entries in the CQI table for single TX antenna = 32
- Reporting can be periodic or aperiodic.

	Periodic	Aperiodic
Frequency non-selective	PUCCH PUSCH (only when scheduled)	PUSCH
Frequency selective	PUCCH PUSCH (only when scheduled)	PUSCH

- Aperiodic reporting
  - The Node B order for the aperiodic reporting is sent in downlink as part of the UL grant.
    - Having maximum 1 bit indication is the working assumption. Having more than 1 bit is FFS.
  - Aperiodic report per one Node B order is sent using PUSCH.
    - The aperiodic CQI report is treated as the separate L1 signalling.
    - Not preclude the possibility of repeating over FFS (0, 1, 2,…) subframes for coverage improvement.

Samsung Exhibit 1025, Page 872 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Aperiodic report size and message format can be flexible in terms of size and contents but format needs to be configured by the eNB and reported to UE (e.g. via RRC).
- In case both periodic and aperiodic reporting would occur in the same subframe, only the aperiodic report is transmitted in that subframe.
- Minimum reporting periodicity for CQI and PMI is 1 subframe.

CQI-1TX

R1-074090	Uplink CQI report format	Samsung	
R1-073933	Selection of CQI reporting scheme	Mitsubishi Electric	
R1-073931	Enhanced CQI Feedback with Reduced Overhead for E-UTRA	Icera Semiconductor	
R1-073945	Adaptive Best-M Based Scheme for CQI Reporting in the LTE UL	SHARP	
R1-074153	CQI Feedback Reduction Scheme for E-UTRA	Texas Instruments	
R1-074232	Performances of CQI feedback schemes on PUSCH	Huawei	
R1-074234	Optimal bitmap compression for CQI feedback	Huawei	
R1-074261	Incremental CQI Feedback Scheme and Simulation Results	Alcatel-Lucent	
R1-074389	Performance Evaluation of E-UTRA CQI Schemes with Restricted Reporting Periods	InterDigital Communications LLC	
R1-074415	Selected sub-band CQI reporting	Panasonic	
R1-074490	CQI compression - starting point	CQI Ad-Hoc Chair	
R1-074496	Proposal for CQI way forward	Nokia, Nokia Siemens Networks, Ericsson, TI, Huawei, Samsung, Qualcomm, ZTE, CATT, Nortel	

Conclusion:

- Subband is a set of contiguous k PRBs
  - k can be configured by the Node B

Conclusions for single codeword transmission

- The eNB should have the possibility to semi-statically restrict the set of subbands a UE should use in CQI reporting.

Conclusion for CQI signalling using PUSCH

(The feedback of second codeword CQIs, PMIs on PUSCH and rank feedback is FFS.)

- A UE is configured by the eNB to feed back CQI on PUSCH using one of the following types.
  - Wideband feedback
    - One wideband CQI value is reported.
  - Node B-configured subbands feedback

Samsung Exhibit 1025, Page 873 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- One CQI for each subband in the set of subbands semi-statically configured by the Node B (see above bullet point) is reported.
- Additionally, one wideband CQI value may be reported.
- A differential compression method (with TBD bits (including fractional number of bits) per subband) is used and may comprise e.g.
  - Differential with respect to some reference value, e.g. wideband CQI.
  - Differential with respect to neighbouring subbands
- <= TBD PRBs should be used to carry Node B-configured subbands feedback

- UE-selected subbands feedback
  - The UE selects the *M* best subbands within the subbands configured by the Node B and reports the positions of these *M* subbands using e.g. a compressed label or bitmap.
    - If a compressed label scheme is adopted, the parameter *M* is configured by the eNodeB/network. The possible values for *M* are FFS.
  - One CQI value is reported assuming transmission only over the *M* selected subbands.
  - Additionally, one wideband CQI value is reported.
  - The best-M CQI value is reported differentially relative to the wideband CQI. The details are FFS.

Friday 12th October

R1-074512	Way forward on Multiple Antenna Transmission for high-mobility UE	Samsung, LGE, Nortel, AT&T	(R1-074458)

The document was presented by (…) from Samsung

Discussion (Question / Comment): A few companies raised concerns not having sufficient time for reviewing the proposed way forward.
Decision: Document is noted. Mr Chairman advises for more discussions between companies and postpones decision to next meeting.

The following set of documents has not been treated.

R1-073908	Calibration procedures for TDD beamforming	Qualcomm Europe	
R1-073928	Details on CQI format	Qualcomm Europe	
R1-073936	Evaluation of Delta CQI Scheme	Alcatel-Lucent	
R1-073946	Proposal for the expression of sub band position for Best-M based CQI reporting	SHARP	
R1-073947	Consideration of CQI, PMI, and rank report feedback interval	SHARP	
R1-073948	Transmission mechanism for CQI reporting	SHARP	
R1-073949	Proposal for CQI feedback reconfiguration	SHARP	
R1-073970	Discussion on the Improvement of the Blind Detection of the antenna configuration	Nortel	
R1-073971	Discussion on Rank Adaptation Based on Shadowing for High Speed UEs	Nortel	
R1-073972	Further discussion on rank adaptation for high speed UE	Nortel	

Samsung Exhibit 1025, Page 874 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-073973	System level simulation of adaptive MIMO for high speed UE	Nortel	
R1-073974	Performance evaluation of CL MIMO performance under different UE speed	Nortel	
R1-073975	Evaluation of Spatial Multiplexing for MBSFN including Line of Sight Considerations	Nortel	
R1-073976	Update on HARQ performance enhancement	Nortel	
R1-073977	Rank-1 and Rank-2 Transmission for High Mobility UE	Nortel	
R1-073978	MIMO feedback channel design (PMI, CQI and rank)	Nortel	
R1-074043	CQI Feedback Schemes for E-UTRA	Motorola	
R1-074044	Performance of CQI Feedback Schemes	Motorola	
R1-074045	Joint feedback for E-UTRA downlink precoding and CQI	Motorola	
R1-074046	MU-MIMO for E-UTRA	Motorola	
R1-074149	Design Aspects of UE Feedback	Texas Instruments	
R1-074150	Rank and PMI Feedback Rate – Analysis	Texas Instruments	
R1-074151	CQI/PMI Feedback Rate – System Simulation	Texas Instruments	
R1-074152	Rank Feedback Rate – System Simulation	Texas Instruments	
R1-074159	CQI, PMI and rank reporting issues for EUTRA	NEC Group	
R1-074213	Spatial Delta CQI in SU-MIMO	LG Electronics	
R1-074214	Separation of CQI report into indexes and values over PUSCH and PUCCH	LG Electronics	
R1-074215	Investigation on tradeoff between PMI overhead and performance	LG Electronics	
R1-074216	Consideration on Open-loop SM Transmission Mode	LG Electronics	
R1-074233	CQI and PMI resource management	Huawei	
R1-074254	Codebook for MU-MIMO	Philips, NXP Semiconductors	
R1-074255	CQI definition for MU-MIMO	Philips, NXP Semiconductors	
R1-074262	Application of the Incremental CQI Feedback Scheme	Alcatel-Lucent	
R1-074351	On CQI measurements and compression for eNode-B RRM support	Nokia Siemens Networks, Nokia	
R1-074353	CQI Trigger Mechanism	Nokia Siemens Networks, Nokia	(R1-073680)
R1-074354	Channel Quality Indicator for LTE MU-MIMO	Nokia, Nokia Siemens Networks	
R1-074355	Effect of Precoding Granularity on LTE Multiuser MIMO	Nokia, Nokia Siemens Networks	
R1-074356	CQI and MIMO feedback for LTE	Nokia Siemens Networks, Nokia	
R1-074363	Inconsistence of signalling overhead and resource indication value function	ZTE	
R1-074382	Extending Codeword to layer mapping for efficient support of retransmissions	Ericsson	
R1-074390	Binary Differential Feedback Using Existing Codebooks for E-UTRA	InterDigital Communications LLC	

Samsung Exhibit 1025, Page 875 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074391	E-UTRA PUCCH: ACK/NACK, CQI, PMI, and RI Issues	InterDigital Communications LLC	
R1-074395	Rank reporting for DL LTE MIMO	Freescale Semiconductor	
R1-074425	CQI transmission methods for large reports on PUCCH	Panasonic	-
R1-074426	Rank feedback in downlink MIMO	Panasonic	
R1-074427	Control signalling aspects of MU-MIMO	Panasonic	
R1-074430	Baseline CQI format	Qualcomm Europe	
R1-074436	Down Link Rank Adaptation with 4 Tx antennas for Open Loop MIMO at High Doppler	LSI Corporation	
R1-074458	Way forward on Multiple Antenna Transmission for high-mobilty UE	Samsung, LGE, Nortel	
R1-074467	Necessity of Time Diversity for D-BCH	NTT DoCoMo	(R1-074297)
R1-074476	Transmission mode for BCCH	Ericsson	

6.4.6 UE Procedures for uplink shared channel

R1-073979	Further discussion on UL closed-loop adaptive antenna switching	Nortel	

The document was presented by (…) from Nortel and discusses the control channel for antenna switching transmit diversity issues.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074357	DL signaling for closep loop antenna selection in LTE UL	Nokia Siemens Networks, Nokia	

The document was presented by Asbjörn Grovlen from Nokia and discusses an option for Closed Loop antenna switching transmit diversity DL signaling.
Discussion (Question / Comment):
Decision: Document is noted. The discussion should go on for deciding between R1-073979 and R1-074357. Mr Chairman requests proponents for providing all details to include the proposal into the specifications.

The following set of documents has not been treated.

R1-073929	Details on scheduling requests	Qualcomm Europe	
R1-074217	UL synchronous HARQ procedure and UE behaviour after ACK/NACK detection	LG Electronics	
R1-074256	UE procedure for ACK/NACK detection	Philips, NXP Semiconductors	
R1-074273	Power Offsets to Maintain QoS for Persistent Allocations in the Presence of Control Channel Multiplexing for the E-UTRA Uplink	Alcatel-Lucent	

Samsung Exhibit 1025, Page 876 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

6.5 Finalization of TS 36.214

R1-074358	Measurement states for inter-RAT UE measurements	Nokia Siemens Networks, Nokia	

The document was presented by Joern Krause from NSN and brings correction to TS 36.214 about the states in which the specified inter-RAT UE measurements can be applied.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074482	36.214 CR001 (Rel-8, F) "RRC state correction for LTE UE measurements	Nokia Siemens Networks, Nokia	

The document was shortly introduced by Joern Krause from NSN

Discussion (Question / Comment):
Decision: Document is noted. The topic shall be revisited at next meeting. CR for 36214 shall also be prepared if no concerns raised meanwhile.

R1-074260	A use case for Max Tx Power per PRB as a eNodeB Measurement	Alcatel-Lucent	

The document was presented by Rainer Bachl from Alcatel-Lucent and discusses the definition of the Maximum Transmitted power per RB measurement. The paper defines the use case for eNodeB measurement standardization.

Discussion (Question / Comment):
Decision: Document is noted and shall be revisited after off-line discussion.

6.6 UE Categories

R1-074504	Summary of the e-mail discussion on UE category	NTT DoCoMo	(R1-074500)

The document was presented by Sadayuki Abeta from NTT DoCoMo.

Discussion (Question / Comment):
Decision: Document is noted.

Conclusions from email discussion:

- Limitation of RB size
  - An explicit RB size limit should not be defined as part of UE categories.
- Support of MIMO as mandatory in other UE classes (UE class 2 -5)
  - MIMO is mandated for UE classes 2-5. RAN4 requirements below 1GHz including antenna are FFS for RAN4.

R1-074048	Further comments on UE capabilities and Soft Memory Size	Motorola	

The document was presented by Kenneth Stewart from Motorola and outlines a set of UE classes in terms of downlink and uplink peak rates and soft memory sizes.

Discussion (Question / Comment):
Decision: Document is noted.

Samsung Exhibit 1025, Page 877 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074359	UE Categories	Nokia, Nokia Siemens Networks	

The document was presented by Asbjörn Grovlen from Nokia and discusses the different aspects of defining the physical layer parts of the UE classes and gives a proposal for the FDD UE classes.

Discussion (Question / Comment):
Decision: Document is noted.

- Peak rate for each UE class: Agreement reached for classes 2 to 5 as shown in below table. Discussions still required for class 1.

			Class 1	Class 2	Class 3	Class 4	Class 5
Peak rate (Mbps)	DL	Nokia, NSN	5	50	100	150	300
		Motorola	20.3	38.9	77.8	155.5	293.8
		Ericsson, Qualcomm, Samsung	10	50	100	150	300
	UL	Nokia, NSN	2	25	50	50	75
		Motorola	11.9	11.9	23.8	47.7	47.7
		Ericsson, Qualcomm, Samsung	5	25	50	50	75

- Support of DL 64QAM in UE class 1
    - If class 1 is selected as 5/2 (DL/UL), then DL 64QAM support is optional for class 1.

R1-073980	On Support of 2x2 MIMO for Class 1 UE	Nortel	

The document was presented by (…) from Nortel and discusses on whether class 1 UE (low end UE) should support 2x2 MIMO transmission or not.

Discussion (Question / Comment):
Decision: Document is noted.

- Support of MIMO as mandatory in UE class 1
    - MIMO support with multiple code words to one UE optional for UE class 1.
        - Support for MU-MIMO is FFS
    - UE support for single code word transmission with 1, 2 or 4 TX antennas at the eNB is mandatory.

R1-074362	UE category with single Rx antenna	NXP, Philips	

The document was presented by Gunnar Nitsche from NXP and. focuses on UE category class 1, in particular on the number of Rx antennas.

Discussion (Question / Comment):
Decision: Document is noted.

Samsung Exhibit 1025, Page 878 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Support for UE RX diversity for UE class 1
    - RX diversity mandated for UE class 1, UE performance requirements to be decided by RAN4 (especially considering band dependence)

R1-074428	UE capability and time diversity	Panasonic	

The document was not presented but Mr Chairman recommended delegates to read it.

Friday 12th October: 15:30

R1-074516	Draft LS on UE Categories	RAN1, NTT DoCoMo

The document was presented by Sadayuki Abeta from NTT DoCoMo.

Discussion (Question / Comment): Document shall only report topics on which RAN1 has good view and remove the "TBD" parts.
Decision: Document is noted. LS has been reviewed and is agreed in R1-074521 for sending to relevant WGs.

Samsung Exhibit 1025, Page 879 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

7. Combination of Higher Order Modulation and MIMO in HSDPA (FDD)

R1-073953	CQI for the combination of MIMO and 64QAM	Ericsson	

The document was presented by Bo Göransson from Ericsson.

Discussion (Question / Comment):
Decision: Document is noted. CQI tables agreed as baseline for preparing CRs until next meeting.

R1-074299	25212CR (R8, B) HS-SCCH information field mapping for 64QAM MIMO	Nokia, Nokia Siemens Networks, Ericsson, Philips	

The document was presented by Arto Lehti from Nokia as a draft CR to Rel-8.

Discussion (Question / Comment):
Decision: Document is agreed.

R1-074384	Modulation & Channelization Signaling for MIMO and 64-QAM	InterDigital	

The document was presented by Eldad Zeira from InterDigital.

Discussion (Question / Comment):
Decision: Document is noted.

8. Enhanced Uplink for Cell_FACH State in FDD

R1-074300	Enhanced CELL_FACH state with E-DCH	Nokia, Nokia Siemens Networks	

The document was presented by Antti Hiltunen from Nokia.

Discussion (Question / Comment):
Decision: Document is noted. Mr Chairman decided to look at the applications that are illustrated in following document.

R1-074301	Applications of Enhanced Uplink for CELL_FACH State in FDD	Nokia, Nokia Siemens Networks	

The document was presented by Antti Hiltunen from Nokia and shows two use cases highlighting the gain mechanisms of the feature: typical HTTP requests and keep-alive inquiries.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074302	CELL_FACH state E-DCH – coverage comparison	Nokia, Nokia Siemens Networks	

The document was presented by Antti Hiltunen from Nokia and compares RACH and E-DCH data transmission capabilities from coverage point of view via link level simulations in order to assess the feasibility of using E-DCH instead of RACH for delivering messages from the UE to the network in the CELL_FACH state.

Discussion (Question / Comment):
Decision: Document is noted.

Samsung Exhibit 1025, Page 880 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R1-074303	Resource assignment for E-DCH access in CELL_FACH state	Nokia, Nokia Siemens Networks	

The document was presented by Karri Ranta-aho from NSN and shows an overview for the concept of direct E-DCH access in Cell-FACH state focused on how resource assignment could be done.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074126	L1/L2 aspects for enhanced UL for CELL_FACH	Qualcomm Europe	

The document was presented by Juan Montojo from Qualcomm and addresses some of the high level design aspects, both from a Layer 1 and Layer 2 perspective to allow for the operation of the enhanced uplink in the CELL_FACH state.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074127	Link analysis of HS-RACH	Qualcomm Europe	

The document was presented by Juan Montojo from Qualcomm for information only and provides simulation results of the link analysis on the enhanced uplink performance in the CELL_FACH state.

Discussion (Question / Comment):
Decision: Document is noted.

R1-073954	Enhanced Uplink for CELL_FACH	Ericsson	

The document was presented by Lars Lindbom from Ericsson and outlines a concept for activating E-DCH transmission in CELL_FACH, in which common E-DCH resources are broadcasted in a cell.

Discussion (Question / Comment):
Decision: Document is noted.

As result of the different contributions, working assumption on high level concept is:

- RACH preamble ramping as in R99 with AICH acknowledgement
  - Distinguishable preambles for RACH & Cell_FACH E-DCH
- NB can control physical resources for F-DPCH and E-DCH in Cell FACH
- Resource assignment indicated from NodeB to UE (FFS how)
- Collision resolution (FFS in RAN2)
- Transition to E-DCH transmission in Cell FACH
  - 10ms TTI, support of 2ms TTI FFS
  - max TB size FFS
  - Limited set of E-TFCs
- Resource release (FFS in RAN2/3)
- Possibility to seamlessly transfer to cell DCH

It is also decided to prepare LS in R1-074460 informing RAN2.

Friday 12th October: LS is agreed in R1-074522

Samsung Exhibit 1025, Page 881 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

9. Study Item on Synchronized E-DCH

R1-074128	Considerations for operation of sync E-DCH	Qualcomm Europe	

The document was presented by Juan Montojo from Qualcomm and discusses some of the design and practical issues related to the operation of Synchronized E-DCH on the uplink. The link performance of Synchronized E-DCH is discussed in R1-074129.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074129	Link analysis of sync E-DCH	Qualcomm Europe	

The document was presented by Juan Montojo from Qualcomm and provides the results and conclusions on the performed simulation of synchronized E-DCH assuming that the dominant paths of all the users are perfectly aligned at the NodeB receiver.

Performance is evaluated for both 2ms TTI and 10ms TTI UEs in AWGN, PA3, PB3, VA30 and VA120 channels. Furthermore, evaluation is performed for both QPSK and 16-QAM modulation schemes.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074304	Synchronised E-DCH: Issues to be considered	Nokia Siemens Networks, Nokia	

The document was presented by Thomas Chapman from NSN and discusses issues associated with operating the uplink using OVSF codes that should be addressed in order to assess the performance and understand the signalling requirements in the context of Release 8 HSPA.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074305	Synchronised E-DCH: Initial link simulations	Nokia Siemens Networks, Nokia	

The document was presented by Thomas Chapman from NSN and shows the first results from the link level investigations on the performance of the OVSF separation.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074306	Draft TR skeleton for synchronised E-DCH	Nokia Siemens Networks, Nokia	

The document was presented by Karri Ranta-aho from NSN and proposes the document structure for reporting the Study Item issues.

Discussion (Question / Comment): Although the draft TR content as shown may not be exhaustive, no comments on the feasibility and signalling listed requirements for introducing a synchronised E-DCH to Release 8.
TR number may be required (action point to MCC).
Decision: Document is noted and shall be revised in R1-074461.

Friday 12th October: TR skeleton is agreed in R1-074461

Samsung Exhibit 1025, Page 882 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10. Study Item on Scope of future HSPA Evolution for 1.28Mcps TDD

R1-074049	Analysis of Enhancement to CELL_FACH State for 1.28Mcps TDD	ZTE	

The document was presented by (…) from ZTE and investigates the CELL_FACH enhancement in 1.28Mcps TDD. It also oulines the work baseline that should be followed during the WI phase.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074050	Analysis of Continuous Packet Connectivity for 1.28Mcps TDD	ZTE	

The document was presented by (…) from ZTE.

As a conclusion, the following aspects are listed as the assumptions to further studies on CPC in 1.28Mcps TDD during the WI phase.

- Remove the associated DPCH in HSDPA
- Assign non-scheduled E-DCH resources for each packet data user
- Introduce DRX and DTX conception
- Introduce HS-SCCH-less for downlink VoIP traffic and use non-scheduled transmission for uplink VoIP traffic

Discussion (Question / Comment):
Decision: Document is noted.

R1-074051	64QAM Simulation Results for 1.28Mcps TDD HSDPA	ZTE	

The document was presented by (…) from ZTE and shows some of the potential benefits of introducing 64QAM modulation in the link-level downlink of 1.28Mcps TDD system. System-level simulation focuses on by using 64QAM in the indoor micro-cell scenarios.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074054	Cell Throughput Comparison for 2x2 MIMO: PARC, S-PARC and D-TxAA	TD-Tech	

The document was presented by (…) from TD-Tech.

Discussion (Question / Comment):
Decision: Document is noted.

R1-074189	Link Level Results of 2×2 MIMO Schemes for 1.28Mcps TDD	CATT	

The document was presented by Ke Wang from CATT.

Discussion (Question / Comment):

Samsung Exhibit 1025, Page 883 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: Document is noted.

R1-074457	Draft TR for 1.28Mcps TDD HSPA evolution	TD-Tech	(R1-074440)

The document was presented by (…) from TD-Tech.

Discussion (Question / Comment):
Decision: Document is noted and the proposed skeleton of the TR is agreed.

Samsung Exhibit 1025, Page 884 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11. Closing of the meeting

RAN1 Chairman, Mr. Dirk Gerstenberger expressed his appreciation to the delegates and the host, the Chinese Friends of 3GPP for their supports.

He also welcomed the completion on SCH discussions achieved during the week and encouraged the delegates for joining on-going email discussions and solving the lump of remaining issues.

The meeting was closed at 16:30.

Samsung Exhibit 1025, Page 885 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex A: List of participants at RAN1 #50b

Please see excel file attached to this report

Samsung Exhibit 1025, Page 886 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex B: TSG RAN WG1 meetings in 2008

TITLE	TYPE	DATES	LOCATION	CTRY
3GPPRAN1#51bis	WG	14 – 18 Jan 2008	Sevilla	SP
3GPPRAN1#52	WG	11 – 15 Feb 2008	Sorrento	IT
3GPPRAN1#52bis	WG	31/03 – 4 April 2008	Shenzhen	CHINA
3GPPRAN1#53	WG	05 – 09 May 2008	TBD	
3GPPRAN1#53bis	WG	30/06 – 4 July 2008	TBD	
3GPPRAN1#54	WG	18 – 22 Aug 2008	TBD	
3GPPRAN1#55	WG	10 – 14 Nov 2008	TBD	

MEETING TYPES	
AH = Ad Hoc	CM = Chairmen's meeting
JM = Joint	OR = Ordinary
PM = Preparatory Meeting	RG = Rapporteurs Group
RM = Resolution Meeting	SG = Steering Group
ST = Startup Meeting	TG = Task Group
WG = Working Group	XO = Extraordinary

Samsung Exhibit 1025, Page 887 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex C: List of CRs agreed at RAN1#50b

Spec	CR	R	Cat	Rel	R1 Tdoc	Title	Work Item
25.211	248	-	F	7	R1-074244	Correction to transmit diversity specification in MIMO mode	MIMO-Phys
25.213	091	1	F	7	R1-074455	Editorial changes in 25.213 for 16QAM specification	RANimp-16QamUplink
25.214	463	-	F	7	R1-074119	Timing of CQI vs DTX priority change	RANimp-CPC
25.214	465	-	F	7	R1-074121	Grant Monitoring clarification	RANimp-CPC
25.211	249	-	F	6	R1-074518	Correction to E-DPCCH transmission	EDCH-Phys
25.211	250	-	A	7	R1-074519	Correction to E-DPCCH transmission	EDCH-Phys
25.214	467	1	F	7	R1-074462	Clarification on CQI tables in Rel-7	TEI7
25.212		-	B	8	R1-074299	HS-SCCH information field mapping for 64QAM MIMO	RANimp-64QamMimoHsdpa

Samsung Exhibit 1025, Page 888 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex D: List of Outgoing LSs from RAN1#50b

R1	Response to (Ic LS)	To	Cc	Title	Contact	Ref'd /Attachd Tdoc	Release	WI
R1-074452	R5-072580 (R1-073901)	R5	R2	Response LS on introduction of radio bearers for MBMS PTP on HS in 34.108	Ericsson		Rel-8	-
R1-074484		R4		LS on UE transmission power adjustments	Motorola, Panasonic		Rel-8	LTE-RF
R1-074521		R2, R4		LS on UE categories	NTT DoCoMo		Rel-8	LTE
R1-074522		R2, R3		LS on RAN1 conclusions on Enhanced Uplink for CELL_FACH state in FDD	Nokia Siemens Networks		Rel-8	Enhanced Uplink for CELL_FACH State in FDD

Samsung Exhibit 1025, Page 889 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex E: List of Tdocs at RAN1 #50b

Please see excel file attached to this report

Samsung Exhibit 1025, Page 890 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex F: List of actions

1. Outgoing LS.

R1-074451 has been postponed to next meeting

Prepare the reply LS on neighbour cell list in LTE (Nokia Siemens Network) as response to R1-073899.

xxx

2. Text proposal for TS and TR

Deadline for below action points is until 30th october.

MCC to provide TR numbers for Study Items:

- Synchronized E-DCH
- Scope of future HSPA Evolution for 1.28Mcps TDD

xxx

Samsung Exhibit 1025, Page 891 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

		3GPP TSG RAN Working Group 1 (Layer 1)					
		List of WG1 Temporary Documents					
Available	**Tdoc Number**	**Title**	**Source**	**Agenda Item**	**Type**	**Rrevised to (from)**	**Conclusion/Decision**
Yes	R1-073895	Draft Agenda for RAN1#50b meeting	RAN1 Chairman	2	Decision		Approved
Yes	R1-073896	Draft report of RAN1#50 meeting	MCC Support	3	Approval		Approved
Yes	R1-073897	LS on eNodeB measurements	RAN3, Nokia Siemens Networks	4	LS_in	= R3-071730	Noted
Yes	R1-073898	SSCH Mapping to Group ID and Frame Timing	Marvell Semiconductor	6.2.6	Discussion	R1-074485	Revised
Yes	R1-073899	Response to LS on neighbour cell list in LTE	GERAN, Nokia Siemens Networks	4	LS_in	= GP-071552	Noted
Yes	R1-073900	LS on high quality criterion	RAN2, Nokia	4	LS_in	= R2-073852	Noted
Yes	R1-073901	LS on introduction of radio bearers for MBMS PTP on HS in 34.108	RAN5, Ericsson	4	LS_in	= R5-072580	Noted
Yes	R1-073902	LTE Home NodeB mobility	RAN3, Vodafone	4	LS_in	= R3-071751	Noted
Yes	R1-073903	Response LS on receiver Performance and Enhanced CELL_FACH state	RAN4, Ericsson	4	LS_in	= R4-071486	Noted
Yes	R1-073904	Response to LS on Synchronization in Radio Access Networks	RAN3, Orange	4	LS_in	= R3-071745	Noted
Yes	R1-073905	Handover and Cell Reselection Interruption time	RAN4, Nokia Siemens Networks	4	LS_in	= R4-071451	Noted
Yes	R1-073906	Final details on CDD precoding	Qualcomm Europe	6.2	Discussion/Decision		Not treated
Yes	R1-073907	UL control details for TDD	Qualcomm Europe	6.2.4	Discussion/Decision		Not treated
Yes	R1-073908	Calibration procedures for TDD beamforming	Qualcomm Europe	6.4.5	Discussion/Decision		Not treated
Yes	R1-073909	RS structure for MBSFN subframes	Qualcomm Europe	6.2.1	Discussion/Decision		Not treated
Yes	R1-073910	CGS sequences for UL RS	Qualcomm Europe	6.2.2	Discussion/Decision		Not treated
Yes	R1-073911	SRS multiplexing structure	Qualcomm Europe	6.2.2	Discussion/Decision		Not treated
Yes	R1-073912	Hopping of UL DM-RS	Qualcomm Europe	6.2.2	Discussion/Decision		Not treated
Yes	R1-073913	PDCCH formats and contents	Qualcomm Europe	6.2.3	Discussion/Decision		Not treated
Yes	R1-073914	DL Control channel span	Qualcomm Europe	6.2.3	Discussion/Decision		Noted
Yes	R1-073915	Details on DL resource allocation	Qualcomm Europe	6.2.3	Discussion/Decision		Not treated
Yes	R1-073916	On the size of the CCE	Qualcomm Europe	6.2.3	Discussion/Decision		Not treated
Yes	R1-073917	PHICH details	Qualcomm Europe	6.2.3	Discussion/Decision		Not treated
Yes	R1-073918	Issues with SU-1 transmissions	Qualcomm Europe	6.2.3	Discussion/Decision		Not treated
Yes	R1-073919	D-BCH capacity	Qualcomm Europe	6.2.3	Discussion/Decision		Not treated
Yes	R1-073920	Joint coding of CQI and ACK	Qualcomm Europe	6.2.4	Discussion/Decision		Not treated
Yes	R1-073921	Support of ACK repetition in the UL of E-UTRA	Qualcomm Europe	6.2.4	Discussion/Decision		Not treated
Yes	R1-073922	PDSCH distributed transmissions	Qualcomm Europe	6.2.5	Discussion/Decision		Noted
Yes	R1-073923	UL hopping for frequency diverse scheduling	Qualcomm Europe	6.2.5	Discussion/Decision		Not treated
Yes	R1-073924	Scrambling of SSC	Qualcomm Europe	6.2.6	Discussion/Decision		Not treated

Samsung Exhibit 1025, Page 892 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Yes	R1-073925	Details for SSC specification	Qualcomm Europe	6.2.6	Discussion/Decision		Not treated
Yes	R1-073926	Details of control and data multiplexing in PUSCH	Qualcomm Europe	6.3	Discussion/Decision		Not treated
Yes	R1-073927	RE mapping for PDSCH and PUSCH	Qualcomm Europe	6.3	Discussion/Decision		Not treated
Yes	R1-073928	Details on CQI format	Qualcomm Europe	6.4.5	Discussion/Decision		Not treated
Yes	R1-073929	Details on scheduling requests	Qualcomm Europe	6.4.6	Discussion/Decision		Not treated
Yes	R1-073930	Details on UL Power Control	Qualcomm Europe	6.4.2	Discussion/Decision		Noted
Yes	R1-073931	Enhanced CQI Feedback with Reduced Overhead for E-UTRA	Icera Semiconductor	6.4.5	Discussion/Decision		Noted
Yes	R1-073932	UL Sounding RS Control Signaling for Antenna Selection	Mitsubishi Electric	6.2.2	Discussion/Decision		Not treated
Yes	R1-073933	Selection of CQI reporting scheme	Mitsubishi Electric	6.2.4	Discussion/Decision		Noted
Yes	R1-073934	Uplink Reference Signal Sequence Allocation	Toshiba	6.2.2	Discussion/Decision		Not treated
Yes	R1-073935	CAZAC sequence allocation for PUCCH	Toshiba	6.2.4	Discussion		Not treated
Yes	R1-073936	Evaluation of Delta CQI Scheme	Alcatel-Lucent	6.4.5	Discussion		Not treated
Yes	R1-073937	Comparison Aspects of Fixed and Adaptive Beamforming for LTE Downlink	Alcatel-Lucent	6.2	Discussion		Not treated
Yes	R1-073938	Design of Non-CAZAC CG Sequences for Small RB Allocations in E-UTRA UL	SHARP	6.2.2	Discussion/Decision		Not treated
Yes	R1-073939	A Proposed Way Forward for Selection of UL DM RS CG Sequences for Small RB Allocations in E-UTRA UL	SHARP	6.2.2	Discussion/Decision		Not treated
Yes	R1-073940	Proposal of location of PHICH and CCE	SHARP	6.2.3	Discussion/Decision		Not treated
Yes	R1-073941	Improved Flexibility/Performance CQI+ACK/NACK coding in the E-UTRA uplink	SHARP	6.2.4	Discussion/Decision	R1-074493	Revised
Yes	R1-073942	Different target quality for rank	SHARP	6.2.4	Discussion/Decision		Not treated
Yes	R1-073943	Proposed Scrambling sequences for S-SCH with embedded frame timing derivation	SHARP	6.2.6	Discussion/Decision		Not treated
Yes	R1-073944	System information mapping for the SSC	SHARP	6.2.6	Discussion/Decision		Not treated
Yes	R1-073945	Adaptive Best-M Based Scheme for CQI Reporting in the LTE UL	SHARP	6.4.5	Discussion/Decision		Noted
Yes	R1-073946	Proposal for the expression of sub band position for Best-M based CQI reporting	SHARP	6.4.5	Discussion/Decision		Not treated
Yes	R1-073947	Consideration of CQI, PMI, and rank report feedback interval	SHARP	6.4.5	Discussion/Decision		Not treated
Yes	R1-073948	Transmission mechanism for CQI reporting	SHARP	6.4.5	Discussion/Decision		Not treated
Yes	R1-073949	Proposal for CQI feedback reconfiguration	SHARP	6.4.5	Discussion/Decision		Not treated
Yes	R1-073950	25.213 CR091 (Rel-7, F) "Editorial changes in 25.213 for 16QAM specification"	Ericsson	5	CR	R1-074455	Revised
Yes	R1-073951	On downlink sync criteria in case of UE DTX/DRX	Ericsson	5	Discussion/Decision		Noted
Yes	R1-073952	Clarification of UE measurements in case of Rx diversity	Ericsson	5	Discussion/Decision		Noted
Yes	R1-073953	CQI for the combination of MIMO and 64QAM	Ericsson	7	Discussion/Decision		Noted
Yes	R1-073954	Enhanced Uplink for CELL_FACH	Ericsson	8	Discussion/Decision		Noted
Yes	R1-073955	RS Structure for Short CP MBSFN	Nortel	6.2.1	Discussion/Decision		Not treated

Samsung Exhibit 1025, Page 893 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Yes	R1-073956	Further Discussion on RS Structure Supporting Spatial Multiplexing for MBSFN	Nortel	6.2.1	Discussion/Decision		Not treated
Yes	R1-073957	RE Mapping of SFBC+FSTD Based TxD for RS Power boosting	Nortel	6.2.1	Discussion/Decision		Not treated
Yes	R1-073958	Link Level Evaluation on Adaptive Beaming Forming	Nortel	6.2.1	Discussion/Decision		Not treated
Yes	R1-073959	TxD gain for correlated 8 Tx antennas	Nortel	6.2.1	Discussion/Decision		Not treated
Yes	R1-073960	UL RS for UL MU-MIMO	Nortel	6.2.2	Discussion/Decision		Not treated
Yes	R1-073961	Spread factor for 4 Tx PHICH	Nortel	6.2.3	Discussion/Decision		Noted
Yes	R1-073962	Further discussion on DL/UL signaling channel supporting rank adaptation for high mobility UE	Nortel	6.2.4	Discussion/Decision		Not treated
Yes	R1-073963	On the need of Nd=3 for the diversity VRB mapping	Nortel	6.2.5	Discussion/Decision		Not treated
Yes	R1-073964	UL RB hopping for PUSCH	Nortel	6.2.5	Discussion/Decision		Not treated
Yes	R1-073965	Scrambling code design for SSCH	Nortel	6.2.6	Discussion/Decision		Not treated
Yes	R1-073966	Short Sequences for S-SCH	Nortel	6.2.6	Discussion/Decision		Not treated
Yes	R1-073967	MCS selection for LTE	Nortel	6.3	Discussion/Decision		Not treated
Yes	R1-073968	UL Power Control with Fractional Frequency Reuse for E-UTRA	Nortel	6.4.2	Discussion/Decision		Not treated
Yes	R1-073969	Discussion on the DL interference coordination	Nortel	6.4.3	Discussion/Decision		Not treated
Yes	R1-073970	Discussion on the Improvement of the Blind Detection of the antenna configuration	Nortel	6.4.5	Discussion/Decision		Not treated
Yes	R1-073971	Discussion on Rank Adaptation Based on Shadowing for High Speed UEs	Nortel	6.4.5	Discussion/Decision		Not treated
Yes	R1-073972	Further discussion on rank adaptation for high speed UE	Nortel	6.4.5	Discussion/Decision		Not treated
Yes	R1-073973	System level simulation of adaptive MIMO for high speed UE	Nortel	6.4.5	Discussion/Decision		Not treated
Yes	R1-073974	Performance evaluation of CL MIMO performance under different UE speed	Nortel	6.4.5	Discussion/Decision		Not treated
Yes	R1-073975	Evaluation of Spatial Multiplexing for MBSFN including Line of Sight Considerations	Nortel	6.4.5	Discussion/Decision		Not treated
Yes	R1-073976	Update on HARQ performance enhancement	Nortel	6.4.5	Discussion/Decision		Not treated
Yes	R1-073977	Rank-1 and Rank-2 Transmission for High Mobility UE	Nortel	6.4.5	Discussion/Decision		Not treated
Yes	R1-073978	MIMO feedback channel design (PMI, CQI and rank)	Nortel	6.4.5	Discussion/Decision		Not treated
Yes	R1-073979	Further discussion on UL closed-loop adaptive antenna switching	Nortel	6.4.6	Discussion/Decision		Noted
Yes	R1-073980	On Support of 2x2 MIMO for Class 1 UE	Nortel	6.6	Discussion/Decision		Noted
Yes	R1-073981	BCH/SCH Transmission for Odd number of RB	Motorola, Nokia, Nokia Siemens Network	6.2.3	Discussion/Decision		Noted
Yes	R1-073982	4x2 MIMO vs Beamforming Performance	Motorola	6.2.1	Discussion/Decision		Not treated
No	R1-073983	Beamforming for E-UTRA	Motorola	6.2.1	Discussion/Decision		Missing
Yes	R1-073984	Dedicated Reference Signals for Beamforming	Motorola	6.2.1	Discussion/Decision		Not treated
Yes	R1-073985	Proposal for UL DM RS for 1 and 2 RB Allocation	Motorola	6.2.2	Discussion/Decision		Not treated

Yes	R1-073986	Evaluation of Proposals for UL DM RS for 1 and 2 RB Allocation	Motorola	6.2.2	Discussion/Decision		Not treated
Yes	R1-073987	Multiplexing of SRS and PUSCH	Motorola	6.2.2	Discussion/Decision		Not treated
Yes	R1-073988	Views on Remaining Issues on UL DM RS	Motorola	6.2.2	Discussion/Decision		Not treated
Yes	R1-073989	Views on Remaining Issues on UL SRS	Motorola	6.2.2	Discussion/Decision		Not treated
Yes	R1-073990	Support of Precoding for E-UTRA DL L1/L2 Control Channel	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-073991	Requirement for DL PMI Signaling	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-073992	PHICH Transmission for 1 Tx Antenna	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-073993	PCFICH Transmission for 1 Tx Antenna	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-073994	Interleaver design for Mini-CCE to RE Mapping	Motorola	6.2.3	Discussion/Decision	R1-074488	Revised
Yes	R1-073995	Downlink Resource Allocation Mapping for E-UTRA	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-073996	Search Space definition for L1/L2 Control Channels	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-073997	E-UTRA Downlink L1/L2 Control Channel Configurations	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-073998	Efficient Structure for Aggregating 12[3]48 Downlink Control Channel Elements	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-073999	PDCCH Formats for DL Scheduling Assignments	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-074000	PDCCH Formats for UL Scheduling Grants	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-074001	PMI Downlink Signaling for E-UTRA	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-074002	MU-MIMO PHICH Assignment	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-074003	LTE Control channel configuration signaling and DRX	Motorola	6.2.3	Discussion/Decision		Not treated
No	R1-074004	HARQ Process Identity for SU-MIMO	Motorola	6.2.3	Discussion/Decision		Missing
No	R1-074005	HARQ Error Conditions for Lost Grants	Motorola	6.2.3	Discussion/Decision		Missing
Yes	R1-074006	Transport Block and MCS mapping for RB Allocation	Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-074007	PUCCH Transmission with SRS	Motorola	6.2.4	Discussion/Decision		Not treated
Yes	R1-074008	UL ACK/NACK Resource Provisioning	Motorola	6.2.4	Discussion/Decision		Not treated
Yes	R1-074009	UL ACK/NACK Implicit Mapping	Motorola	6.2.4	Discussion/Decision		Noted
Yes	R1-074010	Uplink transmission of CQI and Ack/Nack	Motorola	6.2.4	Discussion/Decision		Not treated
Yes	R1-074011	Repetition of UL ACK/NACK on PUCCH	Motorola	6.2.4	Discussion/Decision		Not treated
Yes	R1-074012	Scheduling Request Mechanism for EUTRA Uplink	Motorola	6.2.4	Discussion/Decision		Not treated
Yes	R1-074013	CQI Coding Schemes	Motorola	6.2.4	Discussion/Decision		Not treated
Yes	R1-074014	Multiplexing of Ack/Nack and data for UL	Motorola	6.2.4	Discussion/Decision		Not treated
Yes	R1-074015	Persistent Scheduling of PUCCH resources	Motorola	6.2.4	Discussion/Decision		Not treated

Yes	R1-074016	Uplink Control Signaling with Persistent Scheduling	Motorola	6.2.4	Discussion/Decision		Not treated
Yes	R1-074017	DL Distributed Transmission for Nd=3	Motorola	6.2.5	Discussion/Decision		Not treated
Yes	R1-074018	A simple example of dynamic DVRB signaling	Motorola	6.2.5	Discussion/Decision		Not treated
Yes	R1-074019	Downlink DVRB email reflector summary	Motorola	6.2.5	Discussion/Decision		Noted
Yes	R1-074020	UL Resource Allocation for Frequency-diverse (hopping) Allocations	Motorola	6.2.5	Discussion/Decision		Not treated
Yes	R1-074021	Uplink SCH Hopping Configuration email reflector summary	Motorola	6.2.5	Discussion/Decision		Noted
Yes	R1-074022	Cell Search E-mail Reflector Summary	Motorola	6.2.6	Discussion/Decision		Noted
Yes	R1-074023	Optimisation of P-SCH Indices for Synchronous Network Operation	Motorola, Nokia, Nokia Siemens Network	6.2.6	Discussion/Decision		Not treated
Yes	R1-074024	Evaluation of Scrambling Methods for S-SCH	Motorola	6.2.6	Discussion/Decision		Not treated
Yes	R1-074025	Indication of Frame Boundary Using S-SCH	Motorola	6.2.6	Discussion/Decision		Not treated
Yes	R1-074026	Random Access E-mail Reflector Summary	Motorola	6.2.7	Discussion/Decision		Noted
Yes	R1-074027	RACH Slot Configurations for FS1	Motorola	6.2.7	Discussion/Decision		Not treated
Yes	R1-074028	RACH for 1.4MHz System Bandwidth	Motorola	6.2.7	Discussion/Decision		Not treated
Yes	R1-074029	Comparison of Different Proposals for Ncs	Motorola	6.2.7	Discussion/Decision		Not treated
Yes	R1-074030	Physical Channel Segmentation Considering Multiple Antennas	Motorola	6.3	Discussion/Decision		Noted
Yes	R1-074031	RV definition	Motorola	6.3	Discussion/Decision		Not treated
Yes	R1-074032	On supporting 1st stage turbo code rate matching	Motorola	6.3	Discussion/Decision		Not treated
Yes	R1-074033	Soft Buffer size per HARQ Process	Motorola	6.3	Discussion/Decision		Not treated
Yes	R1-074034	Bit Scrambling Per Code Block	Motorola	6.3	Discussion/Decision		Not treated
Yes	R1-074035	Timing and HARQ	Motorola	6.4.1	Discussion/Decision		Not treated
No	R1-074036	Timing at HARQ for HD-FDD	Motorola	6.4.1	Discussion/Decision		Withdrawn
Yes	R1-074037	Sounding Reference Signal Power Setting	Motorola	6.4.2	Discussion/Decision		Not treated
Yes	R1-074038	Path loss and power headroom report for uplink power control	Motorola	6.4.2	Discussion/Decision		Noted
Yes	R1-074039	Power setting for persistent scheduled PUSCH	Motorola	6.4.2	Discussion/Decision		Noted
Yes	R1-074040	EPRE Downlink Requirements	Motorola	6.4.2	Discussion/Decision		Not treated
Yes	R1-074041	UE Transmit Power Adjustment for LTE	Motorola	6.4.2	Discussion/Decision		Noted
Yes	R1-074042	Uplink Inter-Cell Power Control: X2 Messages	Motorola	6.4.3	Discussion/Decision		Not treated
Yes	R1-074043	CQI Feedback Schemes for E-UTRA	Motorola	6.4.5	Discussion/Decision		Not treated
Yes	R1-074044	Performance of CQI Feedback Schemes	Motorola	6.4.5	Discussion/Decision		Not treated
Yes	R1-074045	Joint feedback for E-UTRA downlink precoding and CQI	Motorola	6.4.5	Discussion/Decision		Not treated

Yes	R1-074046	MU-MIMO for E-UTRA	Motorola	6.4.5	Discussion/Decision		Not treated
Yes	R1-074047	Way Forward for CQI Reporting	Motorola	6.4.5	Discussion/Decision		Noted
Yes	R1-074048	Further comments on UE capabilities and Soft Memory Size	Motorola	6.6	Discussion/Decision		Noted
Yes	R1-074049	Analysis of Enhancement to CELL_FACH State for 1.28Mcps TDD	ZTE	10	Discussion/Decision		Noted
Yes	R1-074050	Analysis of Continuous Packet Connectivity for 1.28Mcps TDD	ZTE	10	Discussion/Decision		Noted
Yes	R1-074051	64QAM Simulation Results for 1.28Mcps TDD HSDPA	ZTE	10	Discussion/Decision		Noted
Yes	R1-074052	Comparison of S-SCH mapping Methods	ETRI	6.2.6	Discussion/Decision		Not treated
Yes	R1-074053	S-SCH Scrambling Methods	ETRI	6.2.6	Discussion/Decision		Not treated
Yes	R1-074054	Cell Throughput Comparison for 2x2 MIMO: PARC, S-PARC and D-TxAA	TD-Tech	10	Discussion/Decision		Noted
Yes	R1-074055	25.224 CR0170 (Rel-7,) "EUL power control improvements for 1.28Mcps TDD"	TD-Tech	5	CR		Noted and postponed to next meeting
Yes	R1-074056	More improvement requirements on dedicated carrier for LCR TDD MBMS	CMCC	5	Discussion/Decision		Noted
Yes	R1-074057	Sequence Grouping Method for UL RS	Huawei	6.2.2	Discussion/Decision		Not treated
Yes	R1-074058	Resource-specific cyclic shift hopping	Huawei,ZTE	6.2.2	Discussion/Decision		Not treated
Yes	R1-074059	Control Signaling of MBMS Single-Cell Transmission	Huawei	6.2.3	Discussion/Decision		Not treated
Yes	R1-074060	UL index in UL schedule grant for LTE TDD	Huawei	6.2.3	Discussion/Decision		Not treated
Yes	R1-074061	Multiplexing of scheduling request indicator	Huawei	6.2.4	Discussion/Decision		Not treated
Yes	R1-074062	PUCCH channel structure of TDD FS 2	Huawei	6.2.4	Discussion/Decision		Not treated
Yes	R1-074063	Relation between UL ACK/NACK and DL CCE	Huawei	6.2.4	Discussion/Decision		Not treated
Yes	R1-074064	Summary of email discussion on LTE MIMO	Samsung	6	Discussion		Noted
Yes	R1-074065	Power Scaling and DL RS boosting	Samsung	6.2.1	Discussion/Decision	R1-074450	Not treated
Yes	R1-074066	Summary of Reflector Discussions on EUTRA DL RS	Samsung	6.2.1	Discussion		Noted
Yes	R1-074067	Downlink reference signal structure for TDD frame structure type 2	Samsung	6.2.1	Discussion/Decision		Not treated
Yes	R1-074068	Summary of Reflector Discussions on EUTRA UL RS	Samsung	6.2.2	Discussion		Noted
Yes	R1-074069	Sounding RS Multiplexing in E-UTRA UL – Interaction with PUCCH	Samsung	6.2.2	Discussion/Decision		Not treated
Yes	R1-074070	Link Adaptation Using DM RS for UL VoIP Transmissions	Samsung	6.2.2	Discussion/Decision		Not treated
Yes	R1-074071	Downlink Link Adaptation and Related Control Signaling	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074072	Downlink PMI indication for SU-MIMO	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074073	PHICH linking to downlink CCE	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074074	Downlink ACK/NACK Transmit Diversity	Samsung	6.2.3	Discussion/Decision	R1-074483	Revised
Yes	R1-074075	Further Considerations of CDD Precoding for High-speed UEs	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074076	Subset selection for precoding	Samsung	6.2.3	Discussion/Decision		Not treated

Yes	R1-074077	PHICH structure in MBSFN subframes	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074078	Configuration of PDCCH Monitoring Set	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074079	Comparison of Downlink Resource Allocation Indication Schemes	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074080	PHICH/PDCCH to RE mapping	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074081	Interpretation of CCFI for EUTRA TDD	Samsung	6.2.3	Discussion/Decision		Noted
Yes	R1-074082	Short UL Grant Size in E-UTRA	Samsung	6.2.3	Discussion/Decision		Not treated
No	R1-074083	Support of Re-Transmissions for Persistent Scheduling in E-UTRA UL	Samsung	6.2.3	Discussion/Decision		Missing
Yes	R1-074084	Transmission of Scheduling Units in E-UTRA DL	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074085	CCFI to RE Mapping for One Transmitter Antenna	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074086	CCFI to RE mapping for multiple TX antennas	Samsung	6.2.3	Discussion/Decision		Not treated
Yes	R1-074087	SU-MIMO PMI feedback and Compression	Samsung	6.2.4	Discussion/Decision		Not treated
Yes	R1-074088	CQI Reporting for MU-MIMO	Samsung	6.2.4	Discussion/Decision		Not treated
Yes	R1-074089	Performance of single CQI feedback for 2CW SU-MIMO	Samsung	6.2.4	Discussion/Decision		Not treated
Yes	R1-074090	Uplink CQI report format	Samsung	6.2.4	Discussion/Decision		Noted
Yes	R1-074091	Selection of orthogonal cover Walsh codes for high speed UL ACK/NACK channels	Samsung	6.2.4	Discussion/Decision		Not treated
Yes	R1-074092	Slot-level UL ACK/NACK Cyclic Shift/Orthogonal Cover Remapping	Samsung	6.2.4	Discussion/Decision		Not treated
Yes	R1-074093	Simultaneous UE transmission of UL ACK/NAK and CQI	Samsung	6.2.4	Discussion/Decision		Not treated
Yes	R1-074094	Cyclic shift and orthogonal cover allocations for UL ACK/NACK	Samsung	6.2.4	Discussion/Decision		Not treated
Yes	R1-074095	UL ACK/NACK resource indication for DL persistent scheduling	Samsung	6.2.4	Discussion/Decision		Not treated
Yes	R1-074096	UL RB mapping and slot level re-mapping for ACK/NACK and CQI	Samsung	6.2.4	Discussion/Decision		Not treated
Yes	R1-074097	Multiplexing CQI and ACK/NAK Transmission in E-UTRA UL	Samsung	6.2.4	Discussion/Decision		Noted
Yes	R1-074098	ACK/NAK Repetitions in E-UTRA UL	Samsung	6.2.4	Discussion/Decision		Not treated
Yes	R1-074099	UL LFDMA with hopping in PUSCH	Samsung	6.2.5	Discussion/Decision		Not treated
Yes	R1-074100	Uplink time domain hopping for E-UTRA TDD	Samsung	6.2.5	Discussion/Decision		Not treated
Yes	R1-074101	Cyclic Shift Restrictions for RACH in Small, Medium and Large Cells	Samsung	6.2.7	Discussion/Decision		Not treated
Yes	R1-074102	Determination of the Cyclic Shift Amount, Ncs	Samsung	6.2.7	Discussion/Decision		Not treated
Yes	R1-074103	Performance of orthogonal Hybrid ARQ for multi-user MIMO in E-UTRA uplink	Samsung	6.3	Discussion/Decision		Not treated
Yes	R1-074104	Redundancy Version (RV) Definition for Turbo code Rate Matching	Samsung	6.3	Discussion/Decision		Not treated
Yes	R1-074105	TB CRC generator polynomial	Samsung	6.3	Discussion/Decision	R1-074473	Revised
Yes	R1-074106	RV starting point in UL HARQ	Samsung	6.3	Discussion/Decision		Not treated

No								
Yes	R1-074107	UL code symbol interleaver	Samsung	6.3	Discussion/Decision		Missing
Yes	R1-074108	HARQ symbol to RE mapping	Samsung	6.3	Discussion/Decision		Not treated
Yes	R1-074109	Radio link monitoring for E-UTRA	Samsung	6.4.1	Discussion/Decision		Noted
Yes	~~R1-074110~~	Improving cell-edge performance by Inter-Cell Interference Coordination	Samsung	6.4.3	Discussion/Decision		Withdrawn
Yes	R1-074111	More physical layer improvements on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, TD Tech, ZTE, Spreadtrum Communications, CATT	5	Discussion		Noted
Yes	R1-074112	25.201 CR037 (Rel-7,) More improvement on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	5	CR		Postponed to next meeting
Yes	R1-074113	25.221 CR148 (Rel-7,) More improvement on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	5	CR		Postponed to next meeting
Yes	R1-074114	25.222 CR141 (Rel-7,) More improvement on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	5	CR		Postponed to next meeting
Yes	R1-074115	25.223 CR049 (Rel-7,) More improvement on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	5	CR		Postponed to next meeting
Yes	R1-074116	25.224 CR171 (Rel-7,) More improvement on dedicated carrier for 1.28 Mcps TDD MBMS	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	5	CR		Postponed to next meeting
Yes	R1-074117	Analysis of UE capabilities in 1.28 Mcps TDD MBSFN	CMCC, RITT, CATT,TD Tech, ZTE, Spreadtrum Communications	5	Discussion/Decision		Noted and postponed to next meeting
Yes	R1-074118	Combining Period interrupted by a DTX gap	Qualcomm Europe	5	Discussion/Decision	R1-074456	Revised
Yes	R1-074119	25.214 CR463 (Rel-7, F) Timing of CQI vs DTX priority change - Rel 7	Qualcomm Europe	5	CR		Agreed
No	R1-074120	25.214 CR464 (Rel-8,) Timing of CQI vs DTX priority change - Rel 8	Qualcomm Europe	5	CR		Withdrawn
Yes	R1-074121	25.214 CR465 (Rel-7, F) Grant Monitoring clarification - Rel 7	Qualcomm Europe	5	CR		Agreed
No	R1-074122	25.214 CR466 (Rel-8,) Grant Monitoring clarification - Rel 8	Qualcomm Europe	5	CR		Withdrawn
Yes	R1-074123	E-DPCCH transmission in compressed frames	Qualcomm Europe	5	Discussion/Decision		Noted
No	R1-074124	CQI tables for MIMO + 64QAM	Qualcomm Europe	7	Discussion/Decision		Withdrawn
No	R1-074125	HS-SCCH signaling for MIMO + 64QAM	Qualcomm Europe	7	Discussion/Decision		Withdrawn
Yes	R1-074126	L1/L2 aspects for enhanced UL for CELL_FACH	Qualcomm Europe	8	Discussion/Decision		Noted
Yes	R1-074127	Link analysis of HS-RACH	Qualcomm Europe	8	Discussion/Decision		Noted
Yes	R1-074128	Considerations for operation of sync E-DCH	Qualcomm Europe	9	Discussion/Decision		Noted
Yes	R1-074129	Link analysis of sync E-DCH	Qualcomm Europe	9	Discussion/Decision		Noted
Yes	R1-074130	Design of of CG Sequences for Small RB Allocations in E-UTRA UL	Texas Instruments	6.2.2	Discussion/Decision		Not treated
Yes	R1-074131	Comparison of Computer-Generated Sequence Proposals for UL DM RS	Texas Instruments	6.2.2	Discussion/Decision	R1-074443	Revised
Yes	R1-074132	Uplink Reference Signal Sequence Assignments in E-UTRA	Texas Instruments	6.2.2	Discussion/Decision		Not treated
Yes	R1-074133	Interference between Sounding Reference Signal and Random Access Preamble	Texas Instruments	6.2.2	Discussion/Decision		Not treated
Yes	R1-074134	Uplink Reference Signals in Support of High-Speed UEs	Texas Instruments	6.2.2	Discussion/Decision		Not treated

Yes	R1-074135	Sufficient Number of Sequences for PUSCH with Proposed High-Speed UE RS Structure	Texas Instruments	6.2.2	Discussion/Decision			Not treated
Yes	R1-074136	Choice of CRC Length for PDCCH	Texas Instruments, Nokia, Nokia Siemens Networks	6.2.3	Discussion/Decision			Not treated
Yes	R1-074137	Consideration of Supportable TF for E-UTRA DL	Texas Instruments	6.2.3	Discussion/Decision			Not treated
Yes	R1-074138	Separate Rank and CQI Feedback in PUCCH	Texas Instruments	6.2.4	Discussion/Decision			Not treated
Yes	R1-074139	Simultaneous ACK/NAK and SR Transmission in Uplink	Texas Instruments	6.2.4	Discussion/Decision			Not treated
Yes	R1-074140	ACK/NAK Performance in PUCCH with Timing Offset and Near-Far Effect	Texas Instruments	6.2.4	Discussion/Decision	R1-074487	Revised	
Yes	R1-074141	Simultaneous CQI and ACK/NAK Transmission in Uplink	Texas Instruments	6.2.4	Discussion/Decision			Not treated
Yes	R1-074142	Sounding Reference Signal In Support of Scheduling Request in E-UTRA	Texas Instruments	6.2.4	Discussion/Decision			Not treated
Yes	R1-074143	Secondary SCH Mapping and Scrambling	Texas Instruments	6.2.6	Discussion/Decision			Not treated
Yes	R1-074144	Random Access Slot Configurations	Texas Instruments	6.2.7	Discussion/Decision			Not treated
Yes	R1-074145	Sequence ordering for PRACH in E-UTRA	Texas Instruments, LG Electronics, Huawei	6.2.7	Discussion/Decision			Not treated
Yes	R1-074146	Comparison of Hybrid methods for PRACH sequence ordering	Texas Instruments	6.2.7	Discussion/Decision			Not treated
Yes	R1-074147	Cyclic Shift Values for E-UTRA PRACH	Texas Instruments, LG Electronics	6.2.7	Discussion/Decision			Noted
Yes	R1-074148	Cyclic Shift Configuration and Sequence Ordering in Support of High-Speed Random Access	Texas Instruments	6.2.7	Discussion/Decision			Not treated
Yes	R1-074149	Design Aspects of UE Feedback	Texas Instruments	6.4.5	Discussion/Decision			Not treated
Yes	R1-074150	Rank and PMI Feedback Rate – Analysis	Texas Instruments	6.4.5	Discussion/Decision			Not treated
Yes	R1-074151	CQI/PMI Feedback Rate – System Simulation	Texas Instruments	6.4.5	Discussion/Decision			Not treated
Yes	R1-074152	Rank Feedback Rate – System Simulation	Texas Instruments	6.4.5	Discussion/Decision			Not treated
Yes	R1-074153	CQI Feedback Reduction Scheme for E-UTRA	Texas Instruments	6.4.5	Discussion/Decision			Noted
Yes	R1-074154	Cell-specific Mapping of VRBs to PRBs for Downlink Distributed Transmission	NEC Group	6.2.5	Discussion/Decision			Not treated
Yes	R1-074155	DL Distributed Resource Signalling for EUTRA	NEC Group	6.2.5	Discussion/Decision			Not treated
Yes	R1-074156	Performance Evaluation of FH Schemes for EUTRA Uplink	NEC Group	6.2.5	Discussion/Decision			Not treated
Yes	R1-074157	Frequency Hopping Pattern for EUTRA Uplink	NEC Group	6.2.5	Discussion/Decision			Not treated
Yes	R1-074158	Way forward on DL power control	NEC Group	6.4.2	Discussion/Decision	R1-074479	Revised	
Yes	R1-074159	CQI, PMI and rank reporting issues for EUTRA	NEC Group	6.4.5	Discussion/Decision			Not treated
Yes	R1-074160	DL Control Channel Structure: CCE Aggregation and Blind Detections	NEC Group	6.2.3	Discussion/Decision			Not treated
Yes	R1-074161	Compact DL Assignment and its Resource Allocation Signalling	NEC Group	6.2.3	Discussion/Decision			Not treated
Yes	R1-074162	DL Unicast Resource Allocation Signalling using L1L2 control channels	NEC Group	6.2.3	Discussion/Decision			Not treated
Yes	R1-074163	Downlink ACK/NACK signalling for E-UTRA	NEC Group	6.2.3	Discussion/Decision			Not treated
Yes	R1-074164	DL Multiplexing for Persistent and Dynamic scheduling	NEC Group	6.2.3	Discussion/Decision			Not treated

Yes	R1-074165	Control channel format for DBCH, PCH and RACH response	NEC, Nokia, Nokia Siemens Networks, Motorola	6.2.3	Discussion/Decision		Not treated
Yes	R1-074166	Low overhead PDCCH format for BCCH, PCH, RACH response	NEC Group	6.2.3	Discussion/Decision		Not treated
Yes	R1-074167	Control Channel Multiplexing	NEC Group	6.2.3	Discussion/Decision		Not treated
Yes	R1-074168	CQI + ACK/NACK transmission in PUCCH	NEC Group	6.2.4	Discussion/Decision		Not treated
Yes	R1-074169	PUCCH allocation for ACK/NACK transmission	NEC Group	6.2.4	Discussion/Decision		Not treated
Yes	R1-074170	Detail of ACK/NACK and CQI transmission without data transmission	NEC Group	6.2.4	Discussion/Decision		Not treated
Yes	R1-074171	Summary of Reflector Discussions on TDD FS1: Framing allocations	IPWirless, NextWave Wireless	6.2	Decision		Not treated
Yes	R1-074172	Summary of Reflector Discussions on TDD FS1: RACH Timing	IPWirless, NextWave Wireless	6.4.4	Decision		Postponed to next meeting
Yes	R1-074173	Summary of Reflector Discussions on TDD FS1: HARQ related	IPWirless, NextWave Wireless	6.3	Decision		Noted
Yes	R1-074174	On the TDD UL Grant Channel	IPWirless, NextWave Wireless	6.2.3	Decision		Not treated
Yes	R1-074175	Dimensioning of TDD PHICH	IPWirless, NextWave Wireless	6.2.3	Decision		Not treated
Yes	R1-074176	Dimensioning of TDD Control Signalling	IPWirless, NextWave Wireless	6.2.3	Decision		Not treated
Yes	R1-074177	Frame configurations for TDD frame structure type 1	IPWirless, NextWave Wireless	6.2	Decision		Not treated
Yes	R1-074178	Implementation of Idle Period in TDD FS1	IPWirless, NextWave Wireless	6.3	Decision		Agreed
Yes	R1-074179	TDD HARQ timing	IPWirless, NextWave Wireless	6.3	Decision	R1-074446	Revised
Yes	R1-074180	PRACH Slot Configuration for TDD FS1	IPWirless, NextWave Wireless	6.2.7	Decision		Noted
Yes	R1-074181	Maximum number of ACK/NAK per TTI for TDD FS1	IPWirless, NextWave Wireless	6.2.4	Decision		Noted
Yes	R1-074182	TDD PUCCH	IPWirless, NextWave Wireless	6.2.4	Decision		Noted
Yes	R1-074183	Multiplexing of PUCCH and Sounding RS	Fujitsu	6.2.2	Discussion/Decision		Not treated
Yes	R1-074184	Adoption of 2-stage Rate Matching and Modified IR-HARQ	Fujitsu	6.3	Discussion/Decision		Not treated
Yes	R1-074185	Signaling of MBSFN Subframe Allocations	Alcatel-Lucent	6.2.3	Discussion		Not treated
Yes	R1-074186	CCFI contents for LTE TDD with FS2	CATT	6.2.3	Discussion/Decision		Noted
Yes	R1-074187	PUCCH details for ACK transmission LTE TDD with FS2	CATT	6.2.4	Discussion/Decision		Not treated
Yes	R1-074188	PUCCH details for CQI transmission LTE TDD with FS2	CATT	6.2.4	Discussion/Decision		Not treated
Yes	R1-074189	Link Level Results of 2×2 MIMO Schemes for 1.28Mcps TDD	CATT	10	Discussion/Decision		Noted
Yes	R1-074190	Further Consideration on RE Mapping for 4Tx PDSCH	LG Electronics	6.2.1	Discussion		Not treated
Yes	R1-074191	Frequency hopping operation for UL sounding RS	LG Electronics	6.2.2	Discussion/Decision		Not treated
Yes	R1-074192	Comparison of the proposals for CG UL DM RS	LG Electronics	6.2.2	Discussion/Decision		Not treated
Yes	R1-074193	Interleaver Design for CCE-to-RE Mapping	LG Electronics	6.2.3	Discussion/Decision	R1-074472	Revised
Yes	R1-074194	Downlink control signaling for SU-MIMO	LG Electronics	6.2.3	Discussion/Decision		Not treated
Yes	R1-074195	DL control channel configurations	LG Electronics	6.2.3	Discussion/Decision		Not treated

Yes	R1-074196	Restriction of UL/DL subframe ratio considering PUCCH in TDD	LG Electronics	6.2.3	Discussion/Decision		Not treated
Yes	R1-074197	Downlink PHICH repetition factor in 1 Tx case	LG Electronics	6.2.3	Discussion/Decision		Not treated
Yes	R1-074198	Mapping Relation comparisons for PHICH	LG Electronics	6.2.3	Discussion/Decision		Not treated
Yes	R1-074199	DL PHICH structure	LG Electronics	6.2.3	Discussion/Decision		Noted
Yes	R1-074200	On the implementation of rank overide using codeword DTX	LG Electronics	6.2.3	Discussion/Decision		Not treated
Yes	R1-074201	Interference Randomization Techniques for PHICH	LG Electronics	6.2.3	Discussion/Decision		Not treated
Yes	R1-074202	Methods for PUCCH and SRS simultaneous transmission	LG Electronics	6.2.4	Discussion		Not treated
Yes	R1-074203	Way forward on PUCCH and SRS simultaneous transmission	LG Electronics	6.2.4	Discussion/Decision		Not treated
Yes	R1-074204	Error case handling in case of DL control channel failure	LG Electronics	6.2.4	Discussion		Not treated
Yes	R1-074205	Scheduling Request (SR) design considering PUCCH structure	LG Electronics	6.2.4	Discussion/Decision		Not treated
Yes	R1-074206	Considerations on UL ACK/NACK operation	LG Electronics	6.2.4	Discussion/Decision		Not treated
Yes	R1-074207	Control signalling error requirement depending on eNode B DTX detection	LG Electronics	6.2.4	Discussion/Decision		Not treated
Yes	R1-074208	DL LVRB allocation approach	LG Electronics	6.2.5	Discussion/Decision		Not treated
Yes	R1-074209	Frequency hopping method for PUSCH	LG Electronics	6.2.5	Discussion/Decision		Not treated
Yes	R1-074210	SSC mapping and scrambling method	LG Electronics	6.2.6	Discussion/Decision	R1-074502	Revised
Yes	R1-074211	Flexibility of detecting 40ms P-BCH boundary	LG Electronics	6.2.6	Discussion/Decision		Not treated
No	R1-074212	Consideration on UL power control	LG Electronics	6.4.2	Discussion/Decision		Missing
Yes	R1-074213	Spatial Delta CQI in SU-MIMO	LG Electronics	6.4.5	Discussion		Not treated
No	R1-074214	Separation of CQI report into indexes and values over PUSCH and PUCCH	LG Electronics	6.4.5	Discussion/Decision		Missing
Yes	R1-074215	Investigation on tradeoff between PMI overhead and performance	LG Electronics	6.4.5	Discussion/Decision		Not treated
Yes	R1-074216	Consideration on Open-loop SM Transmission Mode	LG Electronics	6.4.5	Discussion/Decision		Not treated
Yes	R1-074217	UL synchronous HARQ procedure and UE behaviour after ACK/NACK detection	LG Electronics	6.4.6	Discussion/Decision		Not treated
Yes	R1-074218	CCE allocation scheme in PDCCH for efficient blind detection	ZTE	6.2.3	Discussion/Decision		Not treated
Yes	R1-074219	Distributed Transmission in E-UTRA Downlink	ZTE	6.2.5	Discussion/Decision		Not treated
Yes	R1-074220	Remaining Issues on SSC Design	ZTE, RITT, CATT	6.2.6	Discussion/Decision		Not treated
Yes	R1-074221	DL Resource Allocation Signaling Indication Scheme	ZTE	6.2.3	Discussion/Decision		Not treated
Yes	R1-074222	The Intra-TTI frequency hopping scheme in PUSCH	ZTE, CATT, Huawei	6.2.5	Discussion/Decision		Not treated
Yes	R1-074223	Multiplexing of Sounding RS and PUCCH	ZTE	6.2.2	Discussion		Not treated
Yes	R1-074224	Hybrid combination of CG sequences for 1 and 2 RB UL DM RS	ZTE	6.2.2	Discussion		Not treated
Yes	R1-074225	Considerations on DL signaling for support of SU- and MU-MIMO	ZTE	6.2.3	Discussion		Not treated
Yes	R1-074226	Generic interleaver for PDCCH	Huawei	6.2.3	Discussion/Decision		Noted
Yes	R1-074227	MIMO precoding information in PDCCH	Huawei	6.2.3	Discussion/Decision		Not treated
Yes	R1-074228	Completing the 2 TX codebook	Huawei	6.2.4	Discussion/Decision		Not treated

Yes	R1-074229	Performance evaluation of cell-specific mapping of distributed virtual resource blocks in downlink	Huawei	6.2.5	Discussion/Decision		Not treated	
Yes	R1-074230	Scrambling and information encoding for the S-SCH	Huawei	6.2.6	Discussion/Decision		Not treated	
Yes	R1-074231	Comparison of proposals for values of cyclic shift increment Ncs	Huawei	6.2.7	Discussion/Decision		Not treated	
Yes	R1-074232	Performances of CQI feedback schemes on PUSCH	Huawei	6.4.5	Discussion/Decision		Noted	
Yes	R1-074233	CQI and PMI resource management	Huawei	6.4.5	Discussion/Decision		Not treated	
Yes	R1-074234	Optimal bitmap compression for CQI feedback	Huawei	6.4.5	Discussion/Decision		Noted	
Yes	R1-074235	Improving Inter-Sector Handover User Throughput by Combined Interference Coordination and softer Handover in E-UTRA Downlink	CHTTL	6.4.3	Discussion		Not treated	
Yes	R1-074236	Multiplexing of PDCCHs of Multiple Ues in E-UTRA Downlink	KDDI	6.2.3	Discussion/Decision		Not treated	
Yes	R1-074237	Hybrid FDM/CDM Based Multiplexing for ACK/NACK Signals in E-UTRA Downlink	KDDI	6.2.3	Discussion/Decision		Not treated	
Yes	R1-074238	Rotational CDM for L1/L2 Control Channel Signaling in E-UTRA Downlink	KDDI	6.2.3	Discussion/Decision		Not treated	
Yes	R1-074239	An Evaluation of the Rotational CDM for L1/L2 Control Channel	KDDI	6.2.3	Discussion/Decision		Not treated	
Yes	R1-074240	System-Level Evaluation of the Rotational CDM for L1/L2 Control Channel	KDDI	6.2.3	Discussion/Decision		Not treated	
Yes	R1-074241	Uplink Data-non-associated Control Signaling in E-UTRA	KDDI	6.2.4	Discussion		Not treated	
Yes	R1-074242	Scheduling Request Channel in E-UTRA Uplink	KDDI	6.2.4	Discussion/Decision		Not treated	
No	R1-074243	MCCH multiplexing	Philips	4	Discussion/Decision		Withdrawn	
Yes	R1-074244	25.211 CR248 (Rel-7, F) Correction to transmit diversity specification in MIMO mode	Philips, NXP Semiconductors, Ericsson	5	CR		Agreed	
Yes	R1-074245	Way forward for dedicated reference symbols for downlink beamforming	Philips, NXP Semiconductors, NTT DoCoMo, Vodafone, AT&T, NEC, Fujitsu, Mitsubishi, Arraycomm, Sharp	6.2.1	Discussion/Decision	R1-074506	Revised	
Yes	R1-074246	Dedicated reference symbol pattern	Philips	6.2.1	Discussion/Decision		Not treated	
Yes	R1-074247	Discussion of PDCCH message formats	Philips, NXP Semiconductors	6.2.3	Discussion/Decision		Not treated	
Yes	R1-074248	Proposal for resource allocation signalling on PDCCH	Philips, NXP Semiconductors	6.2.3	Discussion/Decision		Not treated	
Yes	R1-074249	Signalling for UL resource allocation	Philips, NXP Semiconductors	6.2.3	Discussion/Decision		Not treated	
Yes	R1-074250	PDSCH timing for power saving for paging in idle mode	Philips	6.2.3	Discussion/Decision		Not treated	
No	R1-074251	Vector quantisation with successive refinement for MIMO feedback	Philips	6.2.4	Discussion/Decision		Withdrawn	
No	R1-074252	CQI reporting for TDD	Philips	6.2.4	Discussion/Decision		Withdrawn	
Yes	R1-074253	DVRB to PRB mapping for EUTRA downlink	Philips	6.2.5	Discussion/Decision		Not treated	
Yes	R1-074254	Codebook for MU-MIMO	Philips, NXP Semiconductors	6.4.5	Discussion/Decision		Not treated	
Yes	R1-074255	CQI definition for MU-MIMO	Philips, NXP Semiconductors	6.4.5	Discussion/Decision		Not treated	
Yes	R1-074256	UE procedure for ACK/NACK detection	Philips, NXP Semiconductors	6.4.6	Discussion/Decision		Not treated	
No	R1-074257	Signalling to support combination of higher-order modulation and MIMO	Philips	7	Discussion/Decision		Withdrawn	

Yes	R1-074258	Distributed Virtual Resource Block Mapping for Persistent Resource Allocation as VoIP	Alcatel-Lucent	6.2.5	Discussion/Decision			Not treated
Yes	R1-074259	Signaling Resource Allocations in DL Control Channel	Alcatel-Lucent	6.2.3	Discussion			Not treated
Yes	R1-074260	A use case for Max Tx Power per PRB as a eNodeB Measurement	Alcatel-Lucent	6.5	Discussion	R1-074515		Revised
Yes	R1-074261	Incremental CQI Feedback Scheme and Simulation Results	Alcatel-Lucent	6.4.5	Discussion			Noted
Yes	R1-074262	Application of the Incremental CQI Feedback Scheme	Alcatel-Lucent	6.4.5	Discussion			Not treated
Yes	R1-074263	Semi-Static Interference Coordination Method	Alcatel-Lucent	6.4.3	Discussion	R1-074475		Revised
Yes	R1-074264	Support for Semi-Static Inter cell Interference Coordination	Alcatel-Lucent, Nortel Networks	6.4.3	Discussion/Decision			Not treated
Yes	R1-074265	UL Sounding RS Design for E-UTRA	Alcatel-Lucent	6.2.2	Discussion/Decision			Not treated
Yes	R1-074266	UL Power Control Parameter Values in PUSCH Power Control	Alcatel-Lucent	6.4.2	Discussion/Decision			Not treated
Yes	R1-074267	Adaptivity for UL HARQ Transmissions	Alcatel-Lucent	6.2.4	Discussion/Decision			Not treated
Yes	R1-074268	On the Time Duration Field in the Uplink Scheduling Grant	Alcatel-Lucent	6.2.4	Discussion/Decision			Not treated
Yes	R1-074269	Number of HARQ Processes	Alcatel-Lucent	6.3	Discussion/Decision			Noted
Yes	R1-074270	Mulplexing of PUCCH with PUSCH in E-UTRA UL Transmission	Alcatel-Lucent	6.2.4	Discussion/Decision			Noted
Yes	R1-074271	On the Need for VoIP Coverage Enhancement for the E-UTRA UL	Alcatel-Lucent	6.2.4	Discussion/Decision			Not treated
Yes	R1-074272	Multiplexing ACK/NAK with CQI	Alcatel-Lucent	6.2.4	Discussion/decision			Not treated
Yes	R1-074273	Power Offsets to Maintain QoS for Persistent Allocations in the Presence of Control Channel Multiplexing for the E-UTRA Uplink	Alcatel-Lucent	6.4.6	Discussion/decision			Not treated
Yes	R1-074274	Power Control for RACH	Alcatel-Lucent	6.4.2	Discussion/decision			Not treated
Yes	R1-074275	VRB addressing for localized and distributed DL transmission	Alcatel-Lucent	6.2.5	Discussion/decision			Not treated
Yes	R1-074276	Multiplexing the Scheduling Request in the Uplink	Alcatel-Lucent	6.2.4	Discussion/decision			Not treated
Yes	R1-074277	Views on Beamforming Using Dedicated RS for E-UTRA Downlink	NTT DoCoMo	6.2.1	Discussion/decision			Not treated
Yes	R1-074278	Sequence Hopping for Uplink RS	NTT DoCoMo	6.2.2	Discussion/decision			Not treated
Yes	R1-074279	Sounding RS Structure in E-UTRA Uplink	NTT DoCoMo	6.2.2	Discussion/decision			Not treated
Yes	R1-074280	Assignment Scheme for Sounding Reference Signals in E-UTRA Uplink	NTT DoCoMo	6.2.2	Discussion/decision			Not treated
Yes	R1-074281	Necessity of Multiple Bandwidths for Sounding Reference Signals	NTT DoCoMo	6.2.2	Discussion/decision			Not treated
Yes	R1-074282	Multiplexing Scheme of Sounding RS in E-UTRA Uplink	NTT DoCoMo	6.2.2	Discussion/decision			Not treated
Yes	R1-074283	Investigation on Control Information Bits in PDCCH	NTT DoCoMo	6.2.3	Discussion/decision			Not treated
Yes	R1-074284	Semi-static Configuration of Non-adaptive and Adaptive ARQ in E-UTRA Downlink	NTT DoCoMo	6.2.3	Discussion/decision			Not treated
Yes	R1-074285	Investigation on PMI Indication Schemes for Single-User MIMO Precoding in E-UTRA Downlink	NTT DoCoMo	6.2.3	Discussion/decision			Not treated
Yes	R1-074286	Investigation on Throughput Performance of MU-MIMO in E-UTRA Downlink	NTT DoCoMo	6.2.3	Discussion/decision	R1-074463		Revised
Yes	R1-074287	On ACK/NACK and CQI Transmission Method in PUCCH	NTT DoCoMo	6.2.4	Discussion/decision			Not treated
No	R1-074288	Transmission Method of Scheduling Request in E-UTRA Uplink	NTT DoCoMo	6.2.4	Discussion/decision			Missing
Yes	R1-074289	Basic Method for CQI Feedback in E-UTRA	NTT DoCoMo	6.2.4	Discussion/decision			Not treated

Yes	R1-074290	Investigation on Performance of PUCCH in Coverage-limited Conditions	NTT DoCoMo	6.2.4	Discussion/decision	R1-074464	Revised		
Yes	R1-074291	Usage of Remaining Resource Elements in Resource Blocks Multiplexed with PBCH and SCH	NTT DoCoMo	6.2.5	Discussion/decision		Not treated		
Yes	R1-074292	Control Signaling for Uplink Frequency Hopping in E-UTRA	NTT DoCoMo	6.2.5	Discussion/decision	R1-074465	Revised		
Yes	R1-074293	Investigation on P-SCH Specific Scrambling Sequences for S-SCH	NTT DoCoMo	6.2.6	Discussion/decision		Not treated		
Yes	R1-074294	On PRACH Structure for 1.4-MHz System Bandwidth	NTT DoCoMo	6.2.7	Discussion/decision		Not treated		
Yes	R1-074295	PRACH Multiplexing Method and Slot Configuration for E-UTRA Uplink	NTT DoCoMo	6.2.7	Discussion/decision		Not treated		
Yes	R1-074296	Views on Number of Hybrid ARQ Processes in E-UTRA	NTT DoCoMo	6.3	Discussion/decision	R1-074466	Revised		
Yes	R1-074297	Necessity of Time Diversity for D-BCH	NTT DoCoMo	6.4.5	Discussion/decision	R1-074467	Revised		
Yes	R1-074298	UE Measurements and Rx Diversity	Nokia Siemens Networks, Nokia	5	Discussion		Noted		
Yes	R1-074299	25212CR (R8, B) HS-SCCH information field mapping for 64QAM MIMO	Nokia, Nokia Siemens Networks, Ericsson, Philips	7	CR		Agreed		
Yes	R1-074300	Enhanced CELL_FACH state with E-DCH	Nokia, Nokia Siemens Networks	8	Decision		Noted		
Yes	R1-074301	Applications of Enhanced Uplink for CELL_FACH State in FDD	Nokia, Nokia Siemens Networks	8	Discussion		Noted		
Yes	R1-074302	CELL_FACH state E-DCH – coverage comparison	Nokia, Nokia Siemens Networks	8	Discussion		Noted		
Yes	R1-074303	Resource assignment for E-DCH access in CELL_FACH state	Nokia, Nokia Siemens Networks	8	Discussion		Noted		
Yes	R1-074304	Synchronised E-DCH: Issues to be considered	Nokia Siemens Networks, Nokia	9	Discussion		Noted		
Yes	R1-074305	Synchronised E-DCH: Initial link simulations	Nokia Siemens Networks, Nokia	9	Discussion		Noted		
Yes	R1-074306	Draft TR skeleton for synchronised E-DCH	Nokia Siemens Networks, Nokia	9	TR	R1-074461	Revised		
Yes	R1-074307	Invariant PBCH Structure	Nokia Siemens Networks, Nokia, Motorola	6.2	Discussion/Decision		Not treated		
Yes	R1-074308	Capacity of D-BCH and Benefits of Time Diversity	Nokia Siemens Networks, Nokia	6.2	Discussion/Decision		Not treated		
Yes	R1-074309	DL UL allocation options for EUTRA TDD	Nokia, Nokia Siemens Networks	6.2	Discussion/Decision		Not treated		
Yes	R1-074310	Issues regarding MBSFN subframes	Nokia, Nokia Siemens Networks	6.2.1	Discussion/Decision		Not treated		
Yes	R1-074311	On remaining MBSFN RS issues	Nokia, Nokia Siemens Networks	6.2.1	Discussion/Decision		Not treated		
Yes	R1-074312	Dedicated Reference Signal for TDD FS2	Nokia, Nokia Siemens Networks	6.2.1	Discussion/Decision		Not treated		
Yes	R1-074313	Open SRS issues	Nokia Siemens Networks, Nokia	6.2.2	Discussion/Decision		Not treated		
Yes	R1-074314	On selection of computer generated DM RS sequences	Nokia Siemens Networks, Nokia	6.2.2	Discussion/Decision		Not treated		
Yes	R1-074315	Cyclic Shift Hopping and DM RS Signaling	Nokia Siemens Networks, Nokia	6.2.2	Discussion/Decision	(R1-073644)	Not treated		
Yes	R1-074316	UL sounding reference signal for EUTRA TDD	Nokia, Nokia Siemens Networks	6.2.2	Discussion/Decision		Not treated		
Yes	R1-074317	Reducing the decoding complexity of the PDCCH	Nokia, Nokia Siemens Networks	6.2.3	Discussion/Decision		Not treated		
Yes	R1-074318	Control channel to RE mapping	Nokia, Nokia Siemens Networks	6.2.3	Discussion/Decision		Not treated		
Yes	R1-074319	Signaling PCH, RACH response and dynamic BCH	Nokia, Nokia Siemens Networks	6.2.3	Discussion/Decision		Not treated		

Yes	R1-074320	Considerations on the CCE sharing for uplink and downlink allocation grants	Nokia, Nokia Siemens Networks	6.2.3	Discussion/Decision		Not treated
Yes	R1-074321	Downlink resource assignments structure for LTE	Nokia, Nokia Siemens Networks	6.2.3	Discussion/Decision		Not treated
Yes	R1-074322	DL-CCH formats	Nokia, Nokia Siemens Networks	6.2.3	Discussion/Decision		Not treated
Yes	R1-074323	Downlink Control signaling considerations for EUTRA TDD	Nokia, Nokia Siemens Networks	6.2.3	Discussion/Decision		Not treated
Yes	R1-074324	Multi-TTI Uplink Grants for TDD	Nokia, Nokia Siemens Networks	6.2.3	Discussion/Decision		Not treated
Yes	R1-074325	MBMS single-cell p-t-m related control signaling	Nokia, Nokia Siemens Networks	6.2.3	Discussion/Decision		Not treated
Yes	R1-074326	Comparison of single-sequence and multi sequence modulation on PUCCH	Nokia Siemens Networks, Nokia	6.2.4	Discussion/Decision		Not treated
Yes	R1-074327	ACK/NACK+CQI transmitted on PUCCH	Nokia Siemens Networks, Nokia	6.2.4	Discussion/Decision		Not treated
Yes	R1-074328	Benefits of resource-specific cyclic shift randomization on PUCCH	Nokia Siemens Networks, Nokia	6.2.4	Discussion/Decision		Not treated
Yes	R1-074329	ACK/NACK Channelization	Nokia Siemens Networks, Nokia	6.2.4	Discussion/Decision		Not treated
Yes	R1-074330	Implicit Mapping of ACK/NACK resources	Nokia Siemens Networks, Nokia	6.2.4	Discussion/Decision		Not treated
Yes	R1-074331	Avoiding PUSCH error situations caused by DL allocation grant signalling failure	Nokia Siemens Networks, Nokia	6.2.4	Discussion/Decision		Noted
Yes	R1-074332	Impact of prioritizing PUCCH ACK/NACK transmission over SRS	Nokia Siemens Networks, Nokia	6.2.2	Discussion/Decision		Not treated
Yes	R1-074333	Scheduling Request supporting High Doppler	Nokia Siemens Networks, Nokia	6.2.4	Discussion/Decision	(R1-073654)	Noted
Yes	R1-074334	On CQI coding in PUCCH	Nokia Siemens Networks, Nokia	6.2.4	Discussion/Decision	(R1-073660)	Not treated
Yes	R1-074335	Repeated transmission of ACK in TDD FS2 PUCCH	Nokia, Nokia Siemens Networks	6.2.4	Discussion/Decision		Not treated
Yes	R1-074336	Multiple ACK transmission in PUCCH for TDD FS2	Nokia, Nokia Siemens Networks	6.2.4	Discussion/Decision		Not treated
Yes	R1-074337	CQI and CQI+ACK transmission in PUCCH for TDD FS2	Nokia, Nokia Siemens Networks	6.2.4	Discussion/Decision		Not treated
Yes	R1-074338	On the impact of LTE DL distributed transmission	Nokia, Nokia Siemens Networks	6.2.5	Discussion/Decision		Not treated
Yes	R1-074339	Transmission of P-BCH, P-SCH and S-SCH on dedicated MBMS carrier	Nokia, Nokia Siemens Networks	6.2.6	Discussion/Decision		Not treated
Yes	R1-074340	Sequence ordering and other RACH issues	Nokia Siemens Networks, Nokia	6.2.7	Discussion/Decision		Not treated
Yes	R1-074341	CRC Bit Order: Simulation Results	Nokia Siemens Networks, Nokia	6.3	Discussion/Decision		Noted
Yes	R1-074342	RV Definition	Nokia Siemens Networks, Nokia	6.3	Discussion/Decision		Not treated
Yes	R1-074343	BCH Interleaving	Nokia Siemens Networks, Nokia	6.3	Discussion/Decision		Not treated
Yes	R1-074344	Number of HARQ processes for FDD	Nokia, Nokia Siemens Networks	6.3	Discussion/Decision		Noted
Yes	R1-074345	HARQ in TDD (FS 1)	Nokia, Nokia Siemens Networks	6.3	Discussion/Decision		Noted
Yes	R1-074346	HARQ in TDD (FS 2)	Nokia, Nokia Siemens Networks	6.3	Discussion/Decision		Noted
Yes	R1-074347	Closed loop power control corrections for PUSCH	Nokia Siemens Networks, Nokia	6.4.2	Discussion/Decision	(R1-073675)	Not treated
Yes	R1-074348	Power control headroom reports for EUTRAN uplink	Nokia Siemens Networks, Nokia	6.4.2	Discussion/Decision	(R1-073676)	Noted
Yes	R1-074349	Overload Indicator handling for LTE	Nokia Siemens Networks, Nokia	6.4.3	Discussion		Not treated

Yes	R1-074350	Low load scenarios with CQI-based interference coordination	Nokia, Nokia Siemens Networks	6.4.3	Discussion/Decision			Not treated
Yes	R1-074351	On CQI measurements and compression for eNode-B RRM support	Nokia Siemens Networks, Nokia	6.4.5	Discussion/Decision			Not treated
Yes	R1-074352	CQI format to facilitate eNode-B link adaptation	Nokia Siemens Networks, Nokia	6.4.5	Discussion/Decision			Noted
Yes	R1-074353	CQI Trigger Mechanism	Nokia Siemens Networks, Nokia	6.4.5	Discussion/Decision	(R1-073680)		Not treated
Yes	R1-074354	Channel Quality Indicator for LTE MU-MIMO	Nokia, Nokia Siemens Networks	6.4.5	Discussion/Decision			Not treated
Yes	R1-074355	Effect of Precoding Granularity on LTE Multiuser MIMO	Nokia, Nokia Siemens Networks	6.4.5	Discussion/Decision			Not treated
Yes	R1-074356	CQI and MIMO feedback for LTE	Nokia Siemens Networks, Nokia	6.4.5	Discussion/Decision			Not treated
Yes	R1-074357	DL signaling for closep loop antenna selection in LTE UL	Nokia Siemens Networks, Nokia	6.4.6	Discussion/Decision			Noted
Yes	R1-074358	Measurement states for inter-RAT UE measurements	Nokia Siemens Networks, Nokia	6.5	Discussion			Noted
Yes	R1-074359	UE Categories	Nokia, Nokia Siemens Networks	6.6	Discussion/Decision			Noted
Yes	R1-074360	UE and CCE specific scrambling codes for low complexity blind detection of downlink control signaling	Mitsubishi Electric	6.2.3	Discussion/Decision			Not treated
Yes	R1-074361	Distributed VRB mapping over 3 PRBs	Mitsubishi Electric	6.2.5	Discussion/Decision			Not treated
Yes	R1-074362	UE category with single Rx antenna	NXP, Philips	6.6	Discussion/Decision			Noted
Yes	R1-074363	Inconsistence of signalling overhead and resource indication value function	ZTE	6.4.5	Discussion/Decision			Not treated
Yes	R1-074364	25.214 CR467 (Rel-7, F) Clarification on CQI tables in Rel-7	Alcatel-Lucent	5	CR	R1-074462		Revised
Yes	R1-074365	On optimisation of LTE TDD based on FS2	Ericsson	6.1	Discussion/Decision	R1-074459		Revised
No	R1-074366	Further optimization of FS2	Ericsson	6.1	Discussion/Decision			Withdrawn
Yes	R1-074367	Downlink reference signal sequences	Ericsson	6.2.1	Discussion/Decision			Not treated
Yes	R1-074368	PUSCH sequence hopping patterns	Ericsson	6.2.2	Discussion/Decision			Not treated
Yes	R1-074369	E-mail summary taking you forward on downlink control signaling	Ericsson	6.2.3	Discussion/Decision			Noted
Yes	R1-074370	CCE to RE Mapping	Ericsson	6.2.3	Discussion/Decision			Not treated
Yes	R1-074371	MIMO related DL control signalling	Ericsson	6.2.3	Discussion/Decision			Not treated
Yes	R1-074372	E-mail summary taking you forward on uplink control signaling	Ericsson	6.2.4	Discussion/Decision			Noted
Yes	R1-074373	Control Signalling for Half Duplex FDD in LTE	Ericsson	6.2.4	Discussion/Decision			Not treated
Yes	R1-074374	Scrambling of the Secondary Synchronization Signal	Ericsson	6.2.6	Discussion/Decision			Not treated
Yes	R1-074375	Error Detection Reliability of CRC	Ericsson	6.3	Discussion/Decision			Noted
Yes	R1-074376	ID specific CRC on DL-SCH/UL-SCH	Ericsson	6.3	Discussion/Decision			Noted
Yes	R1-074377	On monitoring radio problem detection	Ericsson	6.4.1	Discussion/Decision			Noted
Yes	R1-074378	Uplink Power Control for E-UTRA – Comments on Open Issues	Ericsson	6.4.2	Discussion/Decision	R1-074470		Revised
Yes	R1-074379	Reactive and Pro-active Use of Uplink Overload Indication in LTE	Ericsson	6.4.3	Discussion/Decision			Not treated
Yes	R1-074380	On Inter-cell Interference Coordination Schemes without/with Traffic Load Indication	Ericsson	6.4.3	Discussion/Decision	R1-074444		Revised

Yes	R1-074381	Aperiodic CQI reporting	Ericsson	6.4.5	Discussion/Decision		Noted
Yes	R1-074382	Extending Codeword to layer mapping for efficient support of retransmissions	Ericsson	6.4.5	Discussion/Decision		Not treated
Yes	R1-074383	Proposed way forward for CQI reporting	Nokia Siemens Networks, Ericsson, Huawei, Nokia, CATT	6.4.5	Discussion/Decision	R1-074453	Revised
Yes	R1-074384	Modulation & Channelization Signaling for MIMO and 64-QAM	InterDigital	7	CR		Noted
Yes	R1-074385	ACK/NACK Index Mapping for Uplink Transmission for E-UTRA	InterDigital Communications LLC	6.2.3	Discussion/Decision		Not treated
Yes	R1-074386	MU-MIMO Codebook Selection and Signaling Considerations for E-UTRA	InterDigital Communications LLC	6.2.3	Discussion/Decision	R1-074469	Revised
Yes	R1-074387	E-UTRA Power Control Performance Comparison of Feedback Methods	InterDigital Communications LLC	6.4.2	Discussion/Decision	R1-074481	Revised
Yes	R1-074388	Uplink Power Control Procedures and Text Proposal for E-UTRA	InterDigital Communications LLC	6.4.2	Discussion/Decision		Not treated
Yes	R1-074389	Performance Evaluation of E-UTRA CQI Schemes with Restricted Reporting Periods	InterDigital Communications LLC	6.4.5	Discussion		Noted
Yes	R1-074390	Binary Differential Feedback Using Existing Codebooks for E-UTRA	InterDigital Communications LLC	6.4.5	Discussion/Decision		Not treated
Yes	R1-074391	E-UTRA PUCCH: ACK/NACK, CQI, PMI, and RI Issues	InterDigital Communications LLC	6.4.5	Discussion		Not treated
Yes	R1-074392	Specification of Formula for Restricted Cyclic shift Set	LG Electronics, Nokia, Nokia Siemens Networks, Texas Instruments	6.2.7	Decision		Not treated
No	R1-074393	On the codeword to layer mapping issue for retransmission	Freescale Semiconductor	6.2.3	Discussion/Decision		Missing
No	R1-074394	Remaining issues in DL MIMO	Freescale Semiconductor	6.2	Discussion		Missing
No	R1-074395	Rank reporting for DL LTE MIMO	Freescale Semiconductor	6.4.5	Discussion/Decision		Missing
Yes	R1-074396	Comparison of Computer Generated sequences for E-UTRA uplink	Panasonic	6.2.2	Discussion/Decision		Not treated
Yes	R1-074397	Further consideration on uplink RS hopping and grouping	Panasonic	6.2.2	Discussion/Decision		Not treated
Yes	R1-074398	Frequency dependent PUSCH DM-RS generation method with considering eNB-specific allocation	Panasonic	6.2.2	Discussion/Decision		Not treated
Yes	R1-074399	Sounding RS position and relation with PUCCH	Panasonic	6.2.2	Discussion/Decision		Not treated
Yes	R1-074400	Transport format signaling and padding overhead	Panasonic	6.2.3	Discussion/Decision		Not treated
Yes	R1-074401	PDCCH payload formats and sizes	Panasonic	6.2.3	Discussion/Decision		Not treated
Yes	R1-074402	PDCCH Signaling for retransmission of downlink persistent scheduling	Panasonic	6.2.3	Discussion/Decision		Not treated
Yes	R1-074403	Comparison between FDM and CDM+FDM for DL L1/L2 control channel multiplexing	Panasonic	6.2.3	Discussion/Decision		Not treated
Yes	R1-074404	DL ACK/NACK modulation and UL HARQ behavior	Panasonic	6.2.3	Discussion/Decision		Not treated
Yes	R1-074405	Assignment of Downlink ACK/NACK channel	Panasonic	6.2.3	Discussion/Decision		Not treated
Yes	R1-074406	System level analysis for CCE aggregation size dependent transport format signaling	Panasonic	6.2.3	Discussion/Decision		Not treated
Yes	R1-074407	Resource allocation and transport format signaling	Panasonic	6.2.3	Discussion/Decision		Not treated
Yes	R1-074408	Ack/Nack repetition and Implicit Resource Allocation for PUCCH	Panasonic	6.2.4	Discussion/Decision		Not treated
Yes	R1-074409	Proposed way forward on ACK/NACK channelization	Panasonic, Samsung	6.2.4	Discussion/Decision	R1-074491	Revised
Yes	R1-074410	Mapping position of control channel for Uplink Shared Channel	Panasonic	6.2.4	Discussion/Decision		Not treated

Yes	R1-074411	Cyclic shift hopping patterns for uplink ACK/NACK	Panasonic	6.2.4	Discussion/Decision		Not treated
Yes	R1-074412	Ordering of the implicit resource allocation table for UL ACK/NACK	Panasonic	6.2.4	Discussion/Decision		Not treated
Yes	R1-074413	Variable Phase Definition of the Reference Signal for CQI in PUCCH	Panasonic	6.2.4	Discussion/Decision		Not treated
Yes	R1-074414	Clarification of Implicit Resource Allocation of Uplink ACK/NACK Signal	Panasonic	6.2.4	Discussion/Decision		Not treated
Yes	R1-074415	Selected sub-band CQI reporting	Panasonic	6.4.5	Discussion/Decision		Noted
Yes	R1-074416	DVRB-pair to PRB-pair assignment and signaling for DL distributed transmission	Panasonic	6.2.5	Discussion/Decision		Not treated
Yes	R1-074417	VoIP capacity comparison between Nd=2 and Nd=3 for DL distributed transmission	Panasonic	6.2.5	Discussion/Decision		Noted
Yes	R1-074418	Views on mapping within distributed PRB-pair for Nd=3	Panasonic	6.2.5	Discussion/Decision		Not treated
Yes	R1-074419	Mapping within distributed PRB-pair for Nd=3	Panasonic	6.2.5	Discussion/Decision		Not treated
Yes	R1-074420	Proposed way forward for PRACH sequence ordering discussion	Panasonic	6.2.7	Discussion/Decision	R1-074494	Revised
Yes	R1-074421	PRACH sequence index ordering	Panasonic	6.2.7	Discussion/Decision		Not treated
Yes	R1-074422	Limitation of RACH sequence allocation for high mobility cell	Panasonic	6.2.7	Discussion/Decision		Not treated
Yes	R1-074423	Power control: Function split between Specifications	Panasonic	6.4.2	Discussion/Decision		Not treated
Yes	R1-074424	Discussion on CQI Report Metric (SINR vs TBS)	Panasonic	6.4.5	Discussion/Decision		Noted
Yes	R1-074425	CQI transmission methods for large reports on PUCCH	Panasonic	6.4.5	Discussion/Decision		Not treated
Yes	R1-074426	Rank feedback in downlink MIMO	Panasonic	6.4.5	Discussion/Decision		Not treated
Yes	R1-074427	Control signalling aspects of MU-MIMO	Panasonic	6.4.5	Discussion/Decision		Not treated
Yes	R1-074428	UE capability and time diversity	Panasonic	6.6	Discussion/Decision		Not treated
Yes	R1-074429	Details on scrambling	Qualcomm Europe	6.2	Discussion/Decision		Not treated
Yes	R1-074430	Baseline CQI format	Qualcomm Europe	6.4.5	Discussion/Decision		Not treated
Yes	R1-074431	Bandwidth Allocation for the SRS	Freescale Semiconductor	6.2.2	Discussion		Not treated
Yes	R1-074432	TDD Frame Structure	IPWireless, NextWave Wireless	6.1	Discussion		Noted
Yes	R1-074433	P-BCH TTI boundary detection using BPSK on S-SCH	InterDigital Communications LLC	6.2.6	Discussion		Not treated
Yes	R1-074434	Semi-static, dynamic and hybrid CCE aggregation	Panasonic	6.2.3	Discussion/Decision		Not treated
Yes	R1-074435	Signaling of Frequency Hopping for UL Transmission	Alcatel-Lucent	6.2.4	Discussion/Decision		Not treated
Yes	R1-074436	Down Link Rank Adaptation with 4 Tx antennas for Open Loop MIMO at High Doppler	LSI Corporation	6.4.5	Discussion/Decision		Not treated
Yes	R1-074437	Proposed way forward on CPICH measurements with Rx diversity	Vodafone	5	Approval		Noted
Yes	R1-074438	PUCCH details for TDD FS2	Nokia, Nokia Siemens Networks	6.2.4	Discussion/Decision		Not treated
Yes	R1-074439	Summary of Power Control E-mail Discussion	Nokia Siemens Networks	6.4.2	Discussion/Decision		Noted
Yes	R1-074440	Draft TR for 1.28Mcps TDD HSPA evolution	TD-Tech	10	Discussion/Decision	R1-074457	Revised
Yes	R1-074441	CRC Bit Order: Way Forward	Nokia Siemens Networks, Nokia, Motorola, Ericsson, Samsung	6.3	Decision	R1-074510	Agreed-Revised during the week

Yes	R1-074442	Summary of the e-mail discussion on UE category	NTT DoCoMo	6.6	Discussion/ Decision	R1-074500	Revised	
Yes	R1-074443	Comparison of Computer-Generated Sequence Proposals for UL DM RS	Texas Instruments	6.2.2	Discussion/D ecision	(R1-074131)	Not treated	
Yes	R1-074444	On Inter-cell Interference Coordination Schemes without/with Traffic Load Indication	Ericsson	6.4.3	Discussion/D ecision	(R1-074380)	Not treated	
Yes	R1-074445	Way Forward on Full use of Power and Bandwidth in DL PDSCH	Samsung, LGE	6.2.1	Discussion/D ecision		Not treated	
Yes	R1-074446	TDD HARQ timing	IPWireless, NextWave Wireless	6.3	Decision	(R1-074179)	Noted	
Yes	R1-074447	Draft Report WS GERAN_RAN on GERAN E-UTRAN interworking	MCC	3	Information		Noted	
Yes	R1-074448	Generator Polynomial for Transport Block CRC	Qualcomm Europe	6.3	Discussion/D ecision		Noted	
Yes	R1-074449	Computer Generated Sequence Comparison	Qualcomm Europe	6.2.2	Discussion/D ecision		Not treated	
Yes	R1-074450	Power Scaling and DL RS boosting	Samsung	6.2.1	Discussion/D ecision	(R1-074065)	Not treated	
No	R1-074451	Reply LS on neighbour cell list in LTE	RAN1, Nokia Siemens Networks	4	LS_out		Postponed	
Yes	R1-074452	Reply LS on introduction of radio bearers for MBMS PTP on HS in 34.108	RAN1, Ericsson	4	LS_out		Agreed	
Yes	R1-074453	Proposed way forward for CQI reporting	Nokia Siemens Networks, Ericsson, Huawei, Nokia, CATT	6.4.5	Discussion/D ecision	(R1-074383)	Noted	
	R1-074454	void						
Yes	R1-074455	25.213 CR091r1 (Rel-7, F) "Editorial changes in 25.213 for 16QAM specification"	Ericsson	5	CR	(R1-073950)	Agreed	
No	R1-074456	Combining Period interrupted by a DTX gap	Qualcomm Europe	5	Discussion/D ecision	(R1-074118)	Withdrawn	
Yes	R1-074457	Draft TR for 1.28Mcps TDD HSPA evolution	TD-Tech	10	Discussion/ Decision	(R1-074440)	Noted	
Yes	R1-074458	Way forward on Multiple Antenna Transmission for high-mobilty UE	Samsung, LGE, Nortel	6.4.5	Discussion/ Decision	R1-074512	Revised	
Yes	R1-074459	On optimisation of LTE TDD based on FS2	CMCC, Vodafone, CATT, RITT, Ericsson, Nokia, Nokia Siemens Networks, ZTE, Huawei, Qualcomm Europe	6.1	Discussion/D ecision	(R1-074365)	Noted	
Yes	R1-074460	Draft LS on RAN1 conclusions on Enhanced Uplink for CELL_FACH state in FDD	Nokia Siemens Networks	8	LS_out	R1-074522	Revised	
Yes	R1-074461	Draft TR skeleton for synchronised E-DCH	Nokia Siemens Networks, Nokia	9	TR	(R1-074306)	Agreed	
Yes	R1-074462	25.214 CR467r1 (Rel-7, F) Clarification on CQI tables in Rel-7	Alcatel-Lucent, Nokia, Nokia Siemens Networks, Ericsson, Philips	5	CR	(R1-074364)	Agreed	
Yes	R1-074463	Investigation on Throughput Performance of MU-MIMO in E-UTRA Downlink	NTT DoCoMo	6.2.3	Discussion/d ecision	(R1-074286)	Not treated	
Yes	R1-074464	Investigation on Performance of PUCCH in Coverage-limited Conditions	NTT DoCoMo	6.2.4	Discussion/d ecision	(R1-074290)	Not treated	
Yes	R1-074465	Control Signaling for Uplink Frequency Hopping in E-UTRA	NTT DoCoMo	6.2.5	Discussion/d ecision	(R1-074292)	Not treated	
Yes	R1-074466	Views on Number of Hybrid ARQ Processes in E-UTRA	NTT DoCoMo, AT&T, KDDI, Mitsubishi Electric, Orange, Sharp, T-Mobile	6.3	Discussion/d ecision	(R1-074296)	Noted	
Yes	R1-074467	Necessity of Time Diversity for D-BCH	NTT DoCoMo	6.4.5	Discussion/d ecision	(R1-074297)	Not treated	
Yes	R1-074468	Way forward on Physical Channel Segmentation	Motorola, Nokia, Nokia Siemens Networks, Broadcom, TI, Qualcomm, Nortel, Freescale	6.3	Discussion/d ecision		Agreed	

Yes	R1-074469	MU-MIMO Codebook Selection and Signaling Considerations for E-UTRA	InterDigital Communications LLC	6.2.3	Discussion/Decision	(R1-074386)	Not treated	
Yes	R1-074470	Uplink Power Control for E-UTRA – Comments on Open Issues	Ericsson	6.4.2	Discussion/Decision	(R1-074378)	Noted	
Yes	R1-074471	Coverage impact of shortened ACK/NACK format	Ericsson	6.2.2	Discussion/Decision		Not treated	
Yes	R1-074472	Interleaver Design for CCE-to-RE Mapping	LG Electronics	6.2.3	Discussion/Decision	(R1-074193)	Not treated	
Yes	R1-074473	TB CRC generator polynomial	Ericsson, ETRI, ITRI, LGE, Motorola, Nokia, Nokia Siemens Networks, Nortel, Qualcomm, Samsung, ZTE	6.3	Discussion/Decision	(R1-074105)	Noted	
Yes	R1-074474	Summary of companies views regarding multiplexing between PUCCH and S-RS	LG Electtronics	6.2.2	Discussion/Decision	R1-074513	Revised	
Yes	R1-074475	Semi-Static Interference Coordination Method	Alcatel-Lucent	6.4.3	Discussion	(R1-074263)	Not treated	
Yes	R1-074476	Transmission mode for BCCH	Ericsson	6.4.5	Discussion/Decision		Not treated	
Yes	R1-074477	Way forward on UL ICIC/overload indicator for LTE	Nokia Siemens Networks, Nokia, Ericsson, Alcatel-Lucent, T-Mobile	6.4.3	Decision		Noted	
Yes	R1-074478	One generator polynomial for both transport block CRC and code block CRC	Broadcom	6.3	Discussion/Decision		Not treated	
Yes	R1-074479	Way forward on DL power control	NEC, Ericsson, Fujitsu, Marvell Semiconductor, Motorola, Panasonic, Philips, Qualcomm, ZTE	6.4.2	Discussion/Decision	(R1-074158)	Noted	
Yes	R1-074480	Reply LS on Request to clarify LTE states for physical layer measurements	RAN2, Nokia Siemens Networks	4	LS_in	= R2-074509	Noted	
No	R1-074481	E-UTRA Power Control Performance Comparison of Feedback Methods	InterDigital Communications LLC	6.4.2	Discussion/Decision	(R1-074387)	Missing	
Yes	R1-074482	36.214 CR001 (Rel-8, F) "RRC state correction for LTE UE measurements	Nokia Siemens Networks, Nokia	6.5	CR		Noted	
Yes	R1-074483	Downlink ACK/NACK Transmit Diversity	Samsung	6.2.3	Discussion/Decision	(R1-074074)	Noted	
Yes	R1-074484	LS on UE transmission power adjustments	RAN1, Motorola, Panasonic	6.4.2	LS_out		Agreed	
Yes	R1-074485	SSCH Mapping to Group ID and Frame Timing	Marvell Semiconductor	6.2.6	Discussion	(R1-073898)	Not treated	
Yes	R1-074486	F-QPSK based CG UL DM RS for 1RB and 2RB	LG Electronics	6.2.2	Discussion		Not treated	
Yes	R1-074487	ACK/NAK Performance in PUCCH with Timing Offset and Near-Far Effect	Texas Instruments	6.2.4	Discussion/Decision	(R1-074140)	Not treated	
Yes	R1-074488	Interleaver design for Mini-CCE to RE Mapping	Motorola	6.2.3	Discussion/Decision	(R1-073994)	Not treated	
Yes	R1-074489	Uplink Power Control Way forward	Ericsson	6.4.2	Discussion/Decision	R1-074507	Revised	
Yes	R1-074490	CQI compression - starting point	CQI Ad-Hoc Chair	6.4.5	Discussion/Decision		Noted	
Yes	R1-074491	Proposed way forward on ACK/NACK channelization	Panasonic, Nokia, Nokia Siemens Networks, Samsung, Texas Instruments	6.2.4	Discussion/Decision	(R1-074409)	Agreed	
Yes	R1-074492	Details on Probabilities of Undetected TB Errors	Ericsson	6.3	Discussion		Not treated	
Yes	R1-074493	Improved Flexibility/Performance CQI+ACK/NACK coding in the E-UTRA uplink	SHARP	6.2.4	Discussion/Decision	(R1-073941)	Not treated	
Yes	R1-074494	Proposed way forward for PRACH sequence ordering discussion	Panasonic, TI, Huawei, LGE, NTT DoCoMo	6.2.7	Discussion/Decision	(R1-074420)	Noted	
Yes	R1-074495	Way forward for LFDMA with hopping in PUSCH	Samsung, Qualcomm	6.2.5	Discussion/Decision	R1-074517	Revised	

Yes	R1-074496	Proposal for CQI way forward	Nokia, Nokia Siemens Networks, Ericsson, TI, Huawei, Samsung, Qualcomm, ZTE, CATT, Nortel	6.4.5	Discussion/Decision		Noted
Yes	R1-074497	delta-I for UL PC - Way forward	Motorola	6.4.2	Discussion/Decision		Not treated
Yes	R1-074498	Way Forward for Secondary SCH Mapping and Scrambling	TI, Motorola, Huawei, LGE, Nortel, Qualcomm, Sharp, ETRI	6.2.6	Discussion/Decision		Agreed
Yes	R1-074499	Outcome of off-line discussion on DL control signaling	Ericsson	6.2.3	Discussion/Decision		Endorsed
Yes	R1-074500	Summary of the e-mail discussion on UE category	NTT DoCoMo	6.6	Discussion/Decision	(R1-074442) R1-074504	Revised
Yes	R1-074501	Summary of CQI Ad-Hoc	Ad-Hoc Chairman	6.4.5	Discussion/Decision		Endorsed
Yes	R1-074502	SSC mapping and scrambling method	LG Electronics	6.2.6	Discussion/Decision	(R1-074210)	Not treated
Yes	R1-074503	RB mapping for odd number of RB	Motorola, Nokia, Nokia Siemens Networks, TI, Qualcomm, Philips, Samsung	6.2	Decision		Agreed
Yes	R1-074504	Summary of the e-mail discussion on UE category	NTT DoCoMo	6.6	Discussion/Decision	(R1-074500)	Noted
Yes	R1-074505	Way forward on DL Control channel multiplexing	NEC, Nokia, Nokia Siemens Networks	6.2.3	Decision		Noted
Yes	R1-074506	Way forward for dedicated reference symbols for downlink beamforming	Philips, NXP Semiconductors, NTT DoCoMo, Vodafone, AT&T, NEC, Fujitsu, Mitsubishi, Arraycomm, Sharp, Ericsson, CMCC, CATT, RITT, Orange, T-Mobile, Qualcomm	6.2.1	Decision	(R1-074245)	Noted
Yes	R1-074507	Uplink Power Control Way forward	Ericsson	6.4.2	Decision	(R1-074489)	Not treated
Yes	R1-074508	Way forward on 4-Tx Transmit Diversity for PHICH Channel	Nortel, LGE, Alcatel-Lucent, Broadcom	6.2.3	Decision		Agreed
Yes	R1-074509	Way forward on computer generated DM RS sequencer	LGE, Motorola, Nokia, Nokia Siemens Networks, Qualcomm, Sharp, TI	6.2.2	Decision		Agreed
Yes	R1-074510	CRC Bit Order: Way Forward	Nokia Siemens Networks, Nokia, Motorola, Ericsson, Samsung, LGE, TI, Broadcom, Nortel	6.3	Decision	(R1-074441)	Not treated
Yes	R1-074511	Summary of Power Control Discussion	Nokia	6.4.2	Discussion/Decision		Postponed
Yes	R1-074512	Way forward on Multiple Antenna Transmission for high-mobilty UE	Samsung, LGE, Nortel, AT&T	6.4.5	Discussion/Decision	(R1-074458)	Noted
Yes	R1-074513	Summary of companies views regarding multiplexing between PUCCH and S-RS	LG Electtronics	6.2.2	Discussion/Decision	(R1-074474)	Not treated
Yes	R1-074514	Way forward proposal on PRACH sequence ordering	TI, LGE, Huawei, Alcatel-Lucent, Nokia, Nokia Siemens Networks, Panasonic, NTT DoCoMo	6.2.7	Discussion/Decision		Agreed
No	R1-074515	A use case for the eNodeB Measurement "Maximum Tx Power per PRB relative to the rated output power"	Alcatel-Lucent, Orange, T-Mobile	6.5	Discussion/Decision	(R1-074260)	Missing
Yes	R1-074516	Draft LS on UE Categories	NTT DoCoMo	6.6	LS_out	R1-074521	Revised

Yes	R1-074517	Way forward for LFDMA with hopping in PUSCH	Samsung, Qualcomm, Ericsson, LGE, Motorola, NEC, Nortel, NTT DoCoMo, Nokia, Nokia Siemens Networks, Panasonic, ZTE	6.2.5	Discussion/Decision	(R1-074495)	Noted
Yes	R1-074518	25.211 CR0249 (Rel-6, F) "Correction to E-DPCCH transmission"	Philips, Nokia Siemens Networks, Nokia, Alcatel-Lucent	5	CR		Agreed
Yes	R1-074519	25.211 CR0250 (Rel-7, A) "Correction to E-DPCCH transmission"	Philips, Nokia Siemens Networks, Nokia, Alcatel-Lucent	5	CR		Agreed
Yes	R1-074520	Some consideration on UL coverage and overhead improvement LTE TDD FS2	CATT, CMCC, Huawei, RITT, ZTE	6.1	Discussion/Decision		For information and further email discussions
Yes	R1-074521	LS on UE Categories	RAN1, NTT DoCoMo	6.6	LS_out	(R1-074516)	Agreed
Yes	R1-074522	LS on RAN1 conclusions on Enhanced Uplink for CELL_FACH state in FDD	RAN1, Nokia Siemens Networks	8	LS_out	(R1-074460)	Agreed

Appendix 35

3GPP TSG RAN meeting #71 **RP-160002**
Göteborg, Sweden, March 7 – 10, 2016

Agenda Item: 3

Source: ETSI MCC

Title: Draft Report of 3GPP TSG RAN meeting #70,
Sitges, Spain, December 7 – 10, 2015

Document for: Approval

Draft Report of 3GPP TSG RAN meeting #70

held in Sitges, Spain
December 7 – 10, 2015



colour code:
blue: text that will be revised in the final report
green: approved new TSs/TRs/WIs/SIs/Report/Exception
grey: outgoing LSs/LTIs
red: WI/SI closed/completed or moved to next REL
purple: pendingTdocs

The present document has been developed within the 3rd Generation Partnership Project (3GPP ™) and it has not been subject to any approval process by the 3GPP Organizational Partners.

Keywords
RAN, UTRA, LTE

3GPP

Postal address

3GPP support office address
650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet
http://www.3gpp.org

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© 2016, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
All rights reserved.

UMTS™ is a Trade Mark of ETSI registered for the benefit of its members
3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners
LTE™ is a Trade Mark of ETSI currently being registered for the benefit of its Members and of the 3GPP Organizational Partners
GSM® and the GSM logo are registered and owned by the GSM Association

Samsung Exhibit 1025, Page 916 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Contents

Meeting Organisation 6
Executive Summary 6
1 Opening of the Meeting 14
2 Reminders for usage of IT resources, IPR declaration and antitrust compliance 14
3 Approval of the Agenda 16
4 Approval of the meeting report of TSG-RAN #69 17
5 Reports from other meetings 17
5.1 Report from TSG SA 17
5.2 Report from PCG 17
5.3 Report from other meetings 17
6 Liaison activity of TSG RAN 18
7 ITU-R Ad hoc 20
7.1 Status report 20
7.2 Submission to ITU-R 20
7.2.1 Submission to ITU-R WP5A 20
7.2.2 Submission to ITU-R WP5D 20
7.2.3 Other ITU-R submission 21
8 RAN WGs: WG Status Reports & CR Approvals up to Rel-10 22
8.1 TSG RAN WG1 22
8.1.1 Report from RAN WG1 including report on actions required from the previous meeting 22
8.1.2 Discussions on decisions from RAN WG1 22
8.1.3 Approval of CRs to REL-8 WIs and WIs of previous releases 22
8.1.4 Approval of CRs to Rel-9 WIs 22
8.1.5 Approval of CRs to Rel-10 WIs 22
8.1.6 Approval of CRs to Rel-11 WIs 22
8.1.7 Approval of linked CR packages led by RAN WG1 22
8.2 TSG RAN WG2 23
8.2.1 Report from RAN WG2 including report on actions required from the previous meeting 23
8.2.2 Discussions on decisions from RAN WG2 23
8.2.3 Approval of CRs to REL-8 WIs and WIs of previous releases 25
8.2.4 Approval of CRs to Rel-9 WIs 25
8.2.5 Approval of CRs to Rel-10 WIs 25
8.2.6 Approval of CRs to Rel-11 WIs 25
8.2.7 Approval of linked CR packages led by RAN WG2 26
8.3 TSG RAN WG3 26
8.3.1 Report from RAN WG3 including report on actions required from the previous meeting 26
8.3.2 Discussions on decisions from RAN WG3 26
8.3.3 Approval of CRs to REL-8 WIs and WIs of previous releases 26
8.3.4 Approval of CRs to Rel-9 WIs 26
8.3.5 Approval of CRs to Rel-10 WIs 26
8.3.6 Approval of CRs to Rel-11 WIs 26
8.3.7 Approval of linked CR packages led by RAN WG3 26
8.4 TSG RAN WG4 26
8.4.1 Report from RAN WG4 including report on actions required from the previous meeting 26
8.4.2 Discussions on decisions from RAN WG4 27
8.4.3 Approval of CRs to REL-8 WIs and WIs of previous releases 27
8.4.4 Approval of CRs to Rel-9 WIs 27
8.4.5 Approval of CRs to Rel-10 WIs 27
8.4.6 Approval of CRs to Rel-11 WIs 27
8.4.7 Approval of linked CR packages led by RAN WG4 27
8.5 TSG RAN WG5 27

Samsung Exhibit 1025, Page 917 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8.5.1 Report from RAN WG5 including report on actions required from the previous meeting....27
8.5.2 Discussions on decisions from RAN WG5....28
8.5.3 Approval of CRs to closed WIs of REL-10 (incl. TEI10_Test) and previous releases....28
8.5.4 Approval of CRs to closed WIs of REL-11 (incl. TEI11_Test)....28
8.5.5 Approval of linked CR packages led by RAN WG5....29

9 Conformance Testing Work Items....30
9.1 Closed REL-12 work items....30
9.2 Open Rel-7 work items....30
9.3 Open Rel-11 work items....31
9.4 Open Rel-12 work items....31
9.5 Open Rel-13 work items....34

10 Work Items with target Rel-12 (not related to conformance testing)....36
10.1 Closed UTRA only related WIs....36
10.2 Closed UTRA & LTE related WIs....36
10.3 Closed LTE only related WIs....36
10.4 Open LTE only related WIs (non-spectrum related)....37
10.5 Small Technical Enhancements and Improvements for Rel-12 [TEI12]....37

11 Work Items with target Rel-13 (not related to conformance testing)....39
11.1 Closed UTRA only related WIs....39
11.2 Closed UTRA & LTE related WIs....39
11.3 Closed LTE only related WIs (non-spectrum related)....39
11.4 Closed LTE only related WIs (spectrum related)....39
11.5 Open UTRA related WIs (spectrum & non-spectrum related)....42
11.6 Open UTRA & LTE related WIs (non-spectrum related)....46
11.7 Open LTE only related WIs (non-spectrum related)....50
11.8 Open LTE only related WIs (spectrum and CA related)....66
11.9 Open LTE only related WIs (spectrum and not CA related)....98
11.10 Small Technical Enhancements and Improvements for Rel-13 [TEI13]....99

12 Work items with target Rel-14 (not related to conformance testing)....100
12.1 Open LTE only related WIs....100

13 Study Items....102
13.1 Closed study items....102
13.2 Open UTRA related SIs....102
13.3 Open UTRA & LTE related SIs....102
13.4 Open LTE only related SIs....102

14 New Work Items/Study Items....105
14.1 New core functions....105
14.1.1 WIs/SIs led by RAN1....105
14.1.2 WIs/SIs led by RAN2....118
14.1.3 WIs/SIs led by RAN3....121
14.1.4 WIs/SIs led by RAN4....121
14.2 Spectrum related WIs/SIs....123
14.3 UE conformance testing WIs/SIs led by RAN5....126

15 Next generation radio access technology....127
15.1 Communication with other organizations....127
15.2 Study on channel model for frequency spectrum above 6 GHz [new SI: FS_6GHz_CH_model]....127
15.3 New SI proposals....128
15.4 Other inputs....131

Samsung Exhibit 1025, Page 918 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

16 UE capabilities/FGIs 133
17 Inter WG/TSG-related discussions & decisions 134
18 Outputs to other groups 135
19 Terms of Reference (ToR) 135
20 Project management 135
21 Future meeting schedule 137
22 Any other business 137
23 Closing of the meeting 138

Annex A: List of participants 139

Annex B: List of Tdocs 140

Annex C: Incoming liaison statements (LSin) 141

Annex D: Outgoing liaison statements (LSout) 146

Annex E: List of Change Requests (CRs) 147

Annex F: Summary of RAN work items (WI) and study items (SI) 211

Annex G: RAN email discussions between RAN #70 and RAN #71: 215

Annex H: Actions decided by RAN #70 216

Annex I: History 217

Samsung Exhibit 1025, Page 919 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Meeting Organisation

Meeting:	3GPP TSG RAN #70		
Meeting location:	Sitges, Spain		
	Melia Sitges hotel, Tramuntana room		
Duration:	Monday 07.12.2015 (9am) - Thursday 10.12.2015 (5pm)		
Host:	European Friends of 3GPP (EF3)		
TSG RAN Chairman:	Dino Flore (Qualcomm)	email:	oflore@qti.qualcomm.com
TSG RAN Vice chairman:	Takaharu Nakamura (Fujitsu)	email:	n.takaharu@jp.fujitsu.com
TSG RAN Vice chairman:	Giovanni Romano (Telecom Italia)	email:	giovanni.romano@telecomitalia.it
TSG RAN Vice chairman:	Sharat Chander (AT&T)	email:	sharat.chander@att.com
TSG RAN MCC Support:	Joern Krause (ETSI MCC)	email:	Joern.Krause@etsi.org
Email reflector:	3GPP_TSG_RAN@LIST.ETSI.ORG		
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/TSGR_70/Docs		
next meetings:	TSG RAN #71	07.03. - 10.03.2016	Göteborg, Sweden host: EF3
	TSG RAN #72	13.06. - 16.06.2016	tbd, Korea host: TTA

Executive Summary

3GPP TSG RAN meeting #70 was held in Sitges, Spain, Dec. 7-10, 2015, hosted by the European Friends of 3GPP (EF3). The meeting had 236 participants (see Annex A) and 672 Technical Documents (see Annex B).

Main topics/decisions:

- **block approval**: RAN #70 continued to use "block approval process" for agreed CR packages from WGs and WI/SI status reports, i.e. these contributions were only discussed on request (flag) otherwise the CRs were considered approved and the % complete and target date of the status reports were considered approved.
- **time budget analysis (AI 14)**: RAN #70 assessed the modified time budget requests in WI/SI status reports for already approved WIs/SIs relative to the time budget status endorsed by RAN #69 in RP-151600; the RAN WG chairmen provided their estimates of remaining time budgets in their WGs (see WG status reports in AI 8); new WIs/SIs provided their time budget requests in the WI/SI descriptions (see AI 14); the resulting endorsed time budget allocations for all approved WIs/SIs after RAN #70 is provided in **RP-152300** (1 time unit ~ 2h). RAN5 WIs/SIs are excluded from this time budget handling.
- **REL-12:** Last open REL-12 performance part WI LTE_D2D_Prox-Perf was completed (Core part was completed in March 15). So only RAN5 is still working on REL-12 WIs.
- **REL-13:** REL-13 was frozen at RAN #70, exceptions were granted for 20 REL-13 Core part WIs (12 of them spectrum related) to be completed by March 16. In addition the WI NB_IOT-Core will be kept in REL-13 following PCG request PCG34_39r2. Note: The REL-13 ASN.1 freeze is planned for March 16.
- **REL-14**: With RP-152228 RAN confirmed the planned Rel-14 stage-3 freeze date: March 2017 (note: At the same time also the so far tentative SA planning for REL-15/REL-16 was confirmed in order to clarify the timeplan for the 3GPP submission to ITU-R for IMT-2020: Rel-15 stage-3 freeze in June 2018, Rel-16 stage-3 freeze in Dec 2019).

Samsung Exhibit 1025, Page 920 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- **Next generation**:
  - A RAN ad hoc on scenarios and requirements for the next generation access was scheduled for mid Q1-16 (28.-29.01.2016 in Barcelona) to make sure that by RAN#71 we have an initial set of requirements for the technology work to start in the WGs without delay after RAN #71 (see RP-152228).
  - The RAN ITU-R ad hoc group is tasked to prepare for RAN#71 a plan (as a living document) for the interaction with ITU-R for IMT 2020 (see RP-152228 and ACTION_ITEM_1).
  - RAN WG chairs were tasked to prepare plans for RAN #71 on how to accomodate then the work on the next generation in addition to the existing WG capacity that will continue to be dedicated to the LTE evolution and HSPA enhancements (see RP-152228 and ACTION_ITEM_2).
  - A plan for RAN-SA coordination for 2nd half of 2016 will be endorsed by RAN #71.

- **New TDD configurations:** Agreement to introduce a downlink-only TDD configuration for the new 5G RAT in phase-1 (Rel-15) in a band agnostic manner (the principles described in the conclusion of TR 36.825 still apply when introducing DL-only TDD configuration) but no consensus to introduce new TDD configurations to LTE (see RP-152261 under AI 14.1.1).

- **CA basket WI**: As planned by RAN #69 (RP-151172), RAN #70 (see RP-151862) introduced this concept for REL-14, i.e. not each CA combination has an own WI but for 8 different types of CA combinations (intra-band, 2DL/1UL, 3DL/1UL, 4DL/1UL, 5DL/1UL, 2DL/2UL, xDL/2UL (x=3, 4, 5), 3DL/3UL) basket WIs are started which will be open until the end of REL-14 and which will include corresponding CA combinations that can complete independently. TRs of the basket WIs will use 36.714-xx-xx multipart specs and new CA combinations will be reviewed by RAN4 beforehand. Each basket WI will have an own status report to RAN #71 (note: For REL-13 CA combinations that got an exception granted still the old approach with one CA spreadsheet status report for all exceptions will be used for RAN #71).

- **Narrowband Internet of Things (NB_IOT, AI 11.7.17):** WI was kept in REL-13 (following PCG request PCG34_39r2) and the target date is now March 16 (status report: RP-151931). Two way forwards on NB-IOT bands (RP-152268) and on S1 signalling solutions for non-NB-IoT UEs (RP-152285; see also LSout RP-152296) were endorsed and an LS regarding first transmission after the first UL random access was sent to RAN1 (cc: RAN2) in RP-152299. The WID was revised in RP-152284 introducing an additional Perf. part.

- **Indoor positioning enhancements (UTRA_LTE_iPos_enh, AI 11.6.6)**: a revised WID was approved in RP-152251 removing RAT dependent positioning enhancements (which are intended to be addressed in REL-14); for the remaining REL-13 WI the Core part was completed (note: RAN #69 decided to not consider a REL-13 exception;

- **Terms of Reference (ToR)**: revised ToR for 2016 were approved for MCC TF160 in RP-151670.
  Draft versions for new ToR for RAN (RP-151781; will cover also GERAN), RAN5 (RP-151783; will include GERAN3 aspects) and a new RAN6 (RP-151784; will cover GERAN1 and GERAN2) were provided and an email discussion was scheduled to discuss them further until RAN #71.
  NOTE: GERAN and their WGs will have their last meetings in May 2016. Afterwards RAN has to cover also GERAN aspects.

- **ITU-R:**
  - Intelligent Transport Systems: An LS answer to incoming LS from ITU-R WP5A/TEMP/310(Rev.1) = RP-151655 was postponed. RAN ITU-R ad hoc will prepare a draft reply for RAN #71.
  - ITU-R M.1457: Prepared by the RAN ITU-R ad hoc and reviewed by CT and RAN, a letter to ITU-R WP5D was provided to SA #70 in RP-152244. Final answer will be sent out from PCG.
  - Unwanted emissions: Based on RAN4 and RAN5 inputs a reply letter to ITU-R WP5D/TEMP/619 = RP-151140 was sent out to SA in RP-152245. Final answer will be sent out from PCG.

- Incoming Liaison Statements/Letters to ITU: 27, see Annex C

- Outgoing Liaison Statements/Letters to ITU: 8, see Annex D

- 184 closed work items (WI) in Dec. 2015 (101 Core, 80 Perf., 3 Testing):

  - 5 RAN1 REL-13 Core part:
    - Core part: Downlink TPC Enhancements for UMTS (680159, UTRA_EDL_TPC-Core)*
    - Core part: Netw.-Assisted Interf. Cancellation & Suppression for UMTS (690162, UTRA_NAICS-Core) **
    - Core part: LTE CA Enhancement Beyond 5 Carriers (660172, LTE_CA_enh_b5C-Core)*
    - Core part: Licensed-Assisted Access using LTE (680160, LTE_LAA-Core)*
    - Core part: Elevation Beamforming/FD-MIMO for LTE (680161, LTE_EBF_FDMIMO-Core)*

Samsung Exhibit 1025, Page 921 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

*: Perf. parts are still ongoing; **: WI has no Perf. part

- 10 RAN2 REL-13 Core part:
  - Core part: Support of EVS over UTRAN CS (660173, EVSoCS_UTRAN-Core) **
  - Core part: L2/L3 DL enh. for UMTS (680162, UTRA_EDL_L23-Core) **
  - Core part: Power saving enh. for UMTS (680163, UTRA_SDATA_POWSAV-Core); Perf. part for this Core part was started at RAN #70
  - Core part: Dual Carrier HSUPA enhancements for UTRAN CS (690164, DC_HSUPA_CS-Core); **
  - Core part: RAN aspects of Application specific Congestion control for Data Communication (670159, ACDC-RAN-Core) **
  - Core part: Indoor Positioning enhancements for UTRA and LTE (690167, UTRA_LTE_iPos_enh-Core)*
  - Core part: Dual Connectivity enhancements for LTE (670155, LTE_dualC_enh-Core)*
  - Core part: Multicarrier Load Distribution of UEs in LTE (670156, LTE_MC_load-Core)*
  - Core part: Support of single-cell point-to-multipoint transmission in LTE (680164, LTE_SC_PTM-Core) see completed Perf. part under RAN4 below
  - Core part: Further Enh. of Minimization of Drive Tests for E-UTRAN (690165, LTE_eMDT2-Core) **

  *: Perf. parts are still ongoing; **: WI has no Perf. part

- 5 RAN3 REL-13 Core part:
  - Core part: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network (670160, CSPS_Coord-UTRA-Core) **
  - Core part: RAN sharing enhancements for UMTS (680167, RSE_UTRA_GUSH-Core) **
  - Core part: Dedicated Core Networks (680166, DECOR-UTRA_LTE-Core) **
  - Core part: RAN Aspects of RAN Sharing Enhancements for LTE (650121, RSE-RAN_LTE-Core) **
  - Core part: Extension of Dual Connectivity in E-UTRAN (680165, LTE_dualC_ext-Core) **

  **: WI has no Perf. part

- RAN4 (81 Core, 80 Perf.):

  1 REL-12 Perf. parts for:
  - LTE Device to Device Proximity Services (630230, LTE_D2D_Prox-Perf)

  3 REL-13 Core part for:
  - HSPA Dual-Band UL CA (660180, HSUPA_DB_MC-Core)
  - LTE DL 4 Rx antenna ports (670161, LTE_4Rx_AP_DL-Core)
  - LTE FDD in the Bands 1980-2010 MHz and 2170-2200MHz for Region 3 (700178 LTE_1980_2170_REG3-Core); note: This WI was just started at RAN #70.

  78 REL-13 features with Core & Performance parts for:
  - LTE Adv. inter-band CA of Band 1 and Band 40 (650X41, LTE_CA_B1_B40)
  - LTE Adv. inter-band CA of Band 3 and Band 41 (660X82, LTE_CA_B3_B41)
  - LTE Adv. inter-band CA for Band 5 and Band 38 (690X73, LTE_CA_B5_B38)
  - LTE Adv. inter-band CA of Band 8 and Band 27 (620X23, LTE_CA_B8_B27); note: Core and Perf. part of this feature were stopped before completion.
  - LTE Adv. inter-band CA of Band 20 and Band 40 (650X40, LTE_CA_B20_B40)
  - European 700 Suppl. DL band (738-758 MHz) in E-UTRA and LTE CA (2DL/1UL) with Band 20 (680X75, LTE_CA_700EU_B20)
  - LTE Adv. 3 Band CA (3DL/1UL) of Band 1, Band 3 and Band 7 (661X00, LTE_CA_B1_B3_B7)
  - LTE Adv. 3 band CA (3DL/1UL) of Band 1, Band 3 and Band 40 (660X90, LTE_CA_B1_B3_B40)
  - LTE Adv. 3 band CA (3DL/1UL) of Band 1, Band 8 and Band 40 (660X91, LTE_CA_B1_B8_B40)
  - LTE Adv. 3 Band CA (3DL/1UL) of Band 1, Band 11 and Band 18 (690X74, LTE_CA_B1_B11_B18)
  - LTE Adv. 3 Band CA (3DL/1UL) for Band 3, Band 7 and Band 38 (680X81, LTE_CA_B3_B7_B38)
  - LTE Adv. 3 Band CA (3DL/1UL) for Band 3, Band 8 and Band 27 (620X32, LTE_CA_B3_B8_B27) note: Core and Perf. part of this feature were stopped before completion.
  - LTE Adv. 3 band CA (3DL/1UL) of Band 3, Band 8 and Band 40 (660X92, LTE_CA_B3_B8_B40)
  - LTE Adv. 3 Band CA (3DL/1UL) of Band 3, Band 41, and Band 41 (690X77, LTE_CA_B3_B41_B41)
  - LTE Adv. 3 Band CA (3DL/1UL) for Band 3, Band 41 and Band 42 (690X76, LTE_CA_B3_B41_B42)
  - Add. BCS for LTE Adv. 3 Band CA (3DL/1UL) of Band 4, Band 4 and Band 7 (670X70, LTE_CA_B4_B4_B7_BWset)
  - Add. BCS for LTE Adv. 3 Band CA (3DL/1UL) of Band 4, Band 7 and Band 12 (670X71, LTE_CA_B4_B7_B12_BWset)
  - LTE Adv. 3 Band CA (3DL/1UL) of Band 5, Band 40, and Band 40 (690X75, LTE_CA_B5_B40_B40)
  - LTE Adv. 3 Band CA (3DL/1UL) of Band 7, Band 20 and Band 38 (670X74, LTE_CA_B7_B20_B38)

Samsung Exhibit 1025, Page 922 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- LTE Adv. 3 Band CA (3DL/1UL) for Band 7, Band 42 and Band 42 (680X79, LTE_CA_B7_B42_B42)
- LTE Adv. 3 Band CA (3DL/1UL) of Band 28, Band 40 and Band 40 (660X97, LTE_CA_B28_B40_B40)
- LTE Adv. 3 Band CA (3DL/1UL) of Band 28, Band 41 and Band 41 (680X82, LTE_CA_B28_B41_B41)
- LTE Adv. 3 Band CA (3DL/1UL) of Band 28, Band 42 and Band 42 (680X83, LTE_CA_B28_B42_B42)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 5 and Band 40 (670X78, LTE_CA_B1_B3_B5_B40)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 7 and Band 8 (670X79, LTE_CA_B1_B3_B7_B8)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 8 and Band 40 (690X82, LTE_CA_B1_B3_B8_B40)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 19 and Band 42 (680X86, LTE_CA_B1_B3_B19_B42)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 42 and Band 42 (680X87, LTE_CA_B1_B3_B42_B42)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 1, Band 19, Band 21 and Band 42 (680X90, LTE_CA_B1_B19_B21_B42)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 1, Band 19, Band 42 and Band 42 (680X88, LTE_CA_B1_B19_B42_B42)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 1, Band 21, Band 42 and Band 42 (680X91, LTE_CA_B1_B21_B42_B42)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 4 (670X77, LTE_CA_B2_B2_B4_B4)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 5 (680X94, LTE_CA_B2_B2_B4_B5)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 12 (670X76, LTE_CA_B2_B2_B4_B12)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 5 and Band 12 (681X00, LTE_CA_B2_B2_B5_B12)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 5 and Band 30 (661X04, LTE_CA_B2_B2_B5_B30)
- LTE Adv. 4-Band CA (4DL/1UL) of Band 2, Band 2, Band 12 and Band 12 (680X95, LTE_CA_B2_B2_B12_B12)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 12 and Band 30 (661X03, LTE_CA_B2_B2_B12_B30)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 29 and Band 30 (661X05, LTE_CA_B2_B2_B29_B30)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 4 and Band 5 (690X81, LTE_CA_B2_B4_B4_B5); note: This was originally a REL-14 feature.
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 4 and Band 12 (670X75, LTE_CA_B2_B4_B4_B12)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 5 and Band 12 (680X93, LTE_CA_B2_B4_B5_B12)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 5 and Band 29 (670X80, LTE_CA_B2_B4_B5_B29)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 5 and Band 30 (661X07, LTE_CA_B2_B4_B5_B30)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 12 and Band 30 (661X06, LTE_CA_B2_B4_B12_B30)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30 (661X08, LTE_CA_B2_B4_B29_B30)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 5, Band 12 and Band 12 (681X01, LTE_CA_B2_B5_B12_B12)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 3, Band 7, Band 7 and Band 28 (690X85, LTE_CA_B3_B7_B7_B28)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 3, Band 19, Band 42 and Band 42 (680X89, LTE_CA_B3_B19_B42_B42)
- LTE Adv. 4 Band CA (4DL/1UL) for Band 3, Band 28, Band 40 and Band 40 (690X83, LTE_CA_B3_B28_B40_B40)
- LTE Adv. 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 5 and Band 12 (690X80, LTE_CA_B4_B4_B5_B12); note: This was originally a REL-14 feature.
- LTE Adv. 4 Band CA (4DL/1UL) of Band 19, Band 21, Band 42 and Band 42 (680X92, LTE_CA_B19_B21_B42_B42)

Samsung Exhibit 1025, Page 923 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

  - LTE Adv. 4 Band CA (4DL/1UL) of Band 25, Band 41, Band 41 and Band 41 (661X09, LTE_CA_B25_B41_B41_B41)
  - LTE Adv. 4 Band CA (4DL/1UL) for Band 28, Band 40, Band 40 and Band 40 (690X84, LTE_CA_B28_B40_B40_B40)
  - LTE Adv. 4 Band CA (4DL/1UL) of Band 39, Band 39, Band 41 and Band 41 (690X79, LTE_CA_B39_B39_B41_B41)
  - LTE Adv. 4 Band CA (4DL/1UL) of Band 39, Band 41, Band 41 and Band 41 (690X78, LTE_CA_B39_B41_B41_B41)
  - LTE Adv. 4 Band CA (4DL/1UL) of Band 41, Band 41, Band 42 and Band 42 (680X84, LTE_CA_B41_B41_B42_B42)
  - LTE Adv. 5 Band CA (5DL/1UL) of Band 1, Band 3, Band 19, Band 42 and Band 42 (690X89, LTE_CA_B1_B3_B19_B42_B42)
  - LTE Adv. 5 Band CA (5DL/1UL) of Band 1, Band 19, Band 21, Band 42 and Band 42 (690X90, LTE_CA_B1_B19_B21_B42_B42)
  - LTE Adv. dual uplink inter-band CA Class A1 in REL-13 (661X10, LTE_CA_2UL_R13-A1)
  - LTE Adv. dual uplink inter-band CA Class A2 in REL-13 (661X11, LTE_CA_2UL_R13-A2)
  - LTE Adv. dual uplink inter-band CA Class A3 in REL-13 (661X12, LTE_CA_2UL_R13-A3)
  - LTE Adv. dual uplink inter-band CA Class A4 in REL-13 (670X82, LTE_CA_2UL_R13-A4)
  - LTE Adv. dual uplink inter-band CA FDD-TDD (670X81, LTE_CA_2UL_FDD_TDD)
  - LTE Adv. 3DL/2UL inter-band CA (670X83, LTE_CA_3DL_2UL)
  - LTE Adv. 3DL/2UL mixed intra- and inter-band CA (681X02, LTE_CA_3DL_2UL_inter_intra)
  - LTE Adv. 3 Band CA (3DL/3UL) of Band 39, Band 39 and Band 41 (690X94, LTE_CA_3DL3UL_B39_B39_B41)
  - LTE Adv. 3 Band CA (3DL/3UL) of Band 39, Band 41 and Band 41 (690X93, LTE_CA_3DL3UL_B39_B41_B41)
  - LTE Adv. intra-band contiguous CA in Band 5 (681X03, LTE_CA_C_B5)
  - LTE Adv. intra-band contiguous CA in Band 8 (670X85, LTE_CA_C_B8)
  - LTE Adv. intra-band non-contiguous CA in Band 5 (681X05, LTE_CA_NC_B5)
  - Add. BCS for LTE Adv. intra-band non-contiguous CA in Band 7 (690X95, LTE_CA_NC_B7_BWset)
  - LTE Adv. intra-band contiguous CA in Band 42 for 4DL (670X86, LTE_CA_C_B42_4DL)
  - LTE Adv. intra-band non-contiguous CA in Band 41 for 4 DL (661X13, LTE_CA_NC_B41_4DL)
  - LTE Adv. intra-band non-contiguous CA in Band 42 for 4DL (681X06, LTE_CA_NC_B42_4DL)
  - 2GHz FDD LTE Band for Region 1 (1980-2010MHz and 2170-2200MHz Bands) (640X36, LTE_1980_2170_REG1)
  - AWS-Extension Band for LTE (670X62, LTE_AWS_EXT)
  - Introduction of 1447-1467MHz Band for TD-LTE in China (680X72, LTE_TDD_1447MHz_China)

  1 REL-13 Perf. part for:
  - Support of single-cell point-to-multipoint transmission in LTE (680264, LTE_SC_PTM-Perf)

- 3 RAN5 UE Conformance Test Aspects for:
  - REL-12, L-band for Suppl. DL in E-UTRA and UTRA (670047, LTE_UTRA_SDL_BandL-UEConTest)
  - REL-13, Perf. Requirements of Interf. Cancellation and Suppression Receiver for SU-MIMO for E-UTRA (670052, LTE_SUMIMO_RX-UEConTest)
  - REL-13, Core Requirements for Uplink 64QAM for E-UTRA (680069, LTE_UL64QAM-UEConTest)

- 6 closed REL-13 study items (SI) in Dec. 2015:
  - RAN1: Study on Downlink Multiuser Superposition Transmission for LTE (670043, FS_LTE_MUST)
  - RAN4: Study on LTE FDD in the bands 1980-2010 MHz and 2170-2200 MHz (570022, FS_LTE_1980_2170_Korea)
  - RAN4: Study on LTE Advanced inter-band CA of Band 20 and Band 28 (680056, FS_LTE_CA_B20_B28)
  - RAN4: Study on new AWS-3/4 Band for LTE (690061, FS_LTE_AWS_3_4)
  - RAN4: Study on performance enhancements for high speed scenario in LTE (660071, FS_LTE_high_speed)
  - RAN4: Study on Measurement gap enhancement for LTE (670044, FS_LTE_meas_gap)

- 2 WIs and 1 SI shifted from REL-13 to REL-14:
  - LTE_CA_B3_B20_B32-Core, LTE_CA_B3_B20_B32-Perf, FS_LTE_NW_SYNC

- 4 WIs shifted back from REL-14 to REL-13 (as they were completed in Dec.15):
  - LTE_CA_B4_B4_B5_B12-Core, LTE_CA_B4_B4_B5_B12-Perf
  - LTE_CA_B2_B4_B4_B5-Core, LTE_CA_B2_B4_B4_B5-Perf

- 20 REL-13 Core part WIs that got an exception granted to complete by March 16 but still in REL-13:

Samsung Exhibit 1025, Page 924 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

1 in RAN1:
- Further LTE Physical Layer Enhancements for MTC (LTE_MTCe2_L1-Core): RP-152217

Note:Narrowband Internet of Things (IOT) (NB_IOT-Core) is kept in REL-13 because of PCG34_39r2.

4 in RAN2:
- Enhanced LTE Device to Device Proximity Services (LTE_eD2D_Prox-Core): RP-151954
- RAN enhancements for extended DRX in LTE (LTE_extDRX-Core): RP-151951
- LTE-WLAN Radio Level Integration and Interworking Enh. (LTE_WLAN_radio-Core): RP-151963
- LTE-WLAN RAN Level Integr. supporting legacy WLAN (LTE_WLAN_radio_legacy-Core): RP-152235*

  *: NOTE: RAN #70 overwrote here the RAN #69 decision to not grant an exception for this WI.

15 in RAN4:
- LTE UE TRP and TRS and UTRA Hand Phantom related UE TRP and TRS Requirements (LTE_UTRA_TRP_TRS-Core): RP-151915
- Base Station (BS) RF requirements for AAS (AAS_BS_LTE_UTRA-Core): RP-151810
- Radiated req. for the verification of multi-antenna reception perf. of UEs (UTRA_LTE_MIMO_OTA-Core): RP-151870
- 700MHz E-UTRA FDD Band for Arab Region (LTE_FDD_700_ARAB-Core): RP-151716
- LTE Adv. 3 band CA (3DL/1UL) of Band 1, Band 8 and Band 28 (LTE_CA_B1_B8_B28-Core): RP-151719
- LTE Adv. 3 band CA (3DL/1UL) of Band 3, Band 8 and Band 28 (LTE_CA_B3_B8_B28-Core): RP-151720
- LTE Adv. 3 Band CA (3DL/1UL) of Band 8, Band 42 and Band 42 (LTE_CA_B8_B42_B42-Core): RP-151721
- LTE Adv. 3 Band CA (3DL/1UL) of Band 2, Band 7 and Band 12 (LTE_CA_B2_B7_B12-Core): RP-152021
- LTE Adv. 3 Band CA (3DL/1UL) of Band 2, Band 4 and Band 7 (LTE_CA_B2_B4_B7-Core): RP-152020
- LTE Adv. 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 7 and Band 12 (LTE_CA_B2_B4_B7_B12-Core): RP-152022
- LTE Adv. 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 5 and Band 30 (LTE_CA_B4_B4_B5_B30-Core): RP-152122
- LTE Adv. 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 12 and Band 30 (LTE_CA_B4_B4_B12_B30-Core): RP-152123
- LTE Adv. 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 29 and Band 30 (LTE_CA_B4_B4_B29_B30-Core): RP-152124
- LTE Adv. 5 Band CA (5DL/1UL) of Band 1, Band 3, Band 7, Band 7 and Band 28 (LTE_CA_B1_B3_B7_B7_B28-Core): RP-151987
- LTE Adv. 5 Band CA (5DL/1UL) of Band 3, Band 3, Band 7, Band 7 and Band 28 (LTE_CA_B3_B3_B7_B7_B28-Core): RP-151989

- 38 <u>new approved work items</u> (WI) in Dec. 2015 (17 Core, 16 Perf., 5 Testing):

  - 2 RAN1 REL-14:
    - Core part: Enhanced LAA for LTE RP-152272
    - Core part: Support for V2V services based on LTE sidelink RP-152293

  - 2 RAN2 REL-14:
    - Core part: RRC optimization for UMTS RP-152267
    - Core part: DTX/DRX enhancements in CELL_FACH RP-152286

  - RAN4 (13 Core, 16 Perf.):

    REL-13 Core parts:
    - Core part: LTE FDD in the Bands 1980-2010 MHz and 2170-2200MHz for Region 3 RP-152238 (WI was started and also completed at RAN #70, linked to REL-13 WI LTE_1980_2170_REG3-Core)

    REL-14 Performance parts:
    - Perf. part: Power saving enhancements for UMTS RP-151998*
    - Perf. part: Narrowband Internet of Things (IOT) RP-152284*
    - Perf. part: Enhanced LAA for LTE RP-152272
    - Perf. part: Support for V2V services based on LTE sidelink RP-152293

    *: For these 2 new Perf. parts the Core part WIs existed already.

    REL-14 Core & Performance parts:
    - LTE Advanced intra-band CA for xDL/yUL incl. contiguous and non-contiguous spectrum RP-152250

Samsung Exhibit 1025, Page 925 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- LTE Advanced inter-band CA Rel-14 for 2DL/1UL RP-152196
- LTE Advanced inter-band CA Rel-14 for 3DL/1UL RP-152278
- LTE Advanced inter-band CA Rel-14 for 4DL/1UL RP-152249
- LTE Advanced inter-band CA Rel-14 for 5DL/1UL RP-151671
- LTE Advanced inter-band CA Rel-14 for 2DL/2UL RP-152237
- LTE Advanced inter-band CA Rel-14 for xDL/2UL with x=3,4,5 RP-152246
- LTE Advanced inter-band CA Rel-14 for 3DL/3UL RP-152241
- AWS-3/4 Band for LTE RP-151731
- LTE 2.6 GHz FDD Suppl. DL band (2570-2620 MHz) and LTE CA (2DL/1UL) with Band 3 for region 1 RP-152253
- Multi-Band Base Station testing with three or more bands RP-152205
- Performance enhancements for high speed scenario in LTE RP-152263

- 5 RAN5 UE Conformance Test Aspects for:
  - REL-12, Increasing the min. number of carriers for UE monitoring in UTRA and E-UTRA RP-151763
  - REL-13, Rel-13 LTE CA configurations RP-151764
  - REL-13, LTE DL 4 Rx antenna ports RP-151765
  - REL-13, Licensed-Assisted Access using LTE RP-151766
  - REL-13, AWS-Extension Band for LTE (Band 66) RP-151767

- 2 new approved study items (SI) for REL-14 in Dec. 2015:

  - RAN: Study on Scenarios and Requirements for Next Generation Access Technologies RP-152257
  - RAN1: Study on Multi-Carrier Enhancements for UMTS RP-152290

- 0 new approved Technical Specifications (TS), i.e. now under CR control

- 16 new approved Technical Reports (TR), i.e. now under CR control:

- RAN1 Rel-13 TR 36.859	FS_LTE_MUST	RP-151924
- RAN4 Rel-13 TR 36.833-7-42	LTE_CA_C_B42_4DL-Core	RP-151843
- RAN4 Rel-13 TR 36.833-8-41	LTE_CA_NC_B41_4DL-Core	RP-151678
- RAN4 Rel-13 TR 36.857-13	LTE_CA_B1_B3_B19_B42_B42-Core	RP-152190
- RAN4 Rel-13 TR 36.860-13	LTE_CA_2UL_R13-A1-Core	RP-151816
- RAN4 Rel-13 TR 36.861	FS_LTE_1980_2170_Korea	RP-151858
- RAN4 Rel-13 TR 36.862	LTE_1980_2170_REG1-Core	RP-152187
- RAN4 Rel-13 TR 36.869	LTE_AWS_EXT-Core	RP-152189
- RAN4 Rel-13 TR 36.870	FS_LTE_AWS_3_4	RP-152188
- RAN4 Rel-13 TR 36.878	FS_LTE_high_speed	RP-151814
- RAN4 Rel-13 TR 36.879-13	LTE_CA_3DL_2UL-Core	RP-151930
- RAN4 Rel-13 TR 36.892	LTE_TDD_1447MHz_China-Core	RP-151813
- RAN4 Rel-13 TR 36.894	FS_LTE_meas_gap	RP-152192
- RAN4 Rel-13 TR 36.895	LTE_CA_700EU_B20-Core	RP-152240
- RAN4 Rel-13 TR 36.899-13	LTE_CA_3DL3UL_B39_B39_B41-Core	RP-152191
- RAN5 Rel-12 TR 36.905	LTE_UTRA_SDL_BandL-UEConTest	RP-151772

- 5 new Technical Specifications (TS) provided for information

  -

- RAN3 Rel-13 TR 36.461	LTE_WLAN_radio-Core	RP-151742
- RAN3 Rel-13 TR 36.462	LTE_WLAN_radio-Core	RP-151865
- RAN3 Rel-13 TR 36.463	LTE_WLAN_radio-Core	RP-151958
- RAN3 Rel-13 TR 36.464	LTE_WLAN_radio-Core	RP-151985
- RAN3 Rel-13 TR 36.465	LTE_WLAN_radio-Core	RP-151986

- 3 new Technical Reports (TR) provided for information:

- RAN3 Rel-13 TR 36.898	FS_LTE_NW_SYNC	RP-151808
- RAN4 Rel-13 TR 36.852-13	LTE_CA_B3_B38-Core	RP-151912
- RAN4 Rel-13 TR 36.854-13	LTE_CA_B2_B2_B5_B30-Core	RP-152195

Samsung Exhibit 1025, Page 926 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Change request statistics (see also Annex E): 1484 CRs handled with 1457 approved CRs.

Phase	Cat	all CRs	Approved CRs	approved RAN1	approved RAN2	approved RAN3	approved RAN4	approved RAN5
Rel-8	B	1	1	0	0	0	1	0
Rel-9	B	3	3	0	0	0	3	0
Rel-9	F	2	2	0	0	0	2	0
Rel-10	A	2	2	0	0	0	2	0
Rel-10	B	8	8	0	0	0	8	0
Rel-10	C	3	3	0	3	0	0	0
Rel-10	D	1	1	0	0	0	1	0
Rel-10	F	20	20	0	3	0	10	7
Rel-11	A	17	16	0	6	0	10	0
Rel-11	B	19	19	0	0	0	18	1
Rel-11	F	83	83	0	4	0	37	42
Rel-12	A	56	55	0	10	0	45	0
Rel-12	B	64	64	0	0	0	21	43
Rel-12	C	5	3	0	3	0	1	0
Rel-12	D	1	1	0	0	0	0	0
Rel-12	F	703	700	8	31	2	60	599
Rel-13	A	95	95	0	7	1	87	0
Rel-13	B	345	327	25	107	57	138	0
Rel-13	C	6	6	0	2	4	0	0
Rel-13	D	1	1	0	0	0	1	0
Rel-13	F	47	47	2	2	3	23	17
sum		1482	1457	35	178	67	468	709

Samsung Exhibit 1025, Page 927 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

1 Opening of the Meeting

TSG RAN chairman Mr. Dino Flore (Qualcomm) opened the meeting 3GPP TSG RAN #70 on Monday Dec. 7th, 2015 at 9am.
On behalf of the host, the European Friends of 3GPP, Kevin Holley (Telefonica) welcomed the delegates to Sitges, Spain and explained organisational issues of the meeting.

NOTE: The TSG meetings #70 will be carried out in the 1 week TSG set up (see RP-131328, RAN/CT at the beginning and SA at the end of the week).

2 Reminders for usage of IT resources, IPR declaration and antitrust compliance

The TSG RAN chairman made the following three announcements to remind the delegates of this meeting:

RAN chair's reminder regarding responsible behaviour regarding IT resources of the meeting:

Delegates are reminded that they share the meeting IT resources with their fellow delegates. You should not abuse the service by using bandwidth-hogging applications such as movie downloads, streaming video, web-based gaming, etc during the meeting. Use the internet service in your hotel rooms for this!
Delegates must respect the law of the hosting country*, and should not visit prohibited internet sites.*
In cases of persistent abuse of the internet bandwidth, MCC may restrict individual's use of the service.
In particular, the PCG has laid down the following network usage conditions:
1. Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws.
2. Users shall not engage in non-work related activities that are consume excessive bandwidth or cause significant degradation of the performance of the network.
Since the network is a shared resource, users should exercise some basic etiquette when using the 3GPP network at a meeting. It is understood that high bandwidth applications such as downloading large files or video streaming might be required for business purposes, but delegates should be strongly discouraged in performing these activities for personal use. Downloading a movie or doing something in an interactive environment for personal use essentially wastes bandwidth that others need to make the meeting effective. The meeting chairman should remind end users that the network is a shared resource; the more one user grabs, the less there is for another. Email and its attachments already take up significant bandwidth (certain email programs are not very bandwidth efficient). In case of need the chair can ask the delegates to restrict IT usage to things that are essential for the meeting itself.

1. ***DON'T place your WiFi device in ad-hoc mode***
2. ***DON'T set up a personal hotspot in the meeting room***
3. ***DO try 802.11a if your WiFi device supports it***
4. ***DON'T manually allocate an IP address***
5. ***DON'T be a bandwidth hog by streaming video, playing online games, or downloading huge files***
6. ***DON'T use packet probing software which clogs the local network (e.g., packet sniffers or port scanners)***

Based on the report of the PCG ad hoc group on IT improvements:
http://www.3gpp.org/ftp/PCG/PCG_27/DOCS/PCG27_13r1.zip
see also http://www.3gpp.org/Delegates-Corner#outil_sommaire_14

RAN chair's reminder regarding IPRs:

The attention of the delegates to the meeting of this Technical Specification Group was drawn to the fact that 3GPP Individual Members have the obligation under the IPR Policies of their respective Organizational Partners to inform their respective Organizational Partners of

Samsung Exhibit 1025, Page 928 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Essential IPRs they become aware of.
The delegates were asked to take note that they were thereby invited:

- ***to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.***
- ***to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Information Statement and the Licensing declaration forms***

Based on http://www.3gpp.org/3gpp-calendar/89-call-for-ipr-meetings

RAN chair's reminder regarding antitrust and competition law:

The attention of the delegates to the meeting was drawn to the fact that 3GPP activities were subject to all applicable antitrust and competition laws and that compliance with said laws was therefore required by any participant of the meeting, including the Chairman and Vice-Chairmen and were invited to seek any clarification needed with their legal counsel. The leadership would conduct the present meeting with impartiality and in the interests of 3GPP. Delegates were reminded that timely submission of work items in advance of TSG/WG meetings was important to allow for full and fair consideration of such matters.

Based on http://www.3gpp.org/about-3gpp/legal-matters/21-3gpp-calendar/1616-statement-of-antitrust-compliance

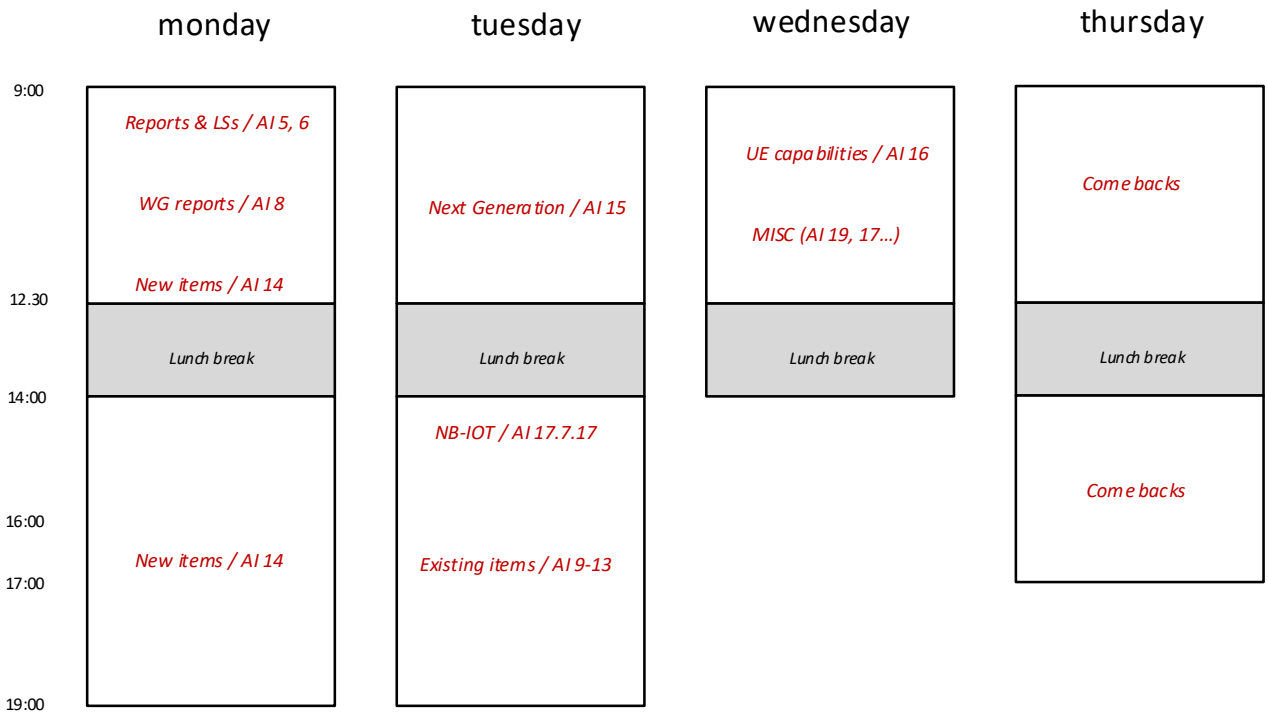
Samsung Exhibit 1025, Page 929 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

3 Approval of the Agenda

NOTE: Agreed CR packages of RAN WGs (if not flagged for discussion) will be approved without presentation. % complete and target dates of WI/SI status reports (if not flagged for discussion) will be approved without presentation.

RP-151629 Agenda for RAN #70 held in Sitges, Spain, 07.12.-10.12.2015 RAN chairman (Qualcomm)
agenda
conclusion: approved

tentative meeting schedule as distributed by the RAN chair on 04.12.2015 over the RAN reflector:



Samsung Exhibit 1025, Page 930 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

4 Approval of the meeting report of TSG-RAN #69

RP-151630 Draft report of RAN #69 held in Phoenix, USA, 14.09.-16.09.2015 ETSI MCC report
conclusion: revised in RP-152199 before RAN #70 in order to shorten one sentence in the executive summary

RP-152199 Draft report of RAN #69 held in Phoenix, USA, 14.09.-16.09.2015 ETSI MCC report
conclusion: revised in RP-152201 to provide the final report

RP-152201 Report of RAN #69 held in Phoenix, USA, 14.09.-16.09.2015 ETSI MCC report
conclusion: approved

5 Reports from other meetings

5.1 Report from TSG SA

TSG SA #69 was held in Phoenix, USA, on 15-16.09.2015 in parallel to RAN #69.
The draft report of this meeting is available under:
ftp://ftp.3gpp.org/tsg_sa/TSG_SA/TSGS_70/Docs/SP-150577.zip

RAN chairman: we will come later to REL planning under AI 15.

5.2 Report from PCG

PCG #35 was held on 22.10.2015 in Vancouver, Canada. The RAN chairman distributed the following list of highlights via the RAN reflector on 23.10.2015:

Moving GERAN into RAN:
PCG agreed the plan proposed by GERAN and RAN Chairman in PCG35_08r1.

New configuration for LTE TDD (aka SDL for LTE TDD):
PCG tasked RAN to discuss next steps on this topic. CCSA proposed the compromise proposal that a TDD SDL configuration is standardized in the phase 1 of the new 5G radio (PCG35_26). The proposal was simply noted as this was not the right audience to discuss it. It will be discussed at next plenary. I recommend interested companies to think about it.

New marker for LTE:
Based on the OP majority views, it was decided to select "LTE-Advanced Pro" as new marker for LTE. During the discussion it was stressed that this will be just a marker for LTE and not a new full-blown 3GPP brand. 3GPP Marcomm officer will now put together some material to advertise the new marker, which will reviewed by PCG members before publication.

discussion: Note: PCG35_26 is also provided to RAN #70 for information in RP-152186, see AI 14.1.1.
Telecom Italia: will we put the new logo on the specs?
RAN chair: yes, logos will be put on REL-13 specs and onwards

5.3 Report from other meetings

RP-152198 Report of 3GPP RAN workshop on "5G" held in Phoenix, USA, September 17-18, 2015 ETSI MCC report
provided just for information
conclusion: noted

Samsung Exhibit 1025, Page 931 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

6 Liaison activity of TSG RAN

NOTE: This agenda item will only handle LSs not handled elsewhere.

Explicit Congestion Notification for Lower Layer Protocols:

RP-151649 LS on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols
(SP-150574; to: SA2, SA4, RAN2, CT1, CT3, CT4; cc: CT, RAN; contact: Samsung) SA
LS in Rel-10ECSRA_LAA
no RAN action requested
discussion: RAN3 chair: SA likes to collect all information but there is also a RAN3 spec for this which is missing and RAN3 was not asked to respond, should we send an LS to inform SA?
RAN chair: you can prepare a draft LS from RAN
conclusion: noted, Huawei will draft an LS to SA in RP-152203

RP-152203 Draft reply LS to SP-150574 = RP-151649 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols (to: SA; cc: RAN3; contact: Huawei) Huawei LS out LSxx Rel-10 ECSRA_LAA
conclusion: revised in RP-152279

RP-152279 Reply LS to SP-150574 = RP-151649 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols (to: SA; cc: RAN3; contact: Huawei) RAN LS out LS02 Rel-10 ECSRA_LAA
conclusion: approved

RP-151646 Reply LS to SP-150574 = RP-151649 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols
(C1-153966; to: SA; cc: CT, RAN, SA2, SA4, RAN2, CT3, CT4; contact: Ericsson) CT1
LS in Rel-10ECSRA_LAA
no RAN action requested
conclusion: noted, no LS answer

RP-151647 Reply LS to SP-150574 = RP-151649 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols
(C3-154252; to: SA; cc: SA2, SA4, RAN2, CT1, CT3, CT4, CT, RAN; contact: Nokia Networks)CT3
LS in Rel-10ECSRA_LAA
no RAN action requested
conclusion: noted, no LS answer

RP-151662 Reply LS to SP-150574 = RP-151649 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols
(R2-157038; to: SA; cc: CT, RAN, SA2, SA4, CT1, CT3, CT4; contact: Samsung) RAN2
LS in Rel-10ECSRA_LAA
ECSRA_LAA = Enabling Coder Selection and Rate Adaptation for UTRAN and E-UTRAN for Load Adaptive Applications; no RAN action requested
conclusion: noted, no LS answer

Licensed Shared Access:

RP-151654 Response to LS Update S5-154456 on Study on OAM support for Licensed Shared Access
(ETSI TC RRS(15)031016r4; to: SA; cc: RAN, SA5; contact: Intel) ETSI TC RRS
LS in Rel-13FS_OAM_LSA
S5-154456 was not sent to/cc RAN; no RAN action requested
conclusion: noted, no LS answer

Time synchronization:

RP-151659 Reply LS to RP-151555 on work on time synchronization and future target requirements
(ITU-T SG15/COM15–LS298–E; to: RAN; cc: -; contact: Ericsson) ITU-T SG15
LS in Rel-13-
RAN #69 received ITU-T SG15/COM15-LS266-E = RP-151142 and answered in RP-151555; RAN action requested by 01.02.16
conclusion: noted, no LS answer

Samsung Exhibit 1025, Page 932 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Public safety:

RP-151829 Request on the completion of 3GPP Work Items related to the Public Safety according to current Release 13 timelineMinistry of Science, ICT and Future Planning (Republic of Korea) LS in Rel-13 -

LS from Korean Government regarding the completion of 3GPP Work Items related to the Public Safety according to current Release 13 timeline; incoming LSs are only submitted via MCC

conclusion: withdrawn

Samsung Exhibit 1025, Page 933 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

7 ITU-R Ad hoc

7.1 Status report

RP-151631 Status Report ITU-R Ad hoc ITU-R Ad hoc Contact (Telecom Italia) report
conclusion: noted

7.2 Submission to ITU-R

7.2.1 Submission to ITU-R WP5A

Intelligent Transport Systems (ITS):

RP-151655 LS on the standardization status of Intelligent Transport Systems (ITS) radio interface technologies (ITU-R WP5A/TEMP/310(Rev.1); to: RAN, SA, ARIB, AWG, CCSA, ETSI TC ERM, IEEE, TIA, and TTA; cc: -; contact: ITU-R WP5A Counsellor) ITU-R WP5A
LS in Rel-14FS_LTE_V2X
RAN action requested for ITU-R WP5A meeting in May 2016;
LS is presented by Huawei
discussion: Orange: research or regulatory activities is not clear from an attachment
Telecom Italia: we need to check with CCSA
Huawei: maybe more than research, we can try to find out
conclusion: noted, LS answer postponed (next ITU-R WP5A meeting will be in May 2016, so RAN has time to finalize the answer in RAN #71 in March 2016)
The RAN ITU-R ad hoc will prepare a draft reply for RAN #71.

7.2.2 Submission to ITU-R WP5D

ITU-R M.1457:

RP-151669 Draft Letter to ITU on final submission for IMT-2000 CDMA DS and IMT-2000 CDMA TDD toward Rev. 13 of Rec. ITU-R M.1457
(RT-150021; to: CT, RAN; cc: -; contact: Telecom Italia) RAN ITU-R ad hoc
LS in Rel-12-
RAN action requested; this LTI is also provided to CT and CT will reply back to RAN; RAN will finally provide their draft incl. CT comments for review to SA and from there to PCG for approval; ATIS will then provide to approved version to ITU-R WP5D on behalf of the OPs
conclusion: noted, no reply from RAN to ITU-R ad hoc; Telecom Italia will draft an LTI to SA in RP-152219 that will include comments from RAN #70 as well as feedback from CT #70

RP-152219 Draft Letter to ITU on final submission for IMT-2000 CDMA DS and IMT-2000 CDMA TDD toward Rev. 13 of Rec. ITU-R M.1457
(to: SA; cc: -; contact: Telecom Italia) Telecom Italia
LS out Rel-12-
based on ITU-R ad hoc input RP-151669 this is a draft version to be sent to SA; from there it will go to PCG for approval and then it is submitted by ATIS to ITU-R WP5D on behalf of the OPs
discussion: Telecom Italia: CT had no comments to RT-150021 (=RP-151669)
Ericsson: 25.470 (from REL-12), 25.471 (from REL-10) to be added
conclusion: revised in RP-152244 to provide final version for SA

RP-152244 Draft Letter to ITU on final submission for IMT-2000 CDMA DS and IMT-2000 CDMA TDD toward Rev. 13 of Rec. ITU-R M.1457 (to: SA; cc: -; contact: Telecom Italia) RAN LS out Rel-12-
revision of RP-152219; this is a draft version to be sent to SA; from there it will go to PCG for approval and then it is submitted by ATIS to ITU-R WP5D on behalf of the OPs
conclusion: agreed, provided to SA on Wed noon

Unwanted emisssions:

RP-151658 Draft Letter to ITU in answer to ITU-R WP5D/TEMP/619 = RP-151140 related to the revision of Recommendations for generic unwanted emission characteristics
(R5-156165; to: RAN; cc: -; contact: Ericsson) RAN5
LS inRel-12-

Samsung Exhibit 1025, Page 934 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN5 has drafted a reply to ITU-R WP5D LS received at RAN #69 in RP-151140; before sending it out the LS has to pass SA and PCG review; RAN action requested
conclusion: noted, no RAN LS answer to RAN5

RP-151663 Draft Letter to ITU in answer to ITU-R WP5D/TEMP/619 = RP- 151140 related to the revision of Recommendations for generic unwanted emission characteristics
(R4-158243; to: RAN; cc: -; contact: Ericsson) RAN4
LS in Rel-12 -
RAN4 has drafted a reply to ITU-R WP5D LS received at RAN #69 in RP-151140; before sending it out the LS has to pass SA and PCG review; RAN action requested; compare RP-151658
conclusion: noted, no RAN LS answer to RAN4; Telecom Italia will merge replies from RAN4 and RAN5 into an draft LTI to SA in RP-152218

RP-152218 Draft Letter to ITU in answer to ITU-R WP5D/TEMP/619 = RP- 151140 on IMT-Advanced related to the revision of Recommendations for generic unwanted emission characteristics
(to: SA; cc: -; contact: Telecom Italia) Telecom Italia
LS out Rel-12 -
merging RAN4 reply RP-151663 and RAN5 reply RP-151658 into one reply that is provided to SA for review before it is going to PCG for approval and from there via ATIS to ITU-R WP5D
conclusion: revised in RP-152245 to provide final version for SA

RP-152245 Draft Letter to ITU in answer to ITU-R WP5D/TEMP/619 = RP- 151140 on IMT-Advanced related to the revision of Recommendations for generic unwanted emission characteristics (to: SA; cc: -; contact: Telecom Italia) Telecom Italia LS out Rel-12 -
revision of RP-152218; merging RAN4 reply RP-151663 and RAN5 reply RP-151658 into one reply that is provided to SA for review before it is going to PCG for approval and from there via ATIS to ITU-R WP5D;
conclusion: agreed, provided to SA on Wed noon

7.2.3 Other ITU-R submission

Nothing to report

Samsung Exhibit 1025, Page 935 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8 RAN WGs: WG Status Reports & CR Approvals up to Rel-10

Note: REL-4, REL-5, REL-6 and REL-7 were closed after RAN #65, i.e. no CRs to these releases will be considered anymore.

8.1 TSG RAN WG1

8.1.1 Report from RAN WG1 including report on actions required from the previous meeting

RP-151632 Status Report RAN WG1 RAN1 chairman (NTT DOCOMO)report
discussion: Orange: to be discussed: handling of the work load in Q4, etc (see considerations in RP-152019)
Intel: slide 13: typo
RAN chair: will discuss later time unit handling of LTE vs. new RAT, no competition between LTE and new RAT intended (we will discuss this on Tue)
RAN chair: let's treat Orange's RP-152019 now
RAN chair: only after discussing the existing WIs/SIs we will know how much time units are left
Vodafone: would like to know whether LTE and 5G will run in parallel
RAN chair: new radio will not be prioritized over LTE evolution; we also need to be more accurate/strict in the time unit allocation for LTE, we cannot approve as much new WIs as we did in the past
Telecom Italia: any impact on ASN.1 from remaining parts?
RAN1 chair: only RAN1 related issues remaining
RAN2 chair: we got the RAN1 LSs and this is hopefully covering all RAN2 impacts
RAN1 chair: confirmed this
conclusion: noted

RP-151633 List of CRs from RAN WG1 ETSI MCC discussion
conclusion: noted

8.1.2 Discussions on decisions from RAN WG1

No contributions

8.1.3 Approval of CRs to REL-8 WIs and WIs of previous releases

No contributions

8.1.4 Approval of CRs to Rel-9 WIs

No contributions

8.1.5 Approval of CRs to Rel-10 WIs

No contributions

8.1.6 Approval of CRs to Rel-11 WIs

RP-152034 CRs to 36.213 clarifying resources related to EPDCCH RAN1 CR Pack Rel-11 LTE_enh_dl_ctrl
conclusion: approved

8.1.7 Approval of linked CR packages led by RAN WG1

No contributions

Samsung Exhibit 1025, Page 936 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8.2 TSG RAN WG2

8.2.1 Report from RAN WG2 including report on actions required from the previous meeting

RP-151634 Status Report RAN WG2 RAN2 chairman (Intel) report
discussion: Orange: to be discussed: handling of the work load in Q4, etc (see considerations in RP-152019)
Ericsson: 8TUs for REL-13 corrections, in the past we had 8TUs but with D2D and ASN.1 was included as well
RAN chair: you can discuss this further during the week with the RAN chairman
conclusion: noted

RP-151635 List of CRs from RAN WG2 ETSI MCC discussion
conclusion: noted

8.2.2 Discussions on decisions from RAN WG2

Workload:

RP-152019 Considerations regarding the work load situation in RAN WG in Q4 2015 and potential impact on the quality of RAN decisions and specifications Orange, Deutsche Telekom discussion Rel-13 - *proposals:*

- *RAN WGs should focus in the next quarter on:*
  - *completion of Rel-13 items*
  - *perform the necessary consistency check on agreements reached during the last quarter and followed by email discussions*
  - *coordinate to ensure that cross WGs specification work is aligned*
- *We recommend that no RAN WG rel-14 new SI or WIs are approved in Dec.15*
- *Future work plan and WGs agenda should ensure that the work is completed in due time and that work load is managed and controlled*
- *Clear guidelines should be given to the chairmen of RAN WGs so that the disruptions from last quarter are not repeated. e.g.:*
  - *Possible extensions or change of meeting dates should be announced and agreed at the plenary;*
  - *Not acceptable that official meetings continue after the formal closing time;*
  - *When there are parallel sessions, the time schedule for the different sessions should be stable, making it possible for delegates to jump between sessions.*

discussion: RAN1 chair: we discussed already in Oct. in RAN1 about the extension forLAA and MTCe
Orange: discussing meeting extension for Nov in Oct is short notice, working on 8 consecutive days is illegal in some countries
RAN chair: meeting was in US where this is not illegal
Dish Networks: agrees with Orange concerns, WG should not decide time units themself
RAN chair: admits that this is a valid concern and we need to improve
RAN chair: decision of having a meeting or not is at the end up to the chair; there was some discussion about an ad hoc before (even in Xmas period which was cancelled)
AT&T: frankly speaking operators lean on vendors to get things done, so we need to be honest that this is also operators responsibility
Telecom Italia: we should see the complete picture, RAN1 specs alone are not sufficient
RAN chair: starting assumption is that we will not approve any RAN2/RAN3/RAN4 new WIs/SIs (except spectrum) unless there is a wide support for a WI where the majority considers it urgent; RAN1 may start something; key factor is we need to be more honest with the time budget planning
Deutsche Telekom: agrees that this was a special quarter with the freeze of the REL but we also approved more WIs/SIs in the past than are really useful so we need to improve here
RAN chair: we said in the past that we have to make sure that we are not overshooting the time budget by more than 50% but this quarter we exceeded again 100% for some items and this has to be improved
RAN3 chair: indicates that there is some time budget in RAN3 available
RAN chair: we agreed last time that we would not start more RAN2/RAN3/RAN4 work and that they work on REL-13 completion/ASN.1 freeze

Samsung Exhibit 1025, Page 937 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN1 vice-chair (ALU): one lesson we learnt: if companies need additional time they must bring the request to RAN; we need to be much more realistic about the needed time units and WG chairs should have the last word on this; approving multiple WIs as a package is probably also not good (we should rather go one by one and see what has highest priority and how much time is left); having a certain overshoot limit is maybe not so fruitfull as this means simply that things get shifted to less transparent offline sessions
RAN2 chair: supports that if a WI needs more time they have to get back to RAN to request more time budget
Nokia Networks: we need to see that we can take some real decisions now and not just some vague intentions that disappear later
RAN chair: companies are free to object the approval of a WI, noone limits this
AT&T: most of the points we could have agreed 5 years ago, if you remember in UMTS times we had even harder times, we need to take into account that decisions taken after ther closing of a meeting could be legally challenged
Orange: we did not have meetings on week-ends in the past and we need a more transparent planning
Telecom Italia: suggests to also not approve any new RAN1 WI/SI and that we need to verify whether we can freeze ASN.1 in March
Ericsson: operators are free to bring more delegates if they are interested in more topics
conclusion: noted
RAN chairman's conclusions:
We will not approve any RAN2/3/4 (except spectrum) new WIs/SIs as REL-13 completion has priority.
WG chairs are reminded to announce plans/inform delegates better.
WG chair and rapporteurs are requested to be more realistic with the time unit requests.

LG: there are some new RAN1 WIs/SIs which will have RAN2 impact
RAN chair: yes, will be take into account
Vodafone: would prefer that additional ad hocs are announced in the RAN meeting
RAN chair: yes, WG chairs are requested to announce planned ad hocs/meetings in the RAN meeting before
TeliaSonera: also the schedule of a meeting should be more transparent
RAN chair: agrees, enough to have it in the WG chairman's report to RAN
RAN2 chair: so also no RAN1 led WIs that have impact on RAN2 time budget?
Orange: if RAN decides just the time units but the WG can have extra meetings then this is not consistent, so the need for meetings need to be discussed at RAN as well
RAN chair: yes, can be discussed at RAN as well
RAN chair: if at the end there is one proposal for a new WI that is not challenged we can still consider it (even if for RAN2/3/4) but the threshold is high for this
Mediatek: also extensions of a meeting should be discussed at RAN?
RAN chair: yes
Oppo: what is a timely announcement?
RAN chair: the RAN plenary before
Mediatek: working procedures talk about 6 months before but for ad hocs is different
RAN chair: RAN plenary before is enough
Orange: we should also avoid that RAN2 WIs are running under RAN1 leadership
RAN chair: agrees

conclusions as displayed on the screen in the meeting:
Chair's Wrap-up (based on RP-152019):
+ No RAN2,3,4 new items to be approved at this Plenary (as agreed to in RAN#69);
+ Completion of R'13 - top priority;
+ Timely discussion and announcement of extra WG meetings, at the Plenary;
+ Great care & honesty with agreeing R'14 allocations.

ASN.1:

RP-151841 ASN.1 freeze for Release 13 Samsung discussion Rel-13 -
Proposal 1: RAN decides to keep the current ASN.1 freeze schedule.
Proposal 2: RAN decides WIs to be put into the ASN.1 review process based on the RAN2 assessment.
conclusion: noted

Samsung Exhibit 1025, Page 938 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151867 Way forward on the completion of ASN.1 related to the Public Safety TTA discussion Rel-13 -
proposed: that RAN approve the ASN.1 review schedule for WIs, which was functionally frozen at RAN2#92 including ProSe Enhancement and Single-Cell Point-to-Multipoint transmission, according to the current Release 13 time schedule.
discussion: RAN chair: no new RAN2 WIs will be approved this week and RAN2 will have an additional ASN.1 review ad hoc so we are on track so far
Orange: items which are considered completed and items which are not yet completed, what will be in the ASN.1 review?
RAN2 chair: all completed WIs plus 2 other WIs: WLAN WI and MTC, indoor positioning has no impact on LTE RRC
Vodafone: NB-IOT is for completion in March 15
RAN chair: we said NB-IOT will be handled separately when CRs are ready
RAN2 chair: yes, NB-IOT will not be in the review for March so can only be reviewed via CRs for June 16
Vodafone: maybe we do not need to wait until May to review it
conclusion: noted

8.2.3 Approval of CRs to REL-8 WIs and WIs of previous releases

RP-152046 RAN2 agreed CRs on REL-8 Work Items RAN2 CR Pack Rel-8 LTE-L23, TEI10, TEI11, TEI12
conclusion: approved

8.2.4 Approval of CRs to Rel-9 WIs

RP-152047 RAN2 agreed CRs on Clarification for physical channel combination of DC-HSUPA and MC-HSDPA RAN2 CR Pack Rel-9 RANimp-DC_HSUPA, TEI10, 4C_HSDPA-Core, 8C_HSDPA-Core
conclusion: approved

8.2.5 Approval of CRs to Rel-10 WIs

RP-152048 RAN2 agreed CRs on various REL-10 Work Items RAN2 CR Pack Rel-10 TEI10, LTE_CA-Core, NIMTC-RAN_overload, TEI12, LTE_CA_TDD_FDD-Core
discussion: MCC: see company CR RP-152112 replacing R2-157101 and company CR RP-152113 replacing R2-157102
conclusion: all CRs of RP-152048 approved except:
- R2-157101 (revised in RP-142112) and
- R2-157102 (revised in RP-142113)

RP-152112 Enabling multiple NS and P-Max operation per cell NTT DOCOMO CR 36.331 1922 4 A Rel-11 TEI10
company CR; replacing agreed R2-157101 of RP-152048
discusssion: RAN2 chair: CR corrects inconsistencies found in cat.A CR with the cat.F CR
conclusion: approved

RP-152113 Enabling multiple NS and P-Max operation per cell NTT DOCOMO CR 36.331 1923 4 A Rel-12 TEI10
company CR; replacing agreed R2-157102 of RP-152048
discusssion: RAN2 chair: CR corrects inconsistencies found in cat.A CR with the cat.F CR
conclusion: approved

RP-152049 RAN2 agreed CRs on Alternative new maximum transport block sizes for DL 64QAM and 256QAM in TM9/10 RAN2 CR Pack Rel-10 LTE_eDL_MIMO-Core, COMP_LTE_DL-Core, TEI12
linked RAN1 36.213 CR R1-157527 in RP-152038 (see AI 10.5).
conclusion: approved

8.2.6 Approval of CRs to Rel-11 WIs

RP-152050 RAN2 agreed CRs on various REL-11 Work Items RAN2 CR Pack Rel-11 SPIA_IDC_LTE-Core, HSDPA_MFTX-Core, TEI12
conclusion: approved

Samsung Exhibit 1025, Page 939 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8.2.7 Approval of linked CR packages led by RAN WG2

No contributions

8.3 TSG RAN WG3

8.3.1 Report from RAN WG3 including report on actions required from the previous meeting

RP-151636 Status Report RAN WG3 RAN3 chairman (Huawei) report
discussion: NEC: slide 8 seems to imply that extension is needed for RSE but this is not needed
RAN chair: we will discuss this under the RSE agenda item
Telecom Italia: dedicated session for new radio interface?
RAN chair: we will discuss this on Tue
AT&T: slide 26: @91?
RAN3 chair: meeting #91
conclusion: noted

RP-151637 List of CRs from RAN WG3 ETSI MCC discussion
conclusion: noted

8.3.2 Discussions on decisions from RAN WG3

No contributions

8.3.3 Approval of CRs to REL-8 WIs and WIs of previous releases

No contributions

8.3.4 Approval of CRs to Rel-9 WIs

No contributions

8.3.5 Approval of CRs to Rel-10 WIs

No contributions

8.3.6 Approval of CRs to Rel-11 WIs

No contributions

8.3.7 Approval of linked CR packages led by RAN WG3

No contributions

8.4 TSG RAN WG4

8.4.1 Report from RAN WG4 including report on actions required from the previous meeting

RP-151638 Status Report RAN WG4 RAN4 chairman (Nokia Networks) report
discussion: Intel: can we also agree ad hoc for eMTC and MIMO OTA it was already agreed in RAN4
RAN4 chair (Samsung): including eMTC topic into NB-IOT ad hoc was already agreed, we can discuss the inclusion of MIMO OTA further this week
Orange: 3 days NB-IOT and now additional 2 days MIMO-OTA ad hoc, it would help a lot to co-locate these ad hocs in the same country
RAN4 chair (Nokia Netw.): organizers tried but it is not yet clear whether the ad hocs can take place at same location
NTT DOCOMO: putting eMTC and NB-IOT has some synergy, however MIMO OTA is a different topic
Huawei: first priority should be NB-IOT and not eMTC

Samsung Exhibit 1025, Page 940 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN chair: we leave this to RAN4 leaders
Vodafone: going from ~100 CA WIs to about 8 CA baskets: recommendation to also have some information in the RAN4 chairman's report to increase visibility
RAN4 chair (Samsung): can do this but there will be also individual status reports for each basket WI including each combination
RAN chair:: maybe including a summary in the WG report will be useful
Panasonic: we may need 5 digit Tdoc numbers in the next year
conclusion: noted, RAN chairman thanked Tuomo for his excellent and hard work as RAN4 chair in the last 4 years

RP-151639 List of CRs from RAN WG4 ETSI MCC discussion
conclusion: noted

8.4.2 Discussions on decisions from RAN WG4

RP-151862 New CA WI approach NTT DOCOMO discussion Rel-14 -
RAN#69 decided that we go for a CA basket WI approach. In consideration of it, RAN4 discussed the concrete approach at both RAN4#76bis and RAN4#77. As a result, RAN4#77 approved the approach we will take. This contribution briefly shares what RAN4 agreed on a new CA WI approach called basket WI approach.
conclusion: noted

8.4.3 Approval of CRs to REL-8 WIs and WIs of previous releases

No contributions

8.4.4 Approval of CRs to Rel-9 WIs

RP-152130 RAN4 CRs to Rel-9 Wis RAN4 CR Pack Rel-9 MBMS_LTE
conclusion: approved

8.4.5 Approval of CRs to Rel-10 WIs

RP-152131 RAN4 CRs to Rel-10 Wis RAN4 CR Pack Rel-10 TEI10, LTE-CA-Core, LTE_TDD_2600_US-Core
conclusion: approved

8.4.6 Approval of CRs to Rel-11 WIs

RP-152132 RAN4 CRs to Rel-11 WIs RAN4 CR Pack Rel-11 LTE_Interf_Rej-Perf, LTE_CA_B7-Core, MB_MSR_RF-Perf, LTE_CA_enh-Core, LTE_CA_enh-Perf, LTE_Relay2-Core, LTE_Relay2-Perf MB_MSR_RF-Core, TEI11
conclusion: approved

8.4.7 Approval of linked CR packages led by RAN WG4

No contributions

8.5 TSG RAN WG5

8.5.1 Report from RAN WG5 including report on actions required from the previous meeting

RP-151641 Status Report RAN WG5 RAN5 Chairman (Motorola Mobility) report
conclusion: noted

RP-151642 List of CRs from RAN WG5 ETSI MCC discussion
conclusion: noted

Samsung Exhibit 1025, Page 941 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151643 Status Report MCC TF160 (for approval) ETSI MCC TF160 Leader report
presented by RAN5 chairman
conclusion: approved

RP-151670 Terms of Reference (2016) of MCC TF160 ETSI MCC TF160 Leader ToR
conclusion: approved

8.5.2 Discussions on decisions from RAN WG5

No contributions

8.5.3 Approval of CRs to closed WIs of REL-10 (incl. TEI10_Test) and previous releases

RP-151681 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel 99 Conformance Testing(TEI_Test) RAN5 CR Pack Rel-99 TEI_Test
conclusion: approved

RP-151682 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-5 Conformance Testing(TEI5_Test) RAN5 CR Pack Rel-6 TEI5_Test
conclusion: approved

RP-151683 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-7 Conformance Testing(TEI7_Test) RAN5 CR Pack Rel-7 TEI7_Test
conclusion: approved

RP-151684 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 1) RAN5 CR Pack Rel-8 TEI8_Test
conclusion: approved

RP-151685 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 2) RAN5 CR Pack Rel-8 TEI8_Test
conclusion: approved
Note: R5-155795 of this CR pack has a wrong revision number on the CR cover, correct is CR 3149 rev 1.

RP-151686 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 3) RAN5 CR Pack Rel-8 TEI8_Test
conclusion: withdrawn

RP-151687 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-9 Conformance Testing(TEI9_Test) RAN5 CR Pack Rel-9 TEI9_Test
conclusion: approved

RP-151688 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 1) RAN5 CR Pack Rel-10 TEI10_Test
conclusion: approved

RP-151689 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 2) RAN5 CR Pack Rel-10 TEI10_Test
conclusion: approved
Note: R5-155745 is actually CR2346a rev - (since a different CR2346 exists for the same spec in R5-156031 in RP-151700)

8.5.4 Approval of CRs to closed WIs of REL-11 (incl. TEI11_Test)

RP-151692 CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (prose), Annex A RAN5 CR Pack 34.229-3 0359 - F Rel-11 TEI8_Test
conclusion: approved

Samsung Exhibit 1025, Page 942 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151693 CRs to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (prose), Annex A RAN5 CR Pack 34.229-3 - - F/B Rel-11 TEI8_Test, TEI9_Test
conclusion: approved

RP-151696 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-11 Conformance Testing (TEI11_Test) RAN5 CR Pack Rel-11 TEI11_Test
conclusion: approved

8.5.5 Approval of linked CR packages led by RAN WG5

No contributions

Samsung Exhibit 1025, Page 943 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

9 Conformance Testing Work Items

9.1 Closed REL-12 work items

Note: For closed WIs of earlier releases see AI 8.5.

RP-151690 CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A RAN5 CR Pack 34.123-3 3467 - F Rel-12 TEI8_Test
conclusion: approved

RP-151691 CRs to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A RAN5 CR Pack 34.123-3 - - F/B Rel-12 TEI7_Test, TEI8_Test, TEI9_Test, TEI10_Test
conclusion: approved

RP-151694 CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (prose), Annex A RAN5 CR Pack 36.523-3 3017 - F Rel-12 TEI8_Test
conclusion: approved

RP-151695 CRs to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (prose), Annex A RAN5 CR Pack 36.523-3 - - F/B Rel-12 LTE_CA_Rel12_2UL-UEConTest, TEI8_Test, TEI9_Test, TEI10_Test, TEI11_Test
conclusion: approved

RP-151697 CR to 37.751-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (prose), Annex A RAN5 CR Pack 37.571-4 0072 - F Rel-12 TEI9_Test
conclusion: approved

RP-151698 CRs to 37.571-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (prose), Annex A RAN5 CR Pack 37.571-4 - - F/B Rel-12 TEI8_Test, TEI9_Test
conclusion: approved

9.2 Open Rel-7 work items

9.2.1 UE Conformance Test Aspects - Multimedia Telephony Services for IMS (MTSI) over fixed access [**New WI**: MTSI_FIXED_ACCESS-UEConTest]

RP-151677 Status report for WI Conformance Test Aspects - Multimedia Telephony Services for IMS (MTSI) over fixed access; rapporteur: Telecom Italia RAN5 WI status report Rel-7 MTSI_FIXED_ACCESS-UEConTest
conclusion: noted, approved: 5%, Dec.16

9.2.2 UE Conformance Test Aspects – Multimedia Telephony Services for IMS (MTSI) over WLAN [**New WI**: MTSI_WLAN-UEConTest]

RP-151769 Status report for WI UE Conformance Test Aspects -Multimedia Telephony Services for IMS (MTSI) over WLAN; rapporteur: Ericsson RAN5 WI status report Rel-7 MTSI_WLAN-UEConTest
conclusion: noted, approved: 5%, Dec.16

RP-151699 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – Multimedia Telephony Services for IMS (MTSI) over WLAN (MTSI_WLAN-UEConTest) RAN5 CR Pack Rel-7 MTSI_WLAN-UEConTest
conclusion: approved

RP-151770 Revision of WI UE Conformance Test Aspects -Multimedia Telephony Services for IMS (MTSI) over WLAN Ericsson WID revised RAN5 Rel-7 MTSI_WLAN-UEConTest
last approved WID: RP-151334
conclusion: approved

Samsung Exhibit 1025, Page 944 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

9.3 Open Rel-11 work items

9.3.1 UE Conformance Test Aspects for UE Over the Air (Antenna) conformance testing methodology – Laptop Mounted Equipment Free Space Test [UEAnt_FSTest-UEConTest]

RP-151673 Status report for WI: UE Conformance Test Aspects for UE Over the Air (Antenna) conformance testing methodology – Laptop Equipment Free Space Test; rapporteur: ZTE RAN5 WI status report Rel-11 UEAnt_FSTest-UEConTest
conclusion: noted, approved: 95%, June 16

9.4 Open Rel-12 work items

9.4.1 UE Conformance Test Aspects – Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL [LTE_CA_Rel12_3DL-UEConTest]

RP-151820 Status report for WI: UE Conformance Test Aspects - Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL, rapporteur: Huawei RAN5 WI status report Rel-12 LTE_CA_Rel12_3DL-UEConTest
discussion: MCC: target date change
conclusion: noted, approved: 90%, March 16

RP-151700 RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL (LTE_CA_Rel12_3DL-UEConTest) RAN5 CR Pack Rel-12 LTE_CA_Rel12_3DL-UEConTest
conclusion: approved

RP-151821 Revision of WI: UE Conformance Test Aspects – Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 3DL Huawei WID revised RAN5 Rel-12 LTE_CA_Rel12_3DL-UEConTest
last approved WID: RP-150594; affected spec and completion date are updated to March 2016;
endorsed in R5-155797;
conclusion: approved

9.4.2 UE Conformance Test Aspects – WLAN/3GPP Radio Interworking [UTRA_LTE_WLAN_interw-UEConTest]

RP-151717 Status report of WI UE Conformance Test Aspects – WLAN/3GPP Radio Interworking; rapporteur: Intel RAN5 WI status report Rel-12 UTRA_LTE_WLAN_interw-UEConTest
discussion: MCC: target date change
conclusion: noted, approved: 90%, March 16

RP-151701 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - WLAN/3GPP Radio Interworking (UTRA_LTE_WLAN_interw-UEConTest) RAN5 CR Pack Rel-12 UTRA_LTE_WLAN_interw-UEConTest
conclusion: approved

9.4.3 UE Conformance Test Aspects - DCH Enhancements for UMTS [UTRA_DCHenh-UEConTest]

RP-151837 Status report of WI UE Conformance Test Aspects - DCH Enhancements for UMTS; rapporteur: Qualcomm RAN5 WI status report Rel-12 UTRA_DCHenh-UEConTest
conclusion: noted, approved: 65%, June 16

RP-151702 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - DCH Enhancements for UMTS (UTRA_DCHenh-UEConTest) RAN5 CR Pack Rel-12 UTRA_DCHenh-UEConTest
conclusion: approved

9.4.4 UE Conformance Test Aspects - L-band for Supplemental Downlink in E-UTRA and UTRA [LTE_UTRA_SDL_BandL-UEConTest]

Samsung Exhibit 1025, Page 945 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151771 Status report for WI Conformance Test Aspects – L-band for Supplemental Downlink in E-UTRA and UTRA (band 32/XXXII); rapporteur: Ericsson RAN5 WI status report Rel-12 LTE_UTRA_SDL_BandL-UEConTest
conclusion: noted, approved: 100%, Dec.15; WI completed

RP-151772 TR 36.905 v2.0.0 on LTE Derivation of test points for Radio Transmission and Reception conformance test cases; for 1-step approval Ericsson draft TR 36.905 RAN5 Rel-12 LTE_UTRA_SDL_BandL-UEConTest
RAN5 TR 36.905 submitted for 1-step approval
conclusion: TR 36.905 is approved as v12.0.0

9.4.5 UE Conformance Test Aspects - Codec for Enhanced Voice Services (EVS)
[EVS_codec-UEConTest]

RP-151773 Status report for WI UE Conformance Test Aspects - Codec for Enhanced Voice Services (EVS); rapporteur: Ericsson RAN5 WI status report Rel-12 EVS_codec-UEConTest
discussion: MCC: target date change
conclusion: noted, approved: 95%, March 16

RP-151703 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Codec for Enhanced Voice Services (EVS) (EVS_codec-UEConTest) RAN5 CR Pack Rel-12 EVS_codec-UEConTest
conclusion: approved

9.4.6 UE Conformance Test Aspects - Further DL MIMO Enhancement for LTE-Advanced
[LTE_eDL_MIMO_enh-UEConTest]

RP-151675 Status report for WI: UE Conformance Test Aspects – Further DL MIMO Enhancement for LTE-Advanced; rapporteur: ZTE RAN5 WI status report Rel-12 LTE_eDL_MIMO_enh-Perf
conclusion: noted, approved: 75%, March 16

RP-151704 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Further DL MIMO Enhancement for LTE-Advanced (LTE_eDL_MIMO_enh-UEConTest) RAN5 CR Pack Rel-12 LTE_eDL_MIMO_enh-UEConTest
conclusion: approved

9.4.7 UE Conformance Test Aspects – LTE Device-to-Device Proximity Services
[LTE_D2D_Prox-UEConTest]

RP-151840 Status report of WI UE Conformance Test Aspects – Device-to-Device Proximity Services; rapporteur: Qualcomm RAN5 WI status report Rel-12 LTE_D2D_Prox-UEConTest
conclusion: noted, approved: 45%, June 16

RP-151705 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – UE Conformance Test Aspects – LTE Device-to-Device Proximity Services (LTE_D2D_PROX-UEConTest) RAN5 CR Pack Rel-12 LTE_D2D_Prox-UEConTest
conclusion: approved

RP-151848 Revised WID: UE Conformance Test Aspects – LTE Device to Device Proximity Services Qualcomm Incorporated WID revised RAN5 Rel-12 LTE_D2D_Prox-UEConTest
conclusion: withdrawn, see RP-151849 instead

RP-151849 Revised WID: UE Conformance Test Aspects – LTE Device to Device Proximity Services Qualcomm Incorporated WID revised RAN5 Rel-12 LTE_D2D_Prox-UEConTest
last approved WID: RP-150131
conclusion: approved

9.4.8 UE Conformance Test Aspects - Low cost & enhanced coverage MTC UE for LTE
[LC_MTC_LTE-UEConTest]

RP-151774 Status report for WI UE Conformance Test Aspects - Low cost & enhanced coverage MTC UE for LTE; rapporteur: Ericsson RAN5 WI status report Rel-12 LC_MTC_LTE-UEConTest
discussion: MCC: target date change
conclusion: noted, approved: 70%, March 16

Samsung Exhibit 1025, Page 946 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151706 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Low cost & enhanced coverage MTC UE for LTE (LC_MTC_LTE-UEConTest) RAN5 CR Pack Rel-12 LC_MTC_LTE-UEConTest
conclusion: approved

9.4.9 UE Conformance Test Aspects - Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL [LTE_CA_Rel12_2UL-UEConTest]

RP-151775 Status report for WI UE Conformance Test Aspects - Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL; rapporteur: Ericsson RAN5 WI status report Rel-12 LTE_CA_Rel12_2UL-UEConTest
discussion: MCC: target date change
conclusion: noted, approved: 70%, March 16

RP-151707 RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL (LTE_CA_Rel12_2UL-UEConTest) RAN5 CR Pack Rel-12 LTE_CA_Rel12_2UL-UEConTest
conclusion: approved

RP-151776 Revision of WI UE Conformance Test Aspects - Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL Ericsson WID revised RAN5 Rel-12 LTE_CA_Rel12_2UL-UEConTest
last approved WID: RP-150136
conclusion: approved

9.4.10 UE Conformance Test Aspects - Performance Requirements of Interference Cancellation and Suppression Receiver for SU-MIMO for E-UTRA [LTE_SUMIMO_RX-UEConTest]

RP-151818 Status report for WI: UE Conformance Test Aspects - Performance Requirements of Interference Cancellation and Suppression Receiver for SU-MIMO for E-UTRA, rapporteur: Huawei RAN5 WI status report Rel-12 LTE_SUMIMO_RX-UEConTest
discussion: MCC: WI is completed 3 months earlier
conclusion: noted, approved: 100%, Dec.15; WI is completed

RP-151708 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Performance Requirements of Interference Cancellation and Suppression Receiver for SU-MIMO for E-UTRA (LTE_SUMIMO_RX-UEConTest)RAN5 CR Pack Rel-12 LTE_SUMIMO_RX-UEConTest
conclusion: approved

RP-151819 Revision of WI: UE Conformance Test Aspects – Performance Requirements of Interference Cancellation and Suppression Receiver for SU-MIMO for E-UTRA Huawei WID revised RAN5 Rel-12 LTE_SUMIMO_RX-UEConTest
last approved WID: RP-151463; affected spec and completion date are updated; endorsed in R5-155796
conclusion: approved

9.4.11 UE Conformance Test Aspects - E-UTRA Small cell enhancements - Physical layer aspects [LTE_SC_enh_L1-UEConTest]

RP-151822 Status report for WI: UE Conformance Test Aspects - E-UTRA small cell enhancements - Physical layer aspects, rapporteur: Huawei RAN5 WI status report Rel-12 LTE_SC_enh_L1-UEConTest
conclusion: noted, approved: 40%, Dec.16

RP-151709 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - E-UTRA Small cell enhancements - Physical layer aspects (LTE_SC_enh_L1-UEConTest) RAN5 CR Pack Rel-12 LTE_SC_enh_L1-UEConTest
conclusion: approved

9.4.12 UE Conformance Test Aspects - Dual connectivity for LTE [LTE_SC_enh_dualC-UEConTest]

Samsung Exhibit 1025, Page 947 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151777 Status report for WI UE Conformance Test Aspects - Dual connectivity for LTE; rapporteur: Ericsson RAN5 WI status report Rel-12 LTE_SC_enh_dualC-UEConTest
discussion: MCC: target date change
conclusion: noted, approved: 15%, June 16

RP-151710 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Dual connectivity for LTE (LTE_SC_enh_dualC-UEConTest) RAN5 CR Pack Rel-12 LTE_SC_enh_dualC-UEConTest
conclusion: approved

9.4.13 UE Conformance Test Aspects - UE Power Consumptions Optimizations (UEPCOP)
[**New WI:** MTCe-UEPCOP-UEConTest]

RP-151778 Status report for WI UE Conformance Test Aspects – UE Power Consumptions Optimizations (UEPCOP); rapporteur: Ericsson RAN5 WI status report Rel-12 MTCe-UEPCOP-UEConTest
conclusion: noted, approved: 25%, March 16

RP-151711 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - UE Power Consumptions Optimizations (UEPCOP) (MTCe-UEPCOP-UEConTest) RAN5 CR Pack Rel-12 MTCe-UEPCOP-UEConTest
conclusion: approved

9.4.14 UE Conformance Test Aspects: Network-Assisted Interference Cancellation and Suppression for LTE [**New WI:** LTE_NAICS-UEConTest]

RP-151918 Status report for WI UE Conformance Test Aspects - Network-Assisted Interference Cancellation and Suppression for LTE; rapporteur: MediaTek RAN5 WI status report Rel-12 LTE_NAICS-UEConTest
conclusion: noted, approved: 35%, June 16

RP-151712 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects: Network-Assisted Interference Cancellation and Suppression for LTE (LTE_NAICS-UEConTest) RAN5 CR Pack Rel-12 LTE_NAICS-UEConTest
conclusion: approved

RP-151945 Revised Work Item Description: UE Conformance Test Aspects - Network-Assisted Interference Cancellation and Suppression for LTE MediaTek Inc. WID revised RAN5 Rel-12 LTE_NAICS-UEConTest
last approved WID: RP-151298
discussion: RAN chair: TR changed, suppporters added
conclusion: approved

9.4.15 UE Conformance Test Aspects - Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation [**New WI:** LTE_TDD_eIMTA-UEConTest]

RP-151834 Status Report for WI: UE Conformance Test Aspects - Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation RAN5 WI status report Rel-12 LTE_TDD_eIMTA-UEConTest
conclusion: noted, approved: 5%, March 17

9.4.16 Conformance Test Aspects: Small Technical Enhancements and Improvements for Rel-12 [TEI12_Test]

RP-151713 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-12 Conformance Testing (TEI12_Test) RAN5 CR Pack Rel-12 TEI12_Test
conclusion: approved

9.5 Open Rel-13 work items

9.5.1 UE Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom [LTE_UTRA_TRP_TRS-UEConTest]

RP-151674 Status report for WI: UE Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom; rapporteur: ZTE RAN5 WI status report Rel-13 LTE_UTRA_TRP_TRS-UEConTest

Samsung Exhibit 1025, Page 948 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: noted, approved: 75%, June 16

9.5.2 UE Conformance Test Aspects - Core Requirements for Uplink 64QAM for E-UTRA [LTE_UL64QAM-UEConTest]

RP-151759 Status report for WI: UE Conformance Test Aspects - Core Requirements for Uplink 64QAM for E-UTRA; rapporteur: China Mobile Com. Corporation RAN5 WI status report Rel-13 LTE_UL64QAM-UEConTest
conclusion: noted, approved: 100%, Dec.15; WI is completed

RP-151714 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Core Requirements for Uplink 64QAM for E-UTRA (LTE_UL64QAM-UEConTest) RAN5 CR Pack Rel-13 LTE_UL64QAM-UEConTest
conclusion: approved
Note: RP-151714 does not include the RAN5 agreed CR R5-156188 (CR2154 rev 2) but its previous version R5-156072 (CR2154 rev 1). The difference between R5-156072 (which was for REL-12) and R5-156188 (which is for REL-13 but based on REL-12 spec) is just the REL on the CR cover.
But the CR implementation and the CR database used R5-156188, i.e. the changes were introduced in REL-13 of of 36.521-1 as requested by the RAN5.

9.5.3 Conformance Test Aspects: Small Technical Enhancements and Improvements for Rel-13 [TEI13_Test]

No contributions

Samsung Exhibit 1025, Page 949 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10 Work Items with target Rel-12 (not related to conformance testing)

10.1 Closed UTRA only related WIs

RAN2:

RP-152051 RAN2 agreed CRs on closed REL-12 UTRA related Work Items RAN2 CR Pack Rel-12 EDCH_enh-Core, UTRA_SIBenh-Core
conclusion: approved

10.2 Closed UTRA & LTE related WIs

RAN2:

RP-152052 RAN2 agreed CRs on Corrections to WLAN/3GPP radio interworking RAN2 CR Pack 25.331 Rel-12 UTRA_LTE_WLAN_interw-Core
conclusion: approved

10.3 Closed LTE only related WIs

RAN1:

RP-152036 CRs to modify max TA for dual connectivity RAN1 CR Pack Rel-12 LTE_SC_enh_dualC-Core
conclusion: approved

RP-152037 CRs to 36.213 for corrections on eIMTA RAN1 CR Pack Rel-12 LTE_TDD_eIMTA-Core
conclusion: approved

RAN2:

RP-152053 RAN2 agreed CRs on closed REL-12 LTE related Work Items RAN2 CR Pack Rel-12 HetNet_eMOB_LTE-Core, LTE_CA_TDD_FDD-Core, LTE_SC_enh_dualC-Core, LTE_SC_enh_L1-Core, LTE_D2D_Prox-Core, SCM_LTE-Core, LTE_NAICS-Core
conclusion: approved
Note: R2-157178 has the wrong CR number CR1313r1 on the CR cover, the correct CR number is CR0313r1.

RP-152054 RAN2 endorsed CR on Support of 256QAM for UE categories 6, 7, 9 and 10 RAN2 CR Pack 36.306 0302 2 F Rel-12 TEI12, LTE_SC_enh_L1-Core
discussion: MCC: unacceptable CR cover sheet, technically correct but no consensus on the motivation; company CR in RP-151830 to replace RP-152054
discussion: RAN chair: will come back on this with UE capability discussion
conclusion: revised in RP-151830

RP-151830 Support of 256QAM for UE categories 6,7,9 and 10 Intel Corporation CR 36.306 0302 3 C Rel-12 TEI12, LTE_SC_enh_L1-Core
company CR; replacing endorsed R2-157116 in RP-152054 which had a CR cover sheet problem
conclusion: not pursued

RAN4:

RP-152133 RAN4 CRs to Rel-12 Closed LTE only related Wis RAN4 CR Pack Rel-12 LC_MTC_LTE-Core, LC_MTC_LTE-Perf, LTE_CA_2UL-A1-Core, LTE_CA_2UL-A4-Core, LTE_CA_B1_B3_B40-Perf, LTE_CA_B1_B3_B5-Perf, LTE_CA_B1_B3-Perf, LTE_CA_B1_B41_B41-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B18_B28-Core, LTE_CA_B21_B42_B42-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B39_B39_B41-Perf, LTE_CA_B39_B41_B41-Perf, LTE_CA_B39_B41-Core, LTE_CA_B4_B4_B5-Core, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_Mult-Perf, LTE_CA_NC_B41_3DL, LTE_CA_TDD_FDD-Perf, LTE_D2D_Prox-Core, LTE_eDL_MIMO_enh-Perf, LTE_NAICS, LTE_SC_enh_dualC-Core, LTE_SC_enh_dualC-Perf, LTE_SC_enh_L1-Perf

Samsung Exhibit 1025, Page 950 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

10.4 Open LTE only related WIs (non-spectrum related)

10.4.1 Perf. part: LTE Device to Device Proximity Services [LTE_D2D_Prox-Perf]

Core part completed in March 15

RP-151797 Status report for WI Perf Part: LTE Device to Device Proximity Services; rapporteur: Qualcomm RAN4 WI status report Rel-12 LTE_D2D_Prox-Perf
conclusion: noted, approved: 100%, Dec.15; WI is completed

RP-152135 RAN4 CRs to LTE Device to Device Proximity Services - Perf Part RAN4 CR Pack Rel-12 LTE_D2D_Prox-Perf
conclusion: approved

10.5 Small Technical Enhancements and Improvements for Rel-12 [TEI12]

RAN1:

RP-152038 CRs for Rel-12 corrections (RI bit widths, TM9/10) RAN1 CR Pack Rel-12 TEI12
CR R1-157527 is linked to CRs in RP-152049 (see AI 8.2.5)
conclusion: approved

RAN2:

RP-152055 RAN2 agreed CRs on Small Technical Enhancements and Improvements for Rel-12 RAN2 CR Pack Rel-12 TEI12
conclusion: approved

establishment cause:

RP-152056 RAN2 endorsed CR on Addition of establishment cause for mobile-originating VoLTE calls and network indication in SIB2 RAN2 CR Pack 36.331 1931 2 C Rel-12 TEI12
discusssion: MCC: No consensus for two alternatives RP-152056 & RP-152057 so RAN decision needed
RAN2 chair: concern was that legacy Node B may have problems with extra cause value; Nokia Networks achieved a way forward
Nokia Networks: is in RP-152225
conclusion: approved

RP-152057 RAN2 endorsed CR on Addition of establishment cause for mobile-originating VoLTE calls without network indication in SIB2 RAN2 CR Pack 36.331 1989 - C Rel-12 TEI12
discussion: MCC: No consensus for two alternatives RP-152056 & RP-152057 so RAN decision needed; see also related company CR in RP-152174
conclusion: not pursued

RP-151929 Handling of Unknown Establishment Cause NTT DOCOMO discussion Rel-12 TEI12
moved from AI 8.2.2 to AI 10.5
Observation 1: The common understanding is that the NW will not reject a request with unknown establishment cause.
Observation 2: The common understanding taken in RAN#51 is not completely understood by all the NW vendors, due e.g., to lack of specification.
Proposal 1: To agree on specifying a general guidance and clarification for the eNB behaviour receiving unknown Establishment Cause
Proposal 2: To agree the RAN2 endorsed CR without SIB + CR on clarification of eNB behaviour receiving uknown Establishment Cause
conclusion: noted

RP-151936 CR on unknown Establishment Cause handling NTT DOCOMO CR36.331 1999 - F Rel-12 TEI12

Samsung Exhibit 1025, Page 951 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

company CR; coming on top of endorsed R2-157182 in RP-152057; no cat.A REL-13 CR since there is not yet a 36.331 REL-13; revised in RP-152174 as RP-151936 has no CR number; compare R2-111704 in RP-110285; moved from AI 8.2.2 to AI 10.5
conclusion: revised in RP-152174 as RP-151936 has no CR number

RP-152174 CR on unknown Establishment Cause handling NTT DOCOMO CR36.331 1999 1 F Rel-12 TEI12
moved from AI 8.2.2 to AI 10.5
conclusion: not pursued

RP-151859 Way forward on new Establishment Cause for VoLTE calls KDDI Corporation discussion Rel-12 TEI12
moved from AI 8.2.2 to AI 10.5;
conclusion: revised in RP-152120

RP-152120 Way forward on new Establishment Cause for VoLTE calls KDDI Corporation discussion Rel-12 TEI12
conclusion: noted

RP-151966 Way forward with new establishment cause for MMTEL voice Nokia Networks discussion Rel-12 TEI12
Discussion on way forward for technically endorsed CRs from RAN2
conclusion: noted

RP-152225 Way forward on VoLTE call establishment cause Nokia Networks discussion Rel-12 TEI12
related to technically endorsed RAN2 CR RP-152056
proposals:
1. Approve the RAN2 technical endorsed CR, RP-152056 (R2-157133).
- I.e. introduce a new establishment cause for MMTEL Voice and network indication in SIB2.
2. Specify a general guidance and clarification for the eNB behaviour receiving unknown establishment cause.
- Ask RAN2 to work on this (including the release from which to introduce the clarification) and provide a CR for RAN#71.

discussion: Deutsche Telekom: why putting burden on UE instead of upgrading network? We have serious concerns about this approach and this shall not be used as an excuse for similar approaches in the future
Vodafone:supports the way forward
KDDI: does not understand reason for new cause and does not want it but could accept it if it the only way to solve it
conclusion: noted, way forward is endorsed

RP-152275 Draft LS on introduction of new establishment cause for mobile-originating calls (to: RAN2, CT1, RAN3; cc: SA2; contact: Nokia Networks) Nokia Networks LSout Rel-12 TEI12
related to way forward RP-152225
conclusion: revised in RP-152295 to provide final version

RP-152295 LS on introduction of new establishment cause for mobile-originating calls (to: RAN2, CT1, RAN3; cc: SA2; contact: Nokia Networks) RAN LSout Rel-12 TEI12
conclusion: approved

RAN3:

RP-152085 RAN3 CRs for TEI12 RAN3 CR Pack Rel-12 TEI12
conclusion: approved

RAN4:

RP-152136 Small Technical Enhancements and Improvements for Rel-12 RAN4 CR Pack Rel-13 TEI12
conclusion: approved

Samsung Exhibit 1025, Page 952 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11 Work Items with target Rel-13 (not related to conformance testing)

11.1 Closed UTRA only related WIs

11.1.1 Multiflow Enhancements for UTRA [HSDPA_MFTX_enh-Core]

RP-152029 CR to clarify definitions and CQI reporting in Multiflow 3F-4C configuration RAN1 CR Pack 25.214 0741 1 F Rel-13 HSDPA_MFTX_enh-Core
conclusion: approved

11.2 Closed UTRA & LTE related WIs

11.2.1 Core part: SON for AAS-based deployments [UTRA_LTE_SON_AAS-Core]

No contributions

11.3 Closed LTE only related WIs (non-spectrum related)

11.3.1 Core part: Enhanced Signalling for Inter-eNB Coordinated Multi-Point (CoMP) for LTE [COMP_LTE_IeNB_sig-Core]

RP-152086 RAN3 CRs for Enhanced Signalling for Inter-eNB Coordinated Multi-Point (CoMP) for LTE RAN3 CR Pack Rel-13 COMP_LTE_IeNB_sig-Core
conclusion: approved

11.3.2 Core part: UE core requirements for uplink 64 QAM [LTE_UL64QAM-Core]

RP-152137 UE core requirements for uplink 64 QAM RAN4 CR Pack Rel-13 LTE_UL64QAM-Core
conclusion: approved

11.4 Closed LTE only related WIs (spectrum related)

11.4.1 Inter-band CA related WIs (2DL/1UL)

RP-151912 TR 36.852-13 v1.0.0, LTE Advanced inter-band Carrier Aggregation (2DL/1UL); Release 13; presented for information Ericsson draft TR 36.852-13 RAN4 Rel-13 LTE_CA_B3_B38-Core
RAN4 TR 36.852-13 is submitted for information;
conclusion: at first intended to be revised in RP-152193 to align with drafting rules;
later it was decided to postpone the revision and to note RP-151912
noted

RP-152193 TR 36.852-13 v1.0.1, LTE Advanced inter-band Carrier Aggregation (2DL/1UL); Release 13; presented for information Ericsson draft TR 36.852-13 RAN4 Rel-13 LTE_CA_B3_B38-Core
RAN4 TR 36.852-13 is submitted for information
conclusion: withdrawn

11.4.1.1 Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 2 and Band 12 [LTE_CA_B2_B12_BWset]

No contributions

11.4.1.2 LTE Advanced inter-band Carrier Aggregation of Band 2 and Band 28 [LTE_CA_B2_B28]

No contributions

11.4.1.3 Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 5 [LTE_CA_B3_B5_BWset]

No contributions

Samsung Exhibit 1025, Page 953 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.1.4 LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 31 [LTE_CA_B3_B31]

No contributions

11.4.1.5 LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 38 [LTE_CA_B3_B38]

No contributions

11.4.1.6 LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 40 [LTE_CA_B3_B40]

No contributions

11.4.1.7 Additional bandwidth combination set 2 for LTE Advanced inter-band Carrier Aggregation of Band 4 and Band 12 [LTE_CA_B4_B12_BWset2]

No contributions

11.4.1.8 LTE Advanced inter-band Carrier Aggregation of Band 4 and Band 28 [LTE_CA_B4_B28]

No contributions

11.4.1.9 Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 5 and Band 7 [LTE_CA_B5_B7_BWset]

No contributions

11.4.1.10 LTE Advanced inter-band Carrier Aggregation of Band 5 and Band 40 [LTE_CA_B5_B40]

No contributions

11.4.1.11 LTE Advanced inter-band Carrier Aggregation of Band 7 and Band 22 [LTE_CA_B7_B22]

No contributions

11.4.1.12 LTE Advanced inter-band Carrier Aggregation of Band 20 and Band 31 [LTE_CA_B20_B31]

No contributions

11.4.1.13 LTE Advanced inter-band Carrier Aggregation of Band 25 and Band 26 [LTE_CA_B25_B26]

No contributions

11.4.2 3 Band Carrier Aggregation (3DL/1UL)

11.4.2.1 LTE Advanced 3 band CA (3DL/1UL) of Band 1, Band 3 and Band 3 [LTE_CA_B1_B3_B3]

No contributions

11.4.2.2 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 3 and Band 28 [LTE_CA_B1_B3_B28]

No contributions

11.4.2.3 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 3 and Band 42 [LTE_CA_B1_B3_B42]

No contributions

11.4.2.4 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 7 and Band 28 [LTE_CA_B1_B7_B28]

No contributions

No contributions

11.4.2.5 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 8 and Band 11 [LTE_CA_B1_B8_B11]

No contributions

Samsung Exhibit 1025, Page 954 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.2.6 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 19 and Band 28 [LTE_CA_B1_B19_B28]

No contributions

11.4.2.7 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 19 and Band 42 [LTE_CA_B1_B19_B42]

No contributions

11.4.2.8 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 21 and Band 42 [LTE_CA_B1_B21_B42]

No contributions

11.4.2.9 LTE Advanced 3 Band CA (3DL/1UL) of Band 2, Band 2 and Band 12 [LTE_CA_B2_B2_B12]

No contributions

11.4.2.10 LTE Advanced 3 Band CA (3DL/1UL) of Band 2, Band 5, and Band 29 [LTE_CA_B2_B5_B29]

No contributions

11.4.2.11 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 3 and Band 5 [LTE_CA_B3_B3_B5]

No contributions

11.4.2.12 LTE Advanced 3 Band CA (3DL/1UL) for Band 3, Band 3 and Band 8 [LTE_CA_B3_B3_B8]

No contributions

11.4.2.13 Additional bandwidth combination set for LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 7 and Band 7 [LTE_CA_B3_B7_B7_BWset]

No contributions

11.4.2.14 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 7 and Band 8 [LTE_CA_B3_B7_B8]

No contributions

11.4.2.15 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 7 and Band 28 [LTE_CA_B3_B7_B28]

No contributions

11.4.2.16 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 19 and Band 42 [LTE_CA_B3_B19_B42]

No contributions

11.4.2.17 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 40 and Band 40 [LTE_CA_B3_B40_B40-Core]

No contributions

11.4.2.18 LTE Advanced 3 Band CA (3DL/1UL) of Band 7, Band 7 and Band 28 [LTE_CA_B7_B7_B28]

No contributions

11.4.2.19 LTE Advanced 3 Band CA (3DL/1UL) of Band 7, Band 40 and Band 40 [LTE_CA_B7_B40_B40]

No contributions

11.4.2.20 LTE Advanced 3 Band CA (3DL/1UL) of Band 8, Band 41 and Band 41 [LTE_CA_B8_B41_B41]

Samsung Exhibit 1025, Page 955 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-152138 LTE Advanced 3 Band (3DL/1UL) of Band 8, Band 41 and Band 41 RAN4 CR Pack Rel-13 LTE_CA_B8_B41_B41-Core
conclusion: approved

11.4.2.21 LTE Advanced 3 Band CA (3DL/1UL) of Band 19, Band 21 and Band 42 [LTE_CA_B19_B21_B42]

No contributions

11.4.2.22 LTE Advanced 3 Band CA (3DL/1UL) for Band 20, Band 42 and Band 42 [LTE_CA_B20_B42_B42]

No contributions

11.4.2.23 LTE Advanced 3 Band CA (3DL/1UL) of Band 21, Band 42 and Band 42 [LTE_CA_B21_B42_B42]

No contributions

11.4.2.24 LTE Advanced 3 Band CA (3DL/1UL) of Band 38, Band 40 and Band 40 [LTE_CA_B38_B40_B40]

No contributions

11.4.2.25 LTE Advanced 3 Band CA (3DL/1UL) of Band 41, Band 42 and Band 42 [LTE_CA_B41_B42_B42]

No contributions

11.4.3 Intra-band CA related WIs (non-contiguous 2DL)

11.4.3.1 Additional bandwidth combination set for LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 4 [LTE_CA_NC_B4_BWset]

11.4.4 Intra-band CA related WIs (contiguous 3DL)

11.4.4.1 LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 3DL [LTE_CA_C_B42_3DL]

RP-152139 LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 3DL RAN4 CR Pack Rel-13 LTE_CA_C_B42_3DL-Core
conclusion: approved

11.4.5 Intra-band CA related WIs (non-contiguous 3DL)

11.4.5.1 LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 42 for 3DL [LTE_CA_NC_B42_3DL]

No contributions

11.5 Open UTRA related WIs (spectrum & non-spectrum related)

RP-152140 Open UTRA related WIs RAN4 CR Pack Rel-13 HSUPA_DB_MC-Core, DC_HSUPA_CS-Core
compare AI 11.5.1 and AI 11.5.9
conclusion: approved

11.5.1 HSPA Dual-Band UL carrier aggregation [HSUPA_DB_MC]

RP-151844 Status report of WI HSPA Dual-Band UL carrier aggregation; rapporteur: Qualcomm RAN4 WI status report Rel-13 HSUPA_DB_MC
conclusion: noted, approved: Core: 100%, Dec.15; Perf.: 90%, March16; Core part WI is completed

RP-152030 Introduction of HSPA Dual-Band UL carrier aggregation RAN1 CR Pack 25.213 0121 1 B Rel-13 HSUPA_DB_MC-Core
conclusion: approved

RP-152058 RAN2 agreed CRs on Introduction of DB-DC-HSUPA RAN2 CR Pack Rel-13 HSUPA_DB_MC-Core
conclusion: approved

Samsung Exhibit 1025, Page 956 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-152087 RAN3 CRs for Introduction of Dual-Band Dual-Cell HSUPA Carrier Aggregation RAN3 CR Pack Rel-13 HSUPA_DB_MC-Core
conclusion: approved

RP-152141 HSPA Dual-Band UL carrier aggregation RAN4 CR Pack Rel-13 HSUPA_DB_MC-Core
note: For 25.101 CR see RP-152140
conclusion: approved

RP-151852 Revised WID - HSPA Dual-Band UL carrier aggregation; rapporteur: Qualcomm Qualcomm Incorporated WID revised RAN4 Rel-13 HSUPA_DB_MC
last approved WID: RP-150129
conclusion: approved

11.5.2 Core part: Support of EVS over UTRAN CS [EVSoCS_UTRAN-Core]

RP-151842 Status report of WI Core part: Support of EVS over UTRAN CS; rapporteur: Qualcomm RAN2 WI status report Rel-13 EVSoCS_UTRAN-Core
conclusion: noted, approved: 100%, Dec.15; WI is completed

RP-152059 RAN2 agreed CR on Introduction of EVS CS RABs RAN2 CR Pack 25.9930119 1 B Rel-13 EVSoCS_UTRAN-Core
conclusion: approved

11.5.3 Core part: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network [CSPS_Coord-UTRA-Core]

RP-151995 Status report of WI Core part: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network; rapporteur: Ericsson RAN3 WI status report Rel-13 CSPS_Coord-UTRA-Core
conclusion: noted, approved: 100%, Dec.15; WI is completed

RP-152088 RAN3 CRs for Introduction of improvements to CS/PS coordination in UTRAN Shared Network RAN3 CR Pack Rel-13 CSPS_Coord-UTRA-Core
conclusion: approved

11.5.4 Downlink TPC Enhancements for UMTS [UTRA_EDL_TPC]

RP-151802 Status report for WI: Downlink TPC enhancements for UMTS, rapporteur: Huawei RAN1 WI status report Rel-13 UTRA_EDL_TPC
discussion: MCC: WI exception request in RP-151803
conclusion: noted, approved: Core: 100%, Dec.15; Perf.: 90%, March16; Core part WI is completed

RP-151803 Work item exception forDownlink TPC enhancements for UMTS - core part Huawei WI exception request RAN1 Rel-13 UTRA_EDL_TPC-Core
need for an exception depends on RAN2 email discussion
discussion: RAN2 chair: RAN2 email discussion concluded
conclusion: withdrawn

RP-152039 Introduction of downlink TPC enhancements for UMTS RAN1 CR Pack 25.214 0743 1 B Rel-13 UTRA_EDL_TPC
discussion: MCC: WI exception request
conclusion: approved

RP-152060 RAN2 agreed CRs on the introduction of Downlink TPC enhancements for UMTS RAN2 CR Pack Rel-13 UTRA_EDL_TPC-Core
discussion: MCC: WI exception request
conclusion: approved

RP-152089 RAN3 CRs for Introduction of TPC enhancements RAN3 CR Pack Rel-13 UTRA_EDL_TPC-Core
discussion: MCC: WI exception request
conclusion: approved

RP-152142 Downlink TPC Enhancements for UMTS RAN4 CR Pack Rel-13 UTRA_EDL_TPC-Perf

Samsung Exhibit 1025, Page 957 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

discussion: MCC: WI exception request
conclusion: approved

RP-151880 Revision of WI: Downlink TPC enhancements for UMTS, rapporteur: Huawei Huawei, HiSilicon WID revised RAN1 Rel-13 UTRA_EDL_TPC
last approved WID: RP-151044; addition of UID
conclusion: approved

11.5.5 Core part: L2/L3 Downlink enhancements for UMTS [UTRA_EDL_L23-Core]

RP-151805 Status report for WI: Core part: L2/L3 Downlink enhancements for UMTS, rapporteur: Huawei RAN2 WI status report Rel-13 UTRA_EDL_L23-Core
conclusion: noted, approved: 100%, Dec.15; WI completed

RAN2:

RP-152061 RAN2 agreed CRs on the introduction of L2/L3 Downlink enhancements for UMTS RAN2 CR Pack Rel-13 UTRA_EDL_L23-Core
conclusion: approved

RP-151825 Introduction of L2 and L3 Downlink enhancements for UMTS in TS 25.300 Huawei, HiSilicon, Nokia Networks CR 25.300 0034 - B Rel-13 UTRA_EDL_L23-Core
company CR; finally not needed as endorsed CR is provided in R2-156999 in RP-152062 to RAN #70 via MCC
conclusion: withdrawn

RP-151826 Introduction of L2 and L3 Downlink enhancements for UMTS in TS 25.331 Huawei, HiSilicon, Nokia Networks CR 25.331 5825 - B Rel-13 UTRA_EDL_L23-Core
company CR; finally not needed as endorsed CR is provided in R2-156998 in RP-152062 to RAN #70 via MCC
conclusion: withdrawn

RP-152062 RAN2 endorsed CRs on Introduction of enhanced state transition RAN2 CR Pack Rel-13 UTRA_EDL_L23-Core
discussion: MCC: One company has a concern to agree so RAN decision needed; alternative to R2-156998 of RP-152062 in RP-151992
conclusion: approved

RP-151988 Introduction of Autonomous State Transition BlackBerry UK Limited discussion 25.331 Rel-13 UTRA_EDL_L23-Core
Discussion related to company CR for Autonomous State Transition as alternative to 25.331 CR5812 rev1, WI Code UTRA_EDL_L23-Core
Proposal: RAN#70 approved the enhanced retrievable configuration proposal captured in RP-151992 as the solution for implementation of the autonomous state transition feature.
discussion: RAN chair: support for the way forward?
conclusion: noted

RP-151992 Introduction of Autonomous State Transmission BlackBerry UK Limited CR 25.331 5821 2 B Rel-13 UTRA_EDL_L23-Core
company contribution; revision of R2-156869 which was not treated in RAN2 #92; alternative to RAN2 endorsed R2-156998 of RP-152062
conclusion: withdrawn

RAN3:

RP-152090 RAN3 CRs for L2/L3 Downlink enhancements for UMTS RAN3 CR Pack Rel-13 UTRA_EDL_L23-Core
conclusion: approved

WID:

RP-152184 Revised WID: Core part: L2/L3 Downlink enhancements for UMTS Huawei WID revised RAN2 Rel-13 UTRA_EDL_L23-Core
last approved WID: RP-151249; reducing the scope to complete WI by RAN #70
discussion: Huawei: one objective was removed

Samsung Exhibit 1025, Page 958 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

11.5.6 Core part: RAN sharing enhancements for UMTS [RSE_UTRA_GUSH-Core]

RP-151806 Status report for WI: Core part: RAN sharing enhancements for UMTS, rapporteur: Huawei RAN3 WI status report Rel-13 RSE_UTRA_GUSH-Core
conclusion: noted, approved: 100%, Dec.15; WI is completed

RP-152091 RAN3 CRs for RAN sharing enhancements for UMTS RAN3 CR Pack Rel-13 RSE_UTRA_GUSH-Core
conclusion: approved

11.5.7 Core part: Power saving enhancements for UMTS [UTRA_SDATA_POWSAV-Core]

RP-151997 Status report of WI Core part: Power Saving Enhancements for UMTS; rapporteur: Ericsson RAN2 WI status report Rel-13 UTRA_SDATA_POWSAV-Core
conclusion: noted, approved: 100%, Dec.15; Core part WI is completed

RP-152063 RAN2 agreed CRs on Introduction of extended DRX in Idle mode RAN2 CR Pack Rel-13 UTRA_SDATA_POWSAV-Core
conclusion: approved

RP-152094 RAN3 CR for Introduction of Power Saving enhancements for UMTS RAN3 CR Pack 25.413 1304 3 B Rel-13 UTRA_SDATA_POWSAV-Core
moved from AI 11.5.9 to AI 11.5.7
conclusion: approved

RP-152143 Power saving enhancements for UMTS - Core Part RAN4 CR Pack Rel-13 UTRA_SDATA_POWSAV-Core
conclusion: approved

RP-151998 Revision of WI Power Saving Enhancements for UMTS Ericsson WID revised RAN2 Rel-13 UTRA_SDATA_POWSAV-Core
last approved WID: RP-151292; note: This revised WID introduces a new Perf. part WI for UTRA only (led by RAN4): UTRA_SDATA_POWSAV-Perf
conclusion: approved; **NEW Perf. part WI is introduced**

11.5.8 Core part: Network-Assisted Interference Cancellation and Suppression for UMTS
[**New WI**: UTRA_NAICS-Core]

RP-151801 Status report for WI: Core part: Network-Assisted Interference Cancellation and Suppression for UMTS, rapporteur: Huawei RAN1 WI status report Rel-13 UTRA_NAICS-Core
conclusion: noted, approved: 100%, Dec.15; WI is completed

RP-152064 RAN2 agreed CR on Introduction of NAICS for UMTS RAN2 CR Pack 25.300 0032 - B Rel-13 UTRA_NAICS-Core
conclusion: approved

RP-152092 RAN3 CRs for Introduction of NAICS RAN3 CR Pack Rel-13 UTRA_NAICS-Core
moved from AI 11.5.7 to AI 11.5.8
conclusion: approved

RP-151879 Revision of WI: Network-Assisted Interference Cancellation and Suppression for UMTS, rapporteur: Huawei Huawei, HiSilicon WID revised RAN1 Rel-13 UTRA_NAICS-Core
last approved WID: RP-151577; addition of UID
conclusion: approved

11.5.9 Core part: Dual Carrier HSUPA Enhancements for UTRAN CS
[**New WI**: DC_HSUPA_CS-Core]

RP-151779 Status report of WI: Core part: Dual Carrier HSUPA Enhancements for UTRAN CS; rapporteur: Nokia Networks RAN2 WI status report Rel-13 DC_HSUPA_CS-Core
conclusion: noted, approved: 100%, Dec.15; WI is completed

Samsung Exhibit 1025, Page 959 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-152023 CRs to 25.211 & 25.213 introducing Dual Carrier HSUPA enhancements for UTRAN CS RAN1 CR Pack Rel-13 DC_HSUPA_CS-Core
conclusion: approved

RP-152065 RAN2 agreed CRs on Introduction of Dual Carrier HSUPA enhancements for UTRAN CS RAN2 CR Pack Rel-13 DC_HSUPA_CS-Core
conclusion: approved

RP-152093 RAN3 CRs for Introduction of Dual Carrier/Dual Band HSUPA operation with DPDCH channel feature RAN3 CR Pack Rel-13 DC_HSUPA_CS-Core moved from AI 11.5.8 to AI 11.5.9
conclusion: approved

RP-152144 Dual Carrier HSUPA Enhancements for UTRAN CS - Core part RAN4 CR Pack Rel-13 DC_HSUPA_CS-Core note: For 25.101 CR see RP-152140
conclusion: approved

RP-151780 Revision of WI: Core part: Dual Carrier HSUPA Enhancements for UTRAN CS Nokia Networks WID revised RAN2 Rel-13 DC_HSUPA_CS-Core
last approved WID: RP-151607
conclusion: approved

11.6 Open UTRA & LTE related WIs (non-spectrum related)

11.6.1 Core part: LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Requirements [LTE_UTRA_TRP_TRS-Core] (WI was shifted from REL-12 to REL-13)

RP-151913 Status report of WI Core part: LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Requirements; rapporteur: Nokia Networks RAN4 WI status report Rel-13 LTE_UTRA_TRP_TRS-Core
discussion: Sony: there is a proposed WI extension by a quarter (RP-151915)
MCC: WI exception request
conclusion: noted, approved: 50%, March 16

RP-151915 Work item exception for LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Requirements Nokia Networks WI exception request RAN4 Rel-13 LTE_UTRA_TRP_TRS-Core
discussion: Sony: WI was going on for 3 years, is 50% complete, exception sheet is extending for 3 months; suggests to stop it now
Vodafone: really stopping it or we need more time?
Sony: we should
Orange: proposal from operators and proposal from vendors and no consensus; there is an input from GSMA and we could consider 3 months to solve this
Vodafone: we discussed this input already so this will not change it
RAN chair: we will verify this at RAN #71 and grant a 3 months exception
conclusion: approved

RP-151917 Revised WID: LTE UE TRP and TRS and UTRA Hand Phantom related UE TRP and TRS Requirements Nokia Networks WID revised RAN4 Rel-13 LTE_UTRA_TRP_TRS-Core
last approved WID: RP-141966; to extend completion with one RAN cycle; MCC: 50% complete and no progress in last quarter, realistic?
conclusion: approved?

11.6.2 Base Station (BS) RF requirements for Active Antenna System (AAS) [AAS_BS_LTE_UTRA] (WIs were shifted from REL-12 to REL-13)

RP-151809 Status report for WI: Base Station (BS) RF requirements for Active Antenna System (AAS), rapporteur: Huawei RAN4 WI status report Rel-13 AAS_BS_LTE_UTRA
discussion: MCC: WI exception request
conclusion: noted, approved:Core: 98%, March 16; Perf.: 20%, June 16

RP-151810 Exception request for WI: Base Station (BS) RF requirements for Active Antenna System (AAS), rapporteur: HuaweiHuawei WI exception request RAN4 Rel-13 AAS_BS_LTE_UTRA-Core

Samsung Exhibit 1025, Page 960 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

RP-151811 Revision of WI: Station (BS) RF requirements for Active Antenna System (AAS), rapporteur: Huawei Huawei WID revised RAN4 Rel-13 AAS_BS_LTE_UTRA last approved WID: RP-142235; revised to add EMC aspects;
conclusion: revised in RP-152119

RP-152119 Revision of WI: Station (BS) RF requirements for Active Antenna System (AAS), rapporteur: Huawei Huawei WID revised RAN4 Rel-13 AAS_BS_LTE_UTRA
last approved WID: RP-142235; revised to add EMC aspects;
conclusion: approved

11.6.3 Core part: Radiated requirements for the verification of multi-antenna reception performance of UEs [UTRA_LTE_MIMO_OTA-Core]

RP-151656 LS on Announcing the Publication of GSMA TS.24 V.3.0 – Operator Acceptance Values for Device Antenna Performance
(GSMA_TSG_AP_147_LS; to: RAN, RAN4, RAN5, GCF - Steering Group, CAG, PAG, PTCRB, CTIA, EU-TCAM, EU Radio Spectrum Committee, ETSI MSG, ETSI ERM, Digital Europe, MMF, ANEC; cc: GSMA PSMC, GSMA Networks Group , GSMA Device Security Group, GSMA N2020; contact: Orange) GSMA TSG AP
LS inRel-13 LTE_UTRA_TRP_TRS-Core, UTRA_LTE_MIMO_OTA-Core
RAN action requested
conclusion: noted, no LS answer

RP-151667 LS regarding the CTIA MIMO OTA Test Plan Roadmap
(CTIA_LS_151110; to: RAN4, RAN5; cc: RAN; contact: CTIA MOSG Co-Chair (Verizon)) CTIA MIMO OTA Sub-Group
LS in Rel-13 LTE_UTRA_TRP_TRS-Core, UTRA_LTE_MIMO_OTA-Core
CTIA = Cellular Telecommunications & Internet Association; no RAN action requested
presented by Spirent Communications
conclusion: noted, no LS answer

RP-151869 Status report of WI Core Part: Radiated requirements for the verification of multi-antenna reception performance of UEs; rapporteur: Intel Corporation RAN4 WI status report Rel-13 UTRA_LTE_MIMO_OTA-Core
conclusion: revised in RP-152216

RP-152216 Status report of WI Core Part: Radiated requirements for the verification of multi-antenna reception performance of UEs; rapporteur: Intel Corporation RAN4 WI status report Rel-13 UTRA_LTE_MIMO_OTA-Core
discussion: MCC: late submission, WI exception request
Intel: time budget updated
conclusion: noted, approved: 30%,, March 16

RP-151870 Work item exception for Core Part: Radiated requirements for the verification of multi-antenna reception performance of Ues Intel Corporation WI exception request RAN4 Rel-13 UTRA_LTE_MIMO_OTA-Core
discussion: RAN4 chair (Samsung): there will be a MIMO OTA ad hoc on 18-19.01.2016, location still under discussion
conclusion: approved

RP-152045 MIMO OTA Work Item Considerations CTTC, Bluetest discussion Rel-13 UTRA_LTE_MIMO_OTA-Core
related to WI exception request in RP-151870
conclusion: noted

RP-151878 Revised WID: Radiated requirements for the verification of multi-antenna reception performance of UEs; rapporteur: Intel Corporation Intel WID revised RAN4 Rel-13 UTRA_LTE_MIMO_OTA-Core
last approved WID: RP-151574; to update also time budget; MCC: time budget has to be corrected in status report not in revised WIDs
conclusion: approved

Samsung Exhibit 1025, Page 961 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-152145 Radiated requirements for the verification of multi-antenna reception performance of Ues - Core Part RAN4 CR Pack Rel-13 UTRA_LTE_MIMO_OTA-Core
discussion: MCC: WI exception request
conclusion: approved

11.6.4 Core part: RAN aspects of Application specific Congestion control for Data Communication [ACDC-RAN-Core]

RP-151944 Status Report for WI: Core part: Application specific Congestion control for Data Communication; rapporteur: LG Electronics RAN2 WI status report Rel-13 ACDC-RAN-Core
conclusion: noted, approved: 100%, Dec.15; WI is completed

RP-152066 RAN2 agreed CRs on Introduction of Application specific Congestion control for Data Communication (ACDC) in UTRAN and LTE RAN2 CR Pack Rel-13 ACDC-RAN-Core
conclusion: approved

RP-152095 RAN3 CR for System Information Update to support the new SIBs introduced in ACDC RAN3 CR Pack 25.4332070 1 B Rel-13 ACDC-RAN-Core
conclusion: approved

11.6.5 Core part: Dedicated Core Networks [DECOR-UTRA_LTE-Core]

RP-151996 Status report of WI Core part: Dedicated Core Networks; rapporteur: Ericsson RAN3 WI status report Rel-13 DECOR-UTRA_LTE-Core
conclusion: noted, approved: 100%, Dec.15; WI is completed

RP-152067 RAN2 agreed CR on Introduction of Dedicated Core Network (DECOR) feature RAN2 CR Pack 36.3000779 5 B Rel-13 DECOR-UTRA_LTE-Core
conclusion: approved

RP-152096 RAN3 CRs for Introduction of DÉCOR feature RAN3 CR Pack Rel-13 DECOR-UTRA_LTE-Core
conclusion: approved

11.6.6 Indoor Positioning enhancements for UTRA and LTE [**New WI**: UTRA_LTE_iPos_enh]

LSs:

RP-151648 LS Response to R2-154793 on Indoor Positioning impacts to 29.171 (C4-151875; to: RAN2; cc: RAN; contact: NextNav) CT4 LS in Rel-13 UTRA_LTE_iPos_enh-Core
R2-154793 was only sent to CT4 and not to/cc RAN; no RAN action requested
conclusion: noted, no LS answer from RAN

RP-151651 LS regarding new WI proposal: Indoor Positioning Enhancements for UTRA and LTE (ATC_LS_20150923; to: RAN4; cc: RAN; contact: American Tower Corporation VP Compliance) American Tower Corporation LS in Rel-13 UTRA_LTE_iPos_enh-Core
no RAN action requested
conclusion: noted, no LS answer from RAN

RP-151652 LS regarding new WI proposal: Indoor Positioning Enhancements for UTRA and LTE (CC_LS_20150925; to: RAN4; cc: RAN; contact: Crown Castle Sales Director)Crown Castle LS in Rel-13 UTRA_LTE_iPos_enh-Core
no RAN action requested
conclusion: noted, no LS answer from RAN

RP-151653 LS regarding new WI proposal: Indoor Positioning Enhancements for UTRA and LTE (SBA_LS_20150929; to: RAN4; cc: RAN; contact: SBA Communications Corporation VP) SBS Communications Corporation LS in Rel-13 UTRA_LTE_iPos_enh-Core
no RAN action requested
conclusion: noted, no LS answer from RAN

RP-152127 LS on indoor positioning (FCC_LS151202; to: RAN; cc: -; contact: Chief Public Safety and Homeland Security Bureau) FCC LS in Rel-13 UTRA_LTE_iPos_enh-Core
no explicit RAN action requested

Samsung Exhibit 1025, Page 962 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

discussion: RAN chair: there will be an indoor positioning WI in REL-14 which will not take part in the prioritization with other REL-14 WIs
conclusion: noted, no LS answer from RAN

Status report:

RP-151831 Status report for WI: Indoor Positioning enh. for UTRA and LTE, rapporteur: NextNav RAN2 WI status report Rel-13 UTRA_LTE_iPos_enh
discussion: Ericsson: The completion level of core part of the WI is proposed to be 100%. However core WI objectives are not completed in WGs. Therefore core WI completion level cannot be 100%.
NextNav: the intention is to move the RAN dependent portion to REL-14 as there was no consensus about this in Anaheim
conclusion: noted, approved: Core: 100%, Dec.15; Perf.: 10%, June 16; Core part WI completed

RP-152229 Way Forward on Indoor Positioning Qualcomm, Ericsson, Nokia Networks, TruePosition, Sprint discussion Rel-13 UTRA_LTE_iPos_enh
proposed way forward:
Incorporate WiFi, BT, Barometric in Rel-13
- *Both LTE & UMTS*
- *Requires revision of agreed CRs for:*
  36.305 (R2-157059), 36.355 (R2-157125)
  25.305 (R2-156942), 25.331 (R2-156943), 25.413 (R3-152856), 25.453 (R3-152920)
- *Addresses the vertical component which was identified as the missing feature from the beginning & supports dispatchable UE location*

Move all other components to Rel-14 since they are not complete
- *They can be incorporated when the work is complete*

discussion: NextNav: there were a number of LSs indicating that co-existance is not an issue and the RAN4 part on MBS was completed
Ericsson: does not agree with that view, asks the former RAN4 chair (Nokia Networks) for clarification
RAN4 chair (Nokia Networks): co-existence issues were discussed and some requirements were captured (co-signed by Ericsson) but Ericsson asked at last RAN4 meeting for new requirements and spec, this would require modification of the WID, so work acc. to current WID was done
Ericsson: this was about the SI TR, there is no normative requirement, contributions for this from Anaheim
Broadcom: same view as NextNav, this was covered
NextNav: co-existence was addressed in TR 37.857
Qualcomm: if this objective was just for adding something in a SI TR than there would have been no need to add this to the WID
Intel: supports NextNav view
AT&T: we are supporting this WI, we have invested in this technology and we are happy with the level of coexistance work that was done; if some companies have a problem they can bring up the concrete problem
US Dep.ofC.: supports AT&T, if there is really something to be addressed then this can be addressed in REL-14
RAN chair: what about this proposal?
Qualcomm: there is no RAN4 document saying that co-existence was addressed
NextNav: 3GPP does not put requirements on non-3GPP technologies and we asked a certified lab to verify and we are 10dB better
Ericsson: for other technologies there are standardizations bodies with which we can communicate if there is a problem asking them to protect 3GPP technology, this is not the case with MBS
NextNav: each operator can specify how to protect their bands for co-locations
AT&T: we need a decision at RAN #70
RAN chair: discuss offline to find a way forward and we will come back (either on Tue or Wed)
conclusion: noted

revised WID:

RP-152008 Revised work item proposal: Indoor Positioning enhancements for UTRA and LTE NextNav WID revised RAN2 Rel-13 UTRA_LTE_iPos_enh

Samsung Exhibit 1025, Page 963 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

last approved WID: RP-151624
conclusion: revised in RP-152251

RP-152251 Revised work item proposal: Indoor Positioning enhancements for UTRA and LTE NextNav WID revised RAN2 Rel-13 UTRA_LTE_iPos_enh
last approved WID: RP-151624; revision of RP-152008
discussion: NextNav: one bullet was moved to REL-14
conclusion: approved

RAN2:

RP-152068 RAN2 agreed CRs on RAT-Independent positioning enhancements RAN2 CR Pack Rel-13 UTRA_LTE_iPos_enh-Core
discussion: MCC: company CR in RP-152109 to replace R2-156942
conclusion: all CRs approved except R2-156942; R2-156942 revised in RP-152109

RP-152109 RAT-Independent positioning enhancements NextNav CR 25.305 0125 3 B Rel-13 UTRA_LTE_iPos_enh-Core
company CR; CR is replacing RAN2 agreed CR R2-156942 of RP-152068 as additional changes were found necessary
conclusion: approved

RP-152017 RAT-Independent positioning enhancements NextNav CR 25.331 5824 - B Rel-13 UTRA_LTE_iPos_enh-Core
company CR; finally not needed; see agreed R2-156943 in RP-152068 instead
conclusion: withdrawn

RP-152110 RAT-Independent positioning enhancements NextNav CR 25.306 0497 - B Rel-13 UTRA_LTE_iPos_enh-Core
company CR; need for this CR was only detected after RAN2 in Nov.
conclusion: approved

RAN3:

RP-152097 RAN3 CRs for RAT-independent indoor positioning enhancements RAN3 CR Pack Rel-13 UTRA_LTE_iPos_enh-Core
MCC: 25.413 CR R3-152856 is linked to CT4 CR in CP-150766; note: company CR RP-152016 intends to replace R3-152856
conclusion: all CRs approved except R3-152856, R3-152856 revised in RP-152016

RP-152016 RAT-Independent positioning enhancements for RANAP NextNav CR 25.413 1307 4 B Rel-13 UTRA_LTE_iPos_enh-Core
company CR; replacing RAN3 agreed CR R3-152856 of RP-152097
conclusion: approved

RP-152018 RAT-Independent positioning enhancements NextNav CR 25.453 0158 - B Rel-13 UTRA_LTE_iPos_enh-Core
company CR; finally not needed; see agreed R3-152920 in RP-152097 instead
conclusion: withdrawn

11.7 Open LTE only related WIs (non-spectrum related)

11.7.1 Further LTE Physical Layer Enhancements for MTC [LTE_MTCe2_L1]

RP-151672 Status report of WI Further LTE Physical Layer Enhancements for MTC; rapporteur: Ericsson RAN1 WI status report Rel-13 LTE_MTCe2_L1
discussion: Telecom Italia: verify the completion level of the activity
Huawei: RRM perf. part has 2TU but Perf. should be reduced from 1 to 0.5
Ericsson: fine to reduce
conclusion: revised in RP-152259

RP-152259 Status report of WI Further LTE Physical Layer Enhancements for MTC; rapporteur: Ericsson RAN1 WI status report Rel-13 LTE_MTCe2_L1
revision of RP-151672 which was flagged by Telecom Italia; MCC: late submission
conclusion: noted, approved: Core: 90%, March 16; Perf. 10%, June 16

Samsung Exhibit 1025, Page 964 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151722 Work Item Exception for Further LTE Physical Layer Enhancements for MTC Ericsson WI exception request RAN1 Rel-13 LTE_MTCe2_L1-Core
conclusion: revised in RP-152217

RP-152217 Work Item Exception for Further LTE Physical Layer Enhancements for MTC Ericsson WI exception request RAN1 Rel-13 LTE_MTCe2_L1-Core
discussion: Telecom Italia: for which WGs?
Ericsson: RAN2/RAN3/RAN4
Telecom Italia: still some discussion ongoing in RAN1
RAN1 chair: suggests to check again on Wed
Huawei: UE cap. and UE cat. should be added for RAN2
RAN2 chair: we had a 36.306 CR, we can come back if there is a problem
Huawei: it is not about revisiting a topic, it was not addressed
Vodafone: architecture enhanccements from SA2 were supposed to be imperative, this is not reflected here
Ericsson: was not in the scope of this WI so can be considered later
conclusion: approved
Telecom Italia: does RAN1 need to be added to the exception sheet as CRs are not approved?
RAN1 vice-chair (ALU): work in RAN1 is 100% done so only really essential corrections will be allowed
RAN chair: so no need for a change of the exception request sheet

RP-151976 LTE UE category for Rel-13 eMTC Ericsson discussion Rel-13 LTE_MTCe2_L1-Core
conclusion: withdrawn

RP-152126 Introduction of further LTE Physical Layer Enhancements for MTC Motorola Mobility CR36.213 0540 3 B Rel-13 LTE_MTCe2_L1-Core
company CR; revision of RAN1 endorsed R1-157818 which was supposed to be further revised in a RAN1 email discussion that finally did not conclude in time
conclusion: postponed

RP-152024 Introduction of Rel-13 eMTC feature to LTE RAN1specs RAN1 CR Pack Rel-13 LTE_MTCe2_L1-Core
MCC: late submission, WI exception request; Huawei: Since the eMTC WI is requesting an exception, the RAN1 eMTC CRs cannot be approved until eMTC CRs from all WGs are ready;
discussion: Huawei: as WI has an exception we do not need to approve the package
conclusion: postponed

RP-152069 RAN2 agreed CR on Introduction of low complexity UE and enhanced coverage features RAN2 CR Pack 36.300 0810 2 B Rel-13 LTE_MTCe2_L1-Core
discussion: MCC: WI exception request
Huawei: we should wait with the approval
MCC: stage 2 CR could be approved separately but where is the 36.306 CR
RAN2 chair: the 36.306 CR was stable in RAN2 (is a running CR)
Huawei: open issues have to be taken into account for time budget situation
conclusion: approved

11.7.2 Core part: RAN Aspects of RAN Sharing Enhancements for LTE [RSE-RAN_LTE-Core]

RP-151794 Status report for WI Core Part: RAN Aspects of RAN Sharing Enhancements for LTE; rapporteur: NEC RAN3 WI status report Rel-13 RSE-RAN_LTE-Core
discussion: MCC: WI exception request in RP-151828
conclusion: noted, approved: 100%, Dec.15; WI completed

RP-151827 Revision of WI RAN Aspects of RAN Sharing Enhancements for LTE NEC EUROPE LTD WID revised RAN3 Rel-13 RSE-RAN_LTE-Core
last approved WID: RP-141671; company CR RP-151955 to complete this WI; if the CR is approved, the WI can be closed; if the CR is not approved, RAN2 needs to discuss at the next meeting and the WI needs an exception.
conclusion: approved

Samsung Exhibit 1025, Page 965 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151828 Exception request for WI RAN Aspects of RAN Sharing Enhancements; Core part. NEC EUROPE LTD WI exception request RAN3 Rel-13 RSE-RAN_LTE-Core
A company CR will be provided to RAN#70; if it is approved, the WI can be closed. If it is not approved, RAN2 needs to discuss the issue and we need this exception.
conclusion: withdrawn

RP-151955 Introduction of data volume measurements in shared E-UTRAN TeliaSonera, NEC, Alcatel-Lucent CR 36.314 0035 - B Rel-13 RSE-RAN_LTE-Core
company CR; CR is needed to close REL-13 WI RSE-RAN_LTE-Core; RAN3 agreed a TP to RAN2 TS 36.314 sent in an LS (R3-152873) to RAN2; RP-151955 includes the TP and some more information from the LS; this CR was not presented to any WG but a draft was sent to RAN2 reflector for review
discussion: TeliaSonera: CR was provided via RAN2 reflector and no comments were raised there
Nokia Networks: sending email over the reflector does not mean reviewed
RAN3 chair: this is not a new topic this was known for 3 months
RAN2 chair: there was a Huawei comment was this taken into account? if not we can fix this later
conclusion: approved

RP-152070 RAN2 agreed CRs on Introduction of RAN Aspects of RAN Sharing Enhancements for LTE RAN2 CR Pack Rel-13 RSE-RAN_LTE-Core
discussion: MCC: WI exception request
conclusion: approved

RP-152098 RAN3 CR for Description of solutions for RRC rejections during Overload Start RAN3 CR Pack 36.8560001 1 B Rel-13 RSE-RAN_LTE-Core
discussion: MCC: WI exception request
conclusion: approved

11.7.3 LTE Carrier Aggregation Enhancement Beyond 5 Carriers [LTE_CA_enh_b5C]

RP-151938 Status report of WI LTE Carrier Aggregation Enhancement Beyond 5 Carriers; rapporteur: Nokia Networks RAN1 WI status report Rel-13 LTE_CA_enh_b5C
conclusion: noted, approved: Core: 100%, Dec.15; Perf.: 0%, June 16; Core part WI completed

RP-151984 Revised WID: LTE Carrier Aggregation Enhancement Beyond 5 Carriers Nokia Networks, NTT DoCoMo Inc. WID revised RAN1 Rel-13 LTE_CA_enh_b5C
last approved WID: RP-150771; a few missing affected specifications complemented/added - no other changes
conclusion: approved

RP-151957 36.300 CR for capturing B5C and PUCCH on SCell Nokia Networks, NTT DOCOMO, INC. CR 36.3000822 - B Rel-13 LTE_CA_enh_b5C-Core
company CR; CR was in principle agreed at RAN2 in Oct. in R2-154982 but then forgotten
conclusion: approved

RP-152027 Introduction of Rel-13 eCA feature to LTE RAN1 specs RAN1 CR Pack Rel-13 LTE_CA_enh_b5C-Core
conclusion: approved

RP-152071 RAN2 agreed CRs on Introduction of Carrier Aggregation enhancements beyond 5 CCs RAN2 CR Pack Rel-13 LTE_CA_enh_b5C-Core
conclusion: approved

RP-152099 RAN3 CRs for LTE Carrier Aggregation Enhancement Beyond 5 Carriers RAN3 CR Pack Rel-13 LTE_CA_enh_b5C-Core
conclusion: approved

RP-152149 LTE Carrier Aggregation Enhancement Beyond 5 Carriers RAN4 CR Pack Rel-13 LTE_CA_enh_b5C-Core
conclusion: approved

Samsung Exhibit 1025, Page 966 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.7.4 Enhanced LTE Device to Device Proximity Services [LTE_eD2D_Prox]

RP-151952 Status report for WI on Enhanced LTE Device to Device Proximity Services; rapporteur: Qualcomm RAN2 WI status report Rel-13 LTE_eD2D_Prox
discussion: MCC: WI exception request
conclusion: noted, approved: Core: 90%, March 16; Perf.: 0%, Sep.16

RP-151954 Work item exception for Enhanced LTE Device to Device Proximity Services – core part Qualcomm Incorporated WI exception request RAN2 Rel-13 LTE_eD2D_Prox-Core
discussion: Qualcomm: only Core part for RAN4 needs extension
conclusion: approved

RP-152033 Introduction of Rel-13 eD2D feature to LTE RAN1 specs RAN1 CR Pack Rel-13 LTE_eD2D_Prox-Core
conclusion: revised in RP-152125

RP-152125 Introduction of Rel-13 eD2D feature to LTE RAN1 specs RAN1 CR Pack Rel-13 LTE_eD2D_Prox-Core
discussion: MCC: WI exception request; also note: one CR got split into 2 files in RP-152125
conclusion: approved

RP-152072 RAN2 agreed CRs on Introduction of Enhanced LTE Device to Device Proximity Services RAN2 CR Pack Rel-13 LTE_eD2D_Prox-Core
discussion: MCC: WI exception request
MCC: normally all stage 3 CRs are approved together
RAN2 chair: prefers to approve the CR package to simplify ASN.1 review
conclusion: approved

RP-152100 RAN3 CRs for Enhanced LTE Device to Device Proximity Services RAN3 CR Pack Rel-13 LTE_eD2D_Prox-Core
discussion: MCC: WI exception request
conclusion: approved

RP-152150 Enhanced LTE Device to Device Proximity Services RAN4 CR Pack Rel-13 LTE_eD2D_Prox-Core
discussion: MCC: WI exception request
conclusion: approved

11.7.5 Perf. part: Performance requirements of MMSE-IRC receiver for LTE BS [LTE_MMSE_IRC_BS-Perf]

RP-151741 Status report for WI Perf. Part: Performance requirements of MMSE-IRC receiver for LTE BS, rapporteur: China Telecom RAN4 WI status report Rel-13 LTE_MMSE_IRC_BS-Perf
conclusion: noted, approved: 70%, June 16

11.7.6 Perf. part: CRS Interference Mitigation for LTE Homogenous Deployments [LTE_CRSIM-Perf]

RP-151718 Status report for WI: Perf. part: CRS Interference Mitigation for LTE Homogenous Deployments; rapporteur: Ericsson RAN4 WI status report Rel-13 LTE_CRSIM-Perf
conclusion: noted, approved: 80%, March 16

RP-152073 RAN2 agreed CR on Introducing CRS interference mitigation on Scell RAN2 CR Pack 36.331 1953 2 B Rel-13 LTE_CRSIM-Perf
conclusion: approved

RP-152151 CRS Interference Mitigation for LTE Homogenous Deployments - Perf RAN4 CR Pack Rel-13 LTE_CRSIM-Perf
conclusion: approved

11.7.7 Dual Connectivity enhancements for LTE [LTE_dualC_enh]

RP-151738 Status report for WI: Dual Connectivity enhancements for LTE; rapporteur: NTT DOCOMO, INC. RAN2 WI status report Rel-13 LTE_dualC_enh
conclusion: noted, approved: Core: 100%, Dec. 15; Perf.: 0%, Jun.16; Core part WI completed

Samsung Exhibit 1025, Page 967 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151739 Revised WID: Dual Connectivity enhancements for LTE NTT DOCOMO WID revised RAN2 Rel-13 LTE_dualC_enh
last approved WID: RP-150490; to update the affected spec and objective
conclusion: approved

RP-152032 Introduction of SSTD for dual connectivity enhancement RAN1 CR Pack 36.2140030 1 B Rel-13 LTE_dualC_enh-Core
conclusion: approved

RP-152074 RAN2 agreed CRs on Intdroduction of Dual Connectivity enhancements for LTE RAN2 CR Pack Rel-13 LTE_dualC_enh-Core
conclusion: approved

RP-152152 Dual Connectivity enhancements for LTE RAN4 CR Pack Rel-13 LTE_dualC_enh-Core
conclusion: approved

11.7.8 Multicarrier Load Distribution of UEs in LTE [LTE_MC_load]

RP-151676 Status Report of WI Multicarrier Load Distribution of UEs in LTE; rapporteur: ZTE Corporation RAN2 WI status report Rel-13 LTE_MC_load
conclusion: noted, approved: Core: 100%, Dec.15; Perf.: 70%, June 16; Core part WI completed

RP-152181 Revised WID: Multicarrier Load Distribution of UEs in LTE ZTE Corporation WID revised RAN2Rel-13 LTE_MC_load
last approved WID: RP-151206
conclusion: approved

RP-152035 Introduction of RS-SINR measurement for Multicarrier Load Distribution RAN1 CR Pack 36.214 0028 2 B Rel-13 LTE_MC_load-Core
conclusion: approved

RP-152075 RAN2 agreed CRs on Introduction of Multicarrier Load Distribution of UEs in LTE RAN2 CR Pack Rel-13 LTE_MC_load-Core
conclusion: approved

RP-152153 Multicarrier Load Distribution of UEs in LTE RAN4 CR Pack Rel-13 LTE_MC_load-Core
conclusion: approved

11.7.9 Core part: RAN enhancements for extended DRX in LTE [LTE_extDRX-Core]

RP-151950 Status report for WI on Core part: RAN enhancements for extended DRX in LTE; rapporteur: Qualcomm RAN2 WI status report Rel-13 LTE_extDRX-Core
discussion: MCC: WI exception request
conclusion: noted, approved: 95%, March 16

RP-151951 Work item exception for RAN enhancements for extended DRX in LTE Qualcomm Incorporated WI exception request RAN2 Rel-13 LTE_extDRX-Core
discussion: Qualcomm: RAN3 and RAN4 issues open
conclusion: approved

RP-152076 RAN2 agreed CRs on Introduction of RAN enhancements for extended DRX in LTE RAN2 CR Pack Rel-13 LTE_extDRX-Core
discussion: MCC: WI exception request
conclusion: approved

RP-152154 RAN enhancements for extended DRX in LTE - Core RAN4 CR Pack Rel-13 LTE_extDRX-Core
discussion: MCC: WI exception request
conclusion: approved

11.7.10 LTE-WLAN Radio Level Integration and Interworking Enhancement [LTE_WLAN_radio]

Samsung Exhibit 1025, Page 968 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151962 Status report of WI LTE-WLAN Radio Level Integration and Interworking Enhancement; rapporteur: Intel Corporation RAN2 WI status report Rel-13 LTE_WLAN_radio
discussion: MCC: target dates missing;
Broadcom: discussion regarding level of completion and remaining RAN2 actions
Broadcom: a number of aspects are not properly covered in the status report (e.g. LS, SA LS on co-existence)
Intel: not all optimisations could be addressed in RAN2 so exception sheet is covering only essential parts), also SA3 work can be completed in 1 quarter
Broadcom: metrics, policies, authorization still to be done
KT: supports Intel's proposal to exclude interworking in order to complete the WI in REL-13
RAN chair: we will not do downselection
RAN3 chair: time budget does not properly reflect time budget of RAN3, will be updated in WG summary
conclusion: noted, approved: Core: 75%, March16; Perf.: 10%, March 16

RP-151965 On LTE-WLAN Radio Level Integration and Interworking Enhancement progress Intel Corporation discussion Rel-13 LTE_WLAN_radio
conclusion: revised in RP-152214

RP-152214 On LTE-WLAN Radio Level Integration and Interworking Enhancement progress Intel Corporation, Qualcomm Incorporated, China Telecom, InterDigital Communications, Cisco Systems, MediaTek Inc., Sony, Ruckus, CATT discussion Rel-13 LTE_WLAN_radio
Proposal 1: Only LWA part of the LTE-WLAN Radio Level Integration and Interworking Enhancement WI is standardized in Rel-13.
discussion: Intel: this is a new proposal, WID/SR does not yet reflect this, current SR asked for TU increase
Ericsson: would keep the 2nd part in the WID and we need to increase
Deutsche Telekom: we were interested in interworking aspect
Huawei: originally 46 companies were supporting this WI, so this Tdoc is signed is just by a smaller portion, so just note the paper
Intel: that means we will need all remaining RAN2 capacity for this WI
conclusion: noted

RP-151963 Exception sheet for LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation WI exception request RAN2 Rel-13 LTE_WLAN_radio-Core
conclusion: approved

RP-151964 Revised WID: LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation WID revised RAN2 Rel-13 LTE_WLAN_radio
last approved WID: RP-151114,
conclusion: revised in RP-152213

RP-152213 Revised WID: LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation WID revised RAN2 Rel-13 LTE_WLAN_radio
last approved WID: RP-151114
conclusion: approved

RP-152077 RAN2 agreed CR on Introduction of LTE-WLAN Radio Level Integration and Interworking Enhancement stage-2 RAN2 CR Pack 36.300 0809 1 B Rel-13 LTE_WLAN_radio-Core
discussion: MCC: WI exception request
conclusion: approved

RP-152146 LTE-WLAN Radio Level Integration and Interworking Enhancement RAN4 CR Pack Rel-13 LTE_WLAN_radio-Perf
discussion: MCC: WI exception request
conclusion: approved

RP-151742 TS 36.461 v1.0.0 for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) and Wireless LAN (WLAN); Xw layer 1, for information China Telecommunications draft TS 36.461 RAN3 Rel-13 LTE_WLAN_radio-Core
RAN3 TS 36.461 is submitted for information
discussion: Intel: new RAN2 spec is not submitted
conclusion: noted

Samsung Exhibit 1025, Page 969 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151865 TS 36.462 v1.0.0 on E-UTRAN and Wireless LAN; Xw signalling transport China Mobile Com. Corporation draft TS 36.462 RAN3 Rel-13 LTE_WLAN_radio-Core
RAN3 TS 36.462 is submitted for information; TR title wrong in RP-151865: It should say "transport" instead of "support"
conclusion: noted

RP-151958 TS 36.463 v1.0.0 on Evolved Universal Terrestrial Radio Access Network (E-UTRAN) and Wireless LAN (WLAN); Xw application protocol (XwAP) Qualcomm Incorporated draft TS 36.463 RAN3 Rel-13 LTE_WLAN_radio-Core
RAN3 TS 36.463 submitted for information
conclusion: noted

RP-151985 TR 36.464 v1.0.0 on Evolved Universal Terrestrial Radio Access Network (E-UTRAN) and Wireless LAN (WLAN); Xw data transport Intel Corporation draft TS 36.464 RAN3 Rel-13 LTE_WLAN_radio-Core
RAN3 TS 36.464 submitted for information
conclusion: noted

RP-151986 TR 36.465 v1.0.0 on Evolved Universal Terrestrial Radio Access Network (E-UTRAN) and Wireless LAN (WLAN); Xw interface user plane protocol Intel Corporation draft TS 36.465 RAN3 Rel-13 LTE_WLAN_radio-Core
RAN3 TS 36.465 submitted for information
conclusion: noted

11.7.11 LTE DL 4 Rx antenna ports [LTE_4Rx_AP_DL]

RP-151768 Status Report for WI: LTE DL 4 Rx antenna ports, rapporteur: Ericsson RAN4 WI status report Rel-13 LTE_4Rx_AP_DL
conclusion: noted, approved: Core: 100%, Dec.15; Perf.: 60%, June 16; Core part WI completed

RP-151737 eNB Tx EVM for 4 Layer Transmissions Qualcomm Incorporated discussion Rel-13 LTE_4Rx_AP_DL
In this paper we discuss the need to enhance the eNB Tx EVM requirements for 4 layer transmissions with higher order modulation(64QAM ad 256QAM). We show with the current EVM requirements the feature has very limited use so new requirements are needed.
discussion: Qualcomm: TX requirements were not in the scope of this WI, either under this WI or under TEI?
KDDI: supports Qualcomm's proposal
Ericsson: TX EVM has nothing to do with the number of layers, so we do not agree; it means quite extensive work of ~1year if you want to address this but then this should be another SI
Mediatek: supports to have a SI
Qualcomm: does not think that system level simulations are needed
Ericsson: will take more than quarter
Qualcomm: we would like to change EVM for 64QAM and 256QAM
ALU: if we do this under TEI what will be the time unit impact?
RAN4 chair (Samsung): time budget for TEI is preallocated
conclusion: noted, contribution on this can be brought to RAN4 under TEI13

RP-152147 LTE DL 4 Rx antenna ports RAN4 CR Pack Rel-13 LTE_4Rx_AP_DL-Core, LTE_4Rx_AP_DL-Perf
conclusion: approved

11.7.12 Licensed-Assisted Access using LTE [LTE_LAA]

RP-151650 LS regarding LAA Coexistence (WFA_LS_20151006; to: RAN4, RAN; cc: -; contact: CEO Wi-Fi Alliance) Wi-Fi Alliance LS in LS01 Rel-13 LTE_LAA-Perf
no RAN action requested
conclusion: noted, RAN chair drafted LS answer drafted in RP-152117

Samsung Exhibit 1025, Page 970 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151664 LS on LAA co-existence testing (R4-158439; to: RAN; cc: -; contact: Ericsson) RAN4 LS in Rel-13 LTE_LAA LS01
no explicit RAN action requested
conclusion: noted, no LS answer

RP-151866 Status report for WI: Licensed-Assisted Access to Unlicensed Spectrum, rapporteur: Ericsson RAN1 WI status report Rel-13 LTE_LAA
discussion: Orange: proposal to revise and align some of the WGs (RAN1 and RAN4) agreements to avoid misinterpretation of the FS applicable to LAA bands (see considerations in RP-152011);
Blackberry: discussion regarding level of completion and remaining RAN2 actions;
Broadcom: There is a missing TU allocation for RAN4#78bis (R4RF Perf and R4RD Perf). In RP-151600, there is TU allocation for the RAN4#78bis meeting, and the intention was not to change that. In addition, Yes or No was not selected for the box to indicate whether there are changes with respect to RP-151600;
MCC: WI exception request in RP-152010
Blackberry: still two open issues in RAN2 and would like to know how this will be addressed
RAN2 chair: the 2 open issues are:
i/ Introduction of mapping from QCI to LBT priority classes
ii/ Introduction of some eNB behaviour relating to LBT that was agreed in RAN1 but they preferred to be captured in a RAN2 spec
and we could cover both under maintenance with cat.F CRs in the next quarter
Telecom Italia: no RAN3 CRs?
Ericsson: no RAN3 impact
conclusion: revised in RP-152233

RP-152233 Status report for WI: Licensed-Assisted Access to Unlicensed Spectrum, rapporteur: Ericsson RAN1 WI status report Rel-13 LTE_LAA
conclusion: noted, approved: Core: 100%, Dec.15; Perf.: 0%, June 16; Core part WI completed

RP-151977 Status Report of WI Licensed-Assisted Access using LTE; rapporteur: Ericsson RAN1 WI status report Rel-13 LTE_LAA
conclusion: withdrawn, see RP-151866 instead

RP-152010 Work item exception request for Licensed-Assisted Access to Unlicensed Spectrum Ericsson WI exception request RAN1 Rel-13 LTE_LAA-Core
conclusion: withdrawn

RP-152011 Considerations regarding LAA specification in 3GPP RAN ORANGE discussion Rel-13 LTE_LAA
Consideration regarding some of the latest agreements made by RAN1 and RAN4 regarding LAA
discussion: RAN1 chair: we had a long discussion in RAN1 about this and came up with the current consensus
Huawei: we have to read all specs together; even if TDD is mentioned it it clear that only frame structure 3 can be used
Orange: RAN1 and RAN4 agreeements were done in the last moment and proposal 1 is really needed
RAN4 chair (Nokia Networks): agrees that RAN4 made agreements before RAN1 agreements and recommends that RAN4 double-checks
Ericsson: sounds more like a clean-up
RAN chair: there seems to be no disagreement with the Orange technical comments, we just need to find a way to document this (either this week or by maintenance in WGs)
Samsung: from RAN4 CRs it is clear that band 46 is for frame structure type 3
RAN1 chair: asks Orange to talk with Ericsson and Samsung to avoid longer debates in next RAN1 meeting
RAN chair: discuss offline whether it can be already solved at RAN #70 or whether WG should address this
conclusion: noted, it was agreed that we will do this cleanup in RAN1 and/or RAN4 specs;
finally R1-157914 (36.211 CR) of RP-152026 is revised in RP-152258;
R4-158443 and RP-158444 of RP-152148 were approved without modification

RP-152026 Introduction of Rel-13 LAA feature to LTE RAN1 specs RAN1 CR Pack Rel-13 LTE_LAA-Core

Samsung Exhibit 1025, Page 971 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

discussion: MCC: late submission, WI exception request;
Orange: proposal to revise the content to avoid misinterpretation of the FS applicable to LAA bands (see considerations in RP-152011)
conclusion: all CRs of RP-152026 are approved except R1-157914 which is revised in RP-152258

RP-152258 Introduction of LAA Ericsson CR 36.211 0205 4 B Rel-13 LTE_LAA-Core
company CR; to replace R1-157914 (CR0205 rev 3 to TS 36.211) of RP-152026
discussion: Ericsson: note added following RP-152011 discussions
conclusion: approved

RP-152078 RAN2 agreed CRs on Introduction of Licensed-Assisted Access using LTE RAN2 CR Pack Rel-13 LTE_LAA-Core
discussion: Blackberry: discussion regarding level of completion and remaining RAN2 actions
MCC: WI exception request
conclusion: approved

RP-152148 Licensed-Assisted Access using LTE RAN4 CR Pack Rel-13 LTE_LAA-Core
discussion: MCC: WI exception request
conclusion: approved

RP-152116 Draft LS on LAA (to: IEEE 802 LMSC, Wi-Fi Alliance; cc: RAN1, RAN2, RAN4; contact: RAN Chairman (Qualcomm), RAN1 Chairman (NTT DOCOMO)) RAN Chairman (Qualcomm), RAN1 Chairman (NTT DOCOMO) LS out Rel-13 LTE_LAA
discussion: RAN chair: Barcelona and next meeting number will be changed
conclusion: revised in RP-152280 to attach RAN1/2/4 approved CRs
RP-152280 LS on LAA (to: IEEE 802 LMSC, Wi-Fi Alliance; cc: RAN1, RAN2, RAN4; contact: RAN Chairman (Qualcomm), RAN1 Chairman (NTT DOCOMO)) RAN LS out Rel-13 LTE_LAA
conclusion: approved

RP-152117 Draft Reply LS to RP-151650 on LAA coexistence tests (to: Wi-Fi Alliance; cc: RAN4, IEEE 802 LMSC; contact: RAN Chairman (Qualcomm), RAN4 Chairman (Samsung))RAN Chairman (Qualcomm), RAN4 Chairman (Samsung) LS out Rel-13 LTE_LAA
discussion: RAN chair: Barcelona and next meeting number will be changed
conclusion: revised in RP-152234
RP-152234 Reply LS to RP-151650 on LAA coexistence tests (to: Wi-Fi Alliance; cc: RAN4, IEEE 802 LMSC; contact: RAN Chairman (Qualcomm), RAN4 Chairman (Samsung)) RAN LS out Rel-13 LTE_LAA
conclusion: approved

11.7.13 Elevation Beamforming/Full-Dimension (FD) MIMO for LTE [LTE_EBF_FDMIMO]

RP-151845 Status report for WI Elevation Beamforming/Full-Dimension (FD) MIMO for LTE; rapporteur: Samsung RAN1 WI status report Rel-13 LTE_EBF_FDMIMO
discussion: MCC: late submission;
Ericsson: Although RAN4 BS core requirements have been completed for AAS, it is indicated that the clarification of the applicability of non AAS core BS RF requirements specs 36/37.104 for FD-MIMO has not been clarified in these specs (36/37.104) according to the agreed WF in R4-153330.
conclusion: noted, approved: Core: 100%, Dec.15; Perf.: 5%, June 16; Core part completed

RP-151937 Way forward on handling unwanted emissions beyond 8 antennas NTT DOCOMO discussion Rel-13 LTE_EBF_FDMIMO-Core
How to handle out of band emission requirements beyond 8 antennas is provided.
conclusion: withdrawn

RP-151959 Applicability of the non AAS specification for FD-MIMO and advanced arrays Ericsson discussion Rel-13 FS_LTE_3D_channel
discussion: Huawei: there is no consensus in RAN4 so far, fine to close the Core part
NTT DOCOMO: supports Ericsson
Ericsson: LS from RAN4 that a clarification in RAN4 BS spec will be needed (so we will not discuss this anymore, just how to capture it)

Samsung Exhibit 1025, Page 972 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN4 chair (Samsung): remaining open topic will be discussed under TEI13 in RAN4 as WI is considered completed
conclusion: noted ; by RAN4#78, RAN4 is to complete the work in accordance with the RAN4 agreements captured in the RAN4 LS to RAN in RP-151153 (R4-154982).

RP-152025 Introduction of Rel-13 EBF/FD-MIMO feature to LTE RAN1specs RAN1 CR Pack Rel-13 LTE_EBF_FDMIMO-Core
discussion: MCC: late submission
conclusion: approved

RP-152079 RAN2 agreed CR on Introduction of Elevation Beamforming/Full-Dimension (FD) MIMO for LTE RAN2 CR Pack 36.331 1961 2 B Rel-13 LTE_EBF_FDMIMO-Core
conclusion: approved

11.7.14 Support of single-cell point-to-multipoint transmission in LTE [LTE_SC_PTM]

RP-151804 Status report for WI: Support of single-cell point-to-multipoint transmission in LTE, rapporteur: Huawei RAN2 WI status report Rel-13 LTE_SC_PTM
discussion: MCC: Perf. part target June 16 impossible if 100% completed in Dec.15
conclusion: noted, approved: Core: 100%, Dec.15; Perf.: 100%, Dec.15; Core and Perf. parts completed

RP-152031 Introduction of Rel-13 SC-PTM feature to LTE RAN1 specs RAN1 CR Pack Rel-13 LTE_SC_PTM-Core
conclusion: approved

RP-152080 RAN2 agreed CRs on Introduction of Support of single-cell point-to-multipoint transmission in LTE RAN2 CR Pack Rel-13 LTE_SC_PTM-Core
conclusion: approved

RP-152101 RAN3 CRs for Support of single-cell point-to-multipoint transmission in LTE RAN3 CR Pack Rel-13 LTE_SC_PTM-Core
conclusion: approved

11.7.15 Core part: Extension of Dual Connectivity in E-UTRAN [LTE_dualC_ext-Core]

RP-151743 Status report for WI Core part: Extension of Dual Connectivity in E-UTRAN; rapporteur: Samsung RAN3 WI status report Rel-13 LTE_dualC_ext-Core
conclusion: noted, approved: 100%, Dec.15; WI is completed

RP-151798 Revised WID: Extension of Dual Connectivity in E-UTRAN Samsung WID revised RAN3 Rel-13 LTE_dualC_ext-Core
last approved WID: RP-151008
conclusion: approved

RP-152081 RAN2 agreed CRs on Introduction of Extension of Dual Connectivity in E-UTRAN RAN2 CR Pack Rel-13 LTE_dualC_ext-Core
conclusion: approved

RP-152102 RAN3 CRs for Extension of Dual Connectivity in E-UTRAN RAN3 CR Pack Rel-13 LTE_dualC_ext-Core
conclusion: approved

11.7.16 Perf. part: Interference mitigation for downlink control channels of LTE [LTE_IM_DLCCH-Perf]

RP-151874 Status report of WI Perf. part: Interference Mitigation for Downlink Control Channels of LTE; rapporteur: Intel Corporation RAN4 WI status report Rel-13 LTE_IM_DLCCH-Perf
discussion: Qualcomm: TU allocation is unrealistic for the control channel IM work item; we used much more time in last RAN4 meeting, we had coffee break and evening ad hocs and rapporteur thinks 0.5 TU is sufficient to complete it
RAN4 chair (Samsung): can discuss time budget offline
Intel: we agreed for increasing to 1TU for the rest of the WI
conclusion: revised in RP-152271

Samsung Exhibit 1025, Page 973 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-152271 Status report of WI Perf. part: Interference Mitigation for Downlink Control Channels of LTE; rapporteur: Intel Corporation RAN4 WI status report Rel-13 LTE_IM_DLCCH-Perf
conclusion: noted, approved: 40%, June 16

11.7.17 Core part: Narrowband Internet of Things (IOT) [New WI: NB_IOT-Core]

RP-152128 LS on recently established new Study Group 20 (SG20)
(ITU-T SG20/COM 20-LS008-E; to: GERAN, RAN, CT, SA, ISO/TC 122; ISO/TC 204; ISO/IEC JTC 1/SC 6; ISO/IEC JTC 1/SC 31; ISO/IEC JTC 1/WG 7; ISO/IEC JTC 1/WG 10; ISO/IEC JTC 1/WG 11; GS1 EPCglobal; EC/IERC; ETSI; CEN; OMA; YRP; Ecma International; GISFI; TIA; GSC MSTF; OGC; oneM2M; ISO/IEC JTC 1/SC 29/WG11 for Augmented Reality (AR) standards; 3GPP; W3C; IETF; IEEE-SA; AHCIET; ANEC; ANSI; BSI; CCSA; CDP; CEDARE; CEN/CENELEC/ETSI SSCC CG; CIC; CITEL; City Protocol Society (CPS); The Climate Group; Digital Europe; DIN; DKE (DIN/VDE); ECLAC; ETNO; ETSI TC EE; ETSI TC Smart M2M; European Commission (DG Connect); GeSI; GSMA; ICLEI; IDB; IEC/SEG1; IEC/TC 100; IEC/TC 111; IEEE; ISO/TC 268/SC 1; MOHURD; SAC; StEP; UNCDF; UNDP; UNECE; UNEP; UNESCO; UNFCCC; UN-Habitat; UNIDO; WBCSD for GHG Protocol; WHO; WMO; cc: -; contact: ETRI) ITU-T SG20
LS in Rel-13 NB_IOT-Core
no RAN action requested
conclusion: noted, no LS answer

RP-151666 LS on NB-IoT Evaluations
(R1-157742; to: RAN; cc: RAN2, RAN3, RAN4, SA2; contact: Huawei) RAN1
LS in Rel-13 NB_IOT-Core
no explicit RAN action requested
conclusion: noted, no LS answer

RP-151931 Status report for WI: NarrowBand IOT (NB-IOT); rapporteur: Vodafone RAN1 WI status report Rel-13 NB_IOT-Core
discussion: MCC: why does this WI have a Perf. part target?
conclusion: noted, approved: Core part: 25%, March 16
Note: WI will be kept in REL-13 (due to PCG34_39r2 decision)

Architectural aspects:

RP-151832 Compatible S1 architecture with eMTC and normal UEs NTT DOCOMO discussion Rel-13 NB_IOT-Core
Proposal: U-plane based solution with AS information stored in RAN should be specified such that it is compatible with Rel-13 eMTC UEs and normal UEs in the NB-IoT WI.
conclusion: noted

RP-151991 Applicability of SA2's architecture optimisations to non-NB-IOT devices in release 13 VODAFONE Group Plc discussion Rel-13 FS_AE_CIoT
proposal:
This TSG RAN plenary to decide which of the NB-IoT architecture enhancements should be applicable in Rel-13 to:
"Cat 1 and above" devices operating in normal coverage
"Cat 1 and above" devices operating in eMTC coverage enhancement mode
Cat 0 devices operating in normal coverage
Cat 0 devices operating in eMTC coverage enhancement mode
Category M1:Bandwidth reduced devices operating in normal coverage
Category M1:Bandwidth reduced devices operating in eMTC coverage enhancement mode
Others?
However, to simplify the process of taking all issues into account, a quick solution would be to restrict the Release 13 Architecture Enhancements solely to NB-IoT, yet request the working groups to develop changes bearing future extensions in mind.
conclusion: noted

RP-151970 Operator requirements for NB-IoT standardisation Deutsche Telekom AG discussion Rel-13 NB_IOT
We propose to postpone discussion on TDD support for NB-IoT to Rel-14 in order to ensure timely finalization of Rel-13 work

Samsung Exhibit 1025, Page 974 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: noted

discussion:
Mediatek: what is the main reason for having the UP solution instead of CP solution
Ericsson: we had an input at the last RAN meeting explaining this, more efficient radio resource usage
Vodafone: main question is: for CP and UP solution: do you support just NB-IOT or other devices as well; as this will cause work on RAN2 and also in SA2 we have to avoid that it delays the work
Qualcomm: we should stick to the agreement that we have both solutions, we should not delay completion of the NB-IOT WI
Intel: solution 2-solution 18 discussion was already decided in SA2 so we should not reopen the discussion
Nokia Networks: enabling to eMTC devices may be beneficial but agrees we should not delay the feature
Huawei: limiting to NB-IOT for REL-13 is preferred
RAN chair: it seems people say: if we can achieve it without delay we could still try
Samsung: would like to keep door open for C-plane solution as well
RAN chair: suggests offline discussion (rapporteur: Ericsson), involve corresponding WG chairmen

RAN chair: some other aspects from DT paper:
duplex mode: REL-13: FDD only, TDD in REL-14: only if needed
Huawei: agrees with Deutsche Telekom proposal
ALU: at forward compatibility with TDD is included in REL-13
Deutsche Telekom: suggests to remove "at least"
Telecom Italia: how much effort is it to add forward compatibility hooks for TDD?
conclusion: REL-13: FDD only + forward compatibility for TDD

band support: focus on 900MHz
Telefonica: is moredifficult, you can assume single band UE capability, we would at least like to add band ...
NTT DOCOMO: premature to narrow down the number of bands at the moment
Deutsche Telekom: prioritization should be on 900MHz for RAN4 load reduction, we should focus on below 1GHz
Qualcomm: suggests to have this discussion in RAN4
Vodafone: there was someone proposing support for 5 bands for a low cost device, so we should be reasonable, if we move it to RAN4 this will be difficult
conclusion: offline discussion (rapporteur: Vodafone)

Singletone transmission with 3.75 and 15 kHz is mandatory for UE to support:
Huawei: was agreed in RAN1, so ok

Multitone transmission is mandatory for UE and indication on interoperability testing:
RAN1 chair: premature to decide this
Telecom Italia: we need a RAN guidance on NB-IOT aspects from RAN
Vodafone: single tone is certainly first and we can discuss the multitone further
Ericsson: initial access is certainly single tone
Qualcomm: initial access should be 15kHz single tone, rest can be discussed further
CMCC, NTT DOCOMO: should be discussed in WG, this was also agreed in RAN1
Telecom Italia: we need to provide priorities by RAN and single tone should be mandatory
Intel: if we could make a decision for initial access this would be helpful
Deutsche Telekom: we want to have a single category; remove [ ] from 3.75kHz
Huawei: 3.75kHz is needed for coverage
RAN1 chair: please remember to reduce the scope to avoid high workload
Telecom Italia: suggests offline discussion on Wed afternoon, this is more urgent than 5G discusssion
conclusion: offline discussion (rapporteur: Huawei)

RP-151933 Way Forward on NB-IoT work Huawei, HiSilicon discussion Rel-13 NB_IOT-Core
conclusion: withdrawn

RP-151932 Revision of WI: Narrowband IOT (NB-IOT) Huawei WID revised RAN1 Rel-13 NB_IOT-Core
last approved WID: RP-151621; rapporteur: Vodafone; addition of performance part (i.e. this revised WID is introducing a new Perf. part WID for LTE at the same time!);

Samsung Exhibit 1025, Page 975 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: revised in RP-152220

RP-152220 Revised WID: Core part: Narrowband Internet of Things (IOT) Huawei WID revised RAN1 Rel-13 NB_IOT-Core

last approved WID: RP-151621; revision of RP-151932; rapporteur: Vodafone; addition of performance part (i.e. this revised WID is introducing a new Perf. part WID for LTE at the same time!);

conclusion: revised in RP-152232

RP-152232 Revised WID: Core part: Narrowband Internet of Things (IOT) Huawei WID revised RAN1 Rel-13 NB_IOT-Core

conclusion: revised in RP-152284

RP-152284 Revised WID: Core part: Narrowband Internet of Things (IOT) Huawei WID revised RAN1 Rel-13 NB_IOT-Core

conclusion: approved; **NEW Perf. part WI is introduced**

Thursday:

RP-152281 Report of offine discussion on NB-IOT Huawei report Rel-13 NB_IOT-Core

report of Wed afternoon offline discussion

proposal for LS to RAN1:

- *There is only one NB-IoT UE category*
- *At least the first UL message after NB-PRACH for initial access to the network can be via single-tone UL*
- *Recommending a working assumption that both of the following are supported by the specifications:*
  - *3.75 kHz subcarrier spacing for the first transmission after the first UL random access transmission*
  - *15 kHz subcarrier spacing for the first transmission after the first UL random access transmission*
  - *Details of network configurability is left to WGs (including the possibility of configuring both in the same cell)*
- *RAN has made no decision on capability/interoperability testing signaling*

discussion: Qualcomm: single access method preferable but we would be ok with the compromise

conclusion: revised in RP-152294

RP-152294 RP-152294 Report of offine discussion on NB-IOT Huawei, HiSilicon report Rel-13 NB_IOT-Core

discussion: Qualcomm: not happy with the text
Mediatek: text is confusing now
Ericsson: we need at least one single tone
ALU, DT: support Ericsson
LG: we should include last sentence of yesterday, and multi-tone is ffs
RAN chair: discussion can be done in RAN1
Mediatek: monitoring missing and we are not convinced that single tone is the right option, we could also have "single tone/multitone"
RAN chair: "can" allows this
RAN1 vice-chair (ALU): "can" means that we cannot decide at next meeting that single tone cannot be supported, so it means "can at least be single tone"
Mediatek: so what is the capability assumption?
Qualcomm: there was a last bullet in the previous version and without it, it will be difficult to agree here
RAN chair: can we just add the sentence in the minutes?
Qualcomm: this is not acceptable
ALU: if the sentence does not cause any harm, then simply add it

conclusion: noted, no consensus so far, Huawei will draft new text in an LSout in RP-152297

RP-152282 Way forward on NB-IOT Panasonic, NTT DOCOMO discussion Rel-13 NB_IOT-Core

proposed way forward:

- *Both single tone and multiple tone are mandatory.*
  - *RAN has made no decision on capability/interoperability testing signaling.*
  - *Interoperability testing signaling needs to take into account the network/testing availability.*
- *The first UL message after NB-PRACH for initial access to the network can be via at least single-tone UL*

Samsung Exhibit 1025, Page 976 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- *o Note that bandwidth/number of the tone/subcarrier spacing of NB-PRACH is separate discussion.*
- *The above first UL message shall allow to carry at least 48 bits in order to minimize the protocol specification impact in NAS/RRC/PDCP/RLC/MAC.*
  - *o NOTE: The message size of UL-CCCH-Message containing RRCConnection(Reestablishment)Request is 48 bits.*
- *Recommending a working assumption that both of the following are supported by the specifications:*
  - *o 3.75 kHz subcarrier spacing for the first transmission after the first UL random access transmission*
  - *o 15 kHz subcarrier spacing for the first transmission after the first UL random access transmission*
  - *o Details of network configurability is left to WGs (including the possibility of configuring both in the same cell)*

discussion: Mediatek: we should not jump into RAN1 discussion, RAN should focus on capabilities
DT: a bit a disappointing that after 4 hours offline discussion we see now diffee
ZTE: shares concern with Mediatek that multitone has to be discussed in RAN1
RAN2 chair: it needs to be clarified what RAN1 and what RAN2 has to do as this is a but blurry at the moment
RAN chairman: discuss this over Thu lunch break, we will come back

conclusion: noted

RP-152268 Way forward on NB-IOT bands Vodafone, Deutsche Telekom, Telefónica, Orange, China Unicom, Verizon, CMCC, Telecom Italia, AT&T discussion Rel-13 NB_IOT-Core

proposal:

- *The following bands shall be considered with high priority for defining any RAN4 band specific requirement within Release 13:*
  - *o Bands 1, 3, 5, 8, 12, 13, 17, 19, 20, 26, 28*
  - *o Note if we identify there are other bands not having significant specific issues and there is consensus in RAN4, these could be considered as well*
- *Whether one or multiple bands are supported in a device is a UE implementation issue*

discussion: Qualcomm: unclear what is intention of the last bullet
Vodafone: we do not want to mandate this
Mediatek: would be interesting to know which operator is supporting which one as more bands mean more costs
Voafone: can provide this information offline
Orange: in Europe we have band 8 and band 20 etc.
RAN chair: we will focus on FDD in REL-13 and TDD can be considered later
Ericsson: wondering about 2GHz bands?
DT: we would prefer band 8, there is no single band below 1GHz which is available all over the world
RAN chair: too much spectrum fragmentation will increase the hosts, hopefully the market will automatically regulate this
Huawei: we should prioritize
RAN chair: it seems operators could not converge so far but agrees that operators should strive to reduce the number of options
DT: suggests that RAN4 will work on these bands
Qualcomm: RAN2 can decide about the signalling themself so last bullet does not limit this
RAN chair: correct, up to RAN2
Qualcomm: some bands are even overlapping, is there no way to reduce the options?
RAN chair: at the moment it seems not so let's endorse this way forward

conclusion: noted, way forward is endorsed, Huawei will reflect this in the WID revision as well

RP-152276 Way forward on S1 signalling solutions for non-NB-IoT UEs Ericsson discussion Rel-13 NB_IOT-Core

Proposals:

- *Signalling design for solution 2 and solution 18 for NB-IoT UEs is done in NB-IoT session. Additional changes due to support for other UEs will be done in TEI13 session. However, additional optimizations e.g. due to mobility will not be discussed.*
- *We will have*

Samsung Exhibit 1025, Page 977 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- *o CRs for NB-IoT UEs (including e.g. L1 parameters, signalling enhancements and other enhancements)*
- *o and a separate CR of additional impact due to non-NB-IoT UEs (e.g. capabilities).*

- *First CR set is discussed in NB-IoT session and second CR set (additional impact due to non-NB-IoT UEs) in TEI13. The second CR set can be written as an alternative CR for the first one (in case they are ready at the same time).*
- *RAN2 and RAN3 have to allocate TEI13 time for the second CR set.*
- *Will inform CT1/SA2 by LS and they can apply same approach.*
- *This approach is applied both for Sol2 and Sol18 unless there are significant impacts on specifications identified.*

discussion: RAN chair: already very detailed
RAN3 chair: CRs will be handled in WGs
Vodafone: SA2 needs some clarity on what RAN thinks on these solutions
RAN chair: just summarize the principles and not CR management (remove 3rd bullet)
Mediatek: can we assume that RAN2 will comply with CP/UP assumption with SA2?
RAN chair: RAN2 and SA2 have to synchronize
Huawei: sympathy with Mediatek to simplify this
conclusion: revised in RP-152285 (e.g. remove 3rd bullet and adapt 4th bullet)

RP-152285 Way forward on S1 signalling solutions for non-NB-IoT UEs Ericsson, Docomo, Softbank, AT&T, Verizon, Nokia, Qualcomm, Alcatel-Lucent, ALU Shanghai Bell, LG, Samsung, Intel, Sierra Wireless, ZTE, InterDigital, Sony, Vodafone discussion Rel-13 NB_IOT-Core
discussion: Mediatek: RAN2 will be synchronous with SA2 so we are fine
conclusion: noted, way forward endorsed

RP-152277 Draft LS on S1 signalling solutions for non-NB-IoT UEs (to: SA2, CT1, SA, CT3, CT4, RAN2; cc: RAN1; contact: Ericsson) Ericsson LSout Rel-13 NB_IOT-Core
conclusion: revised in RP-152292

RP-152292 Draft LS on S1 signalling solutions for non-NB-IoT UEs (to: SA2, SA3, SA, CT1, CT3, CT4, RAN2, RAN3; cc: RAN1; contact: Ericsson)Ericsson LS out Rel-13 NB_IOT-Core
conlsuion: revised in RP-152296

RP-152296 LS on S1 signalling solutions for non-NB-IoT UEs (to: SA2, SA3, SA, CT1, CT3, CT4, RAN2, RAN3; cc: RAN1; contact: Ericsson) RAN LS out Rel-13 NB_IOT-Core
conclusion: approved

RP-152297 Draft LS on NB-IOT (to: RAN1; cc: -; contact: Huawei) Huawei LSout Rel-13 NB_IOT-Core
MCC: This is a draft LS which has the wrong source on the Tdoc
discussion: Mediatek: both single-tone and multi-tone should be mandatory
Huawei: we cannot decide on the fly how many IOT bits we would need for this
Orange: some previous text disappeared and it is unclear who requested it and why
Ericsson: PUSH and intial access (this is what Meditek is talking about) need to be distinguished
Mediatek: we need to clarify which UE capabilities we assume
ALU: we have not yet decided about this
RAN2 chair: add cc: RAN2
Vodafone: let's approve the LS and Mediatek can put their
conclusion: revised in RP-152299

RP-152299 LS on NB-IOT (to: RAN1; cc: RAN2; contact: Huawei) RAN LS out Rel-13 NB_IOT-Core
conclusion: approved
Mediatek concern: RAN should not further differentiate UE category/capability within NB-IoT, there should be single UE category for NB-IoT

11.7.18 Core part: Further Enhancements of Minimization of Drive Tests for E-UTRAN
[**New WI**: LTE_eMDT2-Core]

RP-151748 Status report for WI: Further Enhancements of Minimization of Drive Tests for E-UTRAN; rapporteur: China Mobile Com. Corporation RAN2 WI status report Rel-13 LTE_eMDT2-Core
conclusion: noted, approved: 100%, Dec.15, WI is completed

RP-152082 RAN2 agreed CRs on Introoduction of Further Enhancements of Minimization of Drive Tests for E-UTRAN RAN2 CR Pack Rel-13 LTE_eMDT2-Core
conclusion: approved

Samsung Exhibit 1025, Page 978 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-152103 RAN3 CRs for Introduction of feMDT RAN3 CR Pack Rel-13 LTE_eMDT2-Core
conclusion: approved

11.7.19 Core part: LTE-WLAN RAN Level Integration supporting legacy WLAN
[**New WI**: LTE_WLAN_radio_legacy-Core]

RP-151657 Reply LS to RP-151623 on IPsec tunnelling mechanism for LTE-WiFi aggregation (S3-152467; to: RAN, RAN2, SA2; cc: -; contact: NTT DOCOMO) SA3 LS in Rel-13 LTE_WLAN_radio_legacy-Core
no explicit RAN action requested
conclusion: noted, no LS answer

RP-151665 Reply LS to RP-151623 on New WI on LTE-WLAN RAN Level Integration supporting legacy WLAN (S2-154407; to: RAN, RAN2, RAN3, SA3; cc: -; contact: Alcatel-Lucent) SA2 LS in Rel-13 LTE_WLAN_radio_legacy-Core
no explicit RAN action requested
discussion: ALU: RAN2 may reply to this
conclusion: noted, no LS answer

RP-151993 Status Report of WI Core part: LTE-WLAN RAN Level Integration supporting legacy WLAN; rapporteur: Alcatel-LucentRAN2 WI status report Rel-13 LTE_WLAN_radio_legacy-Core
discussion: MCC: why does this WI have a Perf. part target? WI exception request
RAN2 chair: 1TU for RAN2 was agreed
conclusion: noted, approved: 95%, March 16

RP-151990 Exception Sheet for WI LTE-WLAN RAN Level Integration supporting legacy WLAN Alcatel-Lucent WI exception request RAN2 Rel-13 LTE_WLAN_radio_legacy-Core
RAN #69 decided to not allow a REL-13 exception for this WI
discussion: Sprint: supports this, we just need to have the reply from SA3
Deutsche Telekom: surprised to see this exception sheet as we agreed at RAN #69 to have no exception
ALU: only small amount of work in RAN2 remaining, unexected SA3 impact
Mediatek, AT&T: supports the exception
DT: then there is hopefully also no problem for the interworking part on the other WLAN WI
Qualcomm: shares concern from DT
T-Mobile US: supports this exception
Telefonica: supports the exception
RAN chair: acknowledges that this means changing the agreement of RAN #69
Huawei: fine to have the exception
Qualcomm: DRB identity identification can not be done in stage 2, stage 3 is needed
ALU: fine to add this
Ericsson
conclusion: revised in RP-152235

RP-152235 Exception Sheet for WI LTE-WLAN RAN Level Integration supporting legacy WLAN Alcatel-Lucent WI exception request RAN2 Rel-13 LTE_WLAN_radio_legacy-Core
conclusion: approved, RAN2 will complete the work based on the SA3 reply

RP-151868 CR to 36.331 for introduction of LTE-WLAN RAN Level Integration supporting legacy WLAN Alcatel-Lucent CR36.331 1940 1 B Rel-13 LTE_WLAN_radio_legacy-Core
company CR; R2-156367 was not treated at RAN2 #92 and is under email discussion in RAN2 until next RAN2 meeting; this CR is a revision of R2-156367 to inform RAN about the amount of work that remains to be done in connection with exception request RP-151990
conclusion: revised in RP-152231

RP-152231 CR to 36.331 for introduction of LTE-WLAN RAN Level Integration supporting legacy WLAN Alcatel-Lucent CR36.331 1940 1 B Rel-13 LTE_WLAN_radio_legacy-Core
conclusion: not pursued

RP-152083 RAN2 agreed CR on Introduction of Stage 2 text for LTE-WiFi integration for legacy WLANRAN2 CR Pack 36.300 0800 3 B Rel-13 LTE_WLAN_radio_legacy-Core
MCC: WI exception request
conclusion: approved

Samsung Exhibit 1025, Page 979 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.8 Open LTE only related WIs (spectrum and CA related)

NOTE: For the WIs under agenda item 11.8 and 12.1 no separate status reports per WI will be provided but a Tdoc will be submitted to agenda item 11.8 by RAN4 with a collection of all % complete and target dates for each WI.

RP-151640 Status Report of RAN4 CA WIs RAN4 chairman (Nokia Networks) WI status report - -
MCC: Instead of separate SRs for each CA WI, RAN4 provides a single spreadsheet for REL-13 CA WIs tracking completion level, target date and any other essential information.
conclusion: noted, % complete and target dates are approved as in RP-151640 unless modified in the table below in red

RAN #70 agenda	UID	Acronym	REL	target after RAN #70	% complete	rapporteur	Open issues / Other notes
11.08.01.1	650141	LTE_CA_B1_B40-Core	REL-13	Dec.15	100	KT	Agreed CR: R4-157768 , R4-153757
11.08.01.1	650241	LTE_CA_B1_B40-Perf	REL-13	Dec.15	100	KT	Agreed CR: R4-153758, R4-153935, R4-153936
11.08.01.2	660182	LTE_CA_B3_B41-Core	REL-13	Dec.15	100	China Telecom	TS 36.101 CR agreed in R4-157768. TS 36.104 CR agreed in R4-158004.
11.08.01.2	660282	LTE_CA_B3_B41-Perf	REL-13	Dec.15	100	China Telecom	TS 36.307 CRs agreed in R4-157771, R4-157772. TS 36.141 CR agreed in R4-158005.
11.08.01.3	690173	LTE_CA_B5_B38-Core	REL-13	Dec.15	100	Huawei	TS 36.101 CR agreed in R4-157768. TS 36.104 CR agreed in R4-158004.
11.08.01.3	690273	LTE_CA_B5_B38-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157771, R4-157772. TS 36.141 CR agreed in R4-158005.
11.08.01.4	620123	LTE_CA_B8_B27-Core	REL-13	Dec.15	30	KT	Request to stop WI. We will re-open WI when the B8+B27 filter performance is acceptable => WI stopped
11.08.01.4	620223	LTE_CA_B8_B27-Perf	REL-13	Dec.15	30	KT	Request to stop WI. We will re-open WI when the B8+B27 filter performance is acceptable => WI stopped
11.08.01.5	650140	LTE_CA_B20_B40-Core	REL-13	Dec.15	100	Ericsson	TS 36.101 CR agreed in R4-157768. TS 36.104 CR agreed in R4-158004.
11.08.01.5	650240	LTE_CA_B20_B40-Perf	REL-13	Dec.15	100	Ericsson	TS 36.307 CRs agreed in R4-157771, R4-157772. TS 36.141 CR agreed in R4-158005.
11.08.01.6	680175	LTE_CA_700EU_B20-Core	REL-13	Dec.15	100	TeliaSonera	CRs were agreed in RAN4#76bis, R4-156796, -6890, -6891, -6561, -6099, -6100, -6102, -6490, -6101. R3 CRs agreed in R3-152682, -2436)
11.08.01.6	680275	LTE_CA_700EU_B20-Perf	REL-13	Dec.15	100	TeliaSonera	CRs were agreed in RAN4#76bis, R4-156848, -5894…-5896, -6892, -6893, -6562
11.08.02.01	661100	LTE_CA_B1_B3_B7-Core	REL-13	Dec.15	100	Huawei	TS36.101 CR agreed in R4-158446 TS36.104 CR agreed in R4-158006
11.08.02.01	661200	LTE_CA_B1_B3_B7-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157774, R4-157775, R4-157776, R4-157777 TS 36.141 CR agreed in R4-158007
11.08.02.02	660190	LTE_CA_B1_B3_B40-Core	REL-13	Dec.15	100	KT	Agreed CR: R4-157773 R4-158006
11.08.02.02	660290	LTE_CA_B1_B3_B40-Perf	REL-13	Dec.15	100	KT	Agreed CR: R4-158007, R4-157776 , R4-157777
11.08.02.03	660187	LTE_CA_B1_B8_B28-Core	REL-13	March 16	40	Softbank Mobile	Delta Tib, Rib agreement and final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.

Samsung Exhibit 1025, Page 980 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #70 agenda	UID	Acronym	REL	target after RAN #70	% complete	rapporteur	Open issues / Other notes
11.08.02.03	660287	LTE_CA_B1_B8_B28-Perf	REL-13	March 16	40	Softbank Mobile	Final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.04	660191	LTE_CA_B1_B8_B40-Core	REL-13	Dec.15	100	KT	Agreed CR: R4-157773, R4-158006
11.08.02.04	660291	LTE_CA_B1_B8_B40-Perf	REL-13	Dec.15	100	KT	Agreed CR: R4-158007, R4-157776 , R4-157777
11.08.02.05	690174	LTE_CA_B1_B11_B18-Core	REL-13	Dec.15	100	KDDI	R4-158006, R4-158446
11.08.02.05	690274	LTE_CA_B1_B11_B18-Perf	REL-13	Dec.15	100	KDDI	R4-157774, R4-157775, R4-157776, R4-157777, R4-158007
11.08.02.06	670173	LTE_CA_B2_B4_B7-Core	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.06	670273	LTE_CA_B2_B4_B7-Perf	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.07	670172	LTE_CA_B2_B7_B12-Core	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.07	670272	LTE_CA_B2_B7_B12-Perf	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.08	680181	LTE_CA_B3_B7_B38-Core	REL-13	Dec.15	100	Nokia Networks	TS 36.101 CR agreed in R4-158446. TS 36.104 CR agreed in R4-158006.
11.08.02.08	680281	LTE_CA_B3_B7_B38-Perf	REL-13	Dec.15	100	Nokia Networks	TS 36.307 CRs agreed in R4-157774, R4-157775, R4-157776, R4-157777. TS 36.141 CR agreed in R4-158007.
11.08.02.09	620132	LTE_CA_B3_B8_B27-Core	REL-13	Dec.15	25	KT	Request to stop WI. We will re-open WI when the B8+B27 filter performance is acceptable => WI stopped
11.08.02.09	620232	LTE_CA_B3_B8_B27-Perf	REL-13	Dec.15	25	KT	Request to stop WI. We will re-open WI when the B8+B27 filter performance is acceptable => WI stopped
11.08.02.10	660195	LTE_CA_B3_B8_B28-Core	REL-13	March 16	40	Softbank Mobile	Delta Tib, Rib agreement and final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.10	660295	LTE_CA_B3_B8_B28-Perf	REL-13	March 16	40	Softbank Mobile	Final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.11	660192	LTE_CA_B3_B8_B40-Core	REL-13	Dec.15	100	KT	Agreed CR: R4-157773 R4-155070
11.08.02.11	660292	LTE_CA_B3_B8_B40-Perf	REL-13	Dec.15	100	KT	Agreed CR: R4-155071, R4-154532 , R4-154533
11.08.02.12	680178	LTE_CA_B3_B20_B32-Core	REL-13 => REL-14	March 16	50	Ericsson	ΔTIB and ΔRIB values needs to be defined. Proponent should provide the exception sheet to keep the WI in Rel-13. => no exception provided, WI shifted to REL-14
11.08.02.12	680278	LTE_CA_B3_B20_B32-Perf	REL-13 => REL-14	March 16	50	Ericsson	ΔTIB and ΔRIB values needs to be defined. Proponent should provide the exception sheet to keep the WI in Rel-13. => no exception provided, WI shifted to REL-14
11.08.02.13	690177	LTE_CA_B3_B41_B41-Core	REL-13	Dec.15	100	ZTE	TS 36.101 CR agreed in R4-158446.
11.08.02.13	690277	LTE_CA_B3_B41_B41-Perf	REL-13	Dec.15	100	ZTE	TS 36.307 CRs agreed in R4-157776, R4-157777.
11.08.02.14	690176	LTE_CA_B3_B41_B42-Core	REL-13	Dec.15	100	Huawei	TS 36.101 CR agreed in R4-158446. TS 36.104 CR agreed in R4-158006.

Samsung Exhibit 1025, Page 981 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #70 agenda	UID	Acronym	REL	target after RAN #70	% complete	rapporteur	Open issues / Other notes
11.08.02.14	690276	LTE_CA_B3_B41_B42-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157776, R4-157777. TS 36.141 CR agreed in R4-158007.
11.08.02.15	670170	LTE_CA_B4_B4_B7_BWset-Core	REL-13	Dec.15	100	Rogers Communications	No input fro rapporteur but combination is included in big CRs R4-158446, -7774…-7777, -8006, -8007
11.08.02.15	670270	LTE_CA_B4_B4_B7_BWset-Perf	REL-13	Dec.15	100	Rogers Communications	No input fro rapporteur but combination is included in big CRs R4-158446, -7774…-7777, -8006, -8007
11.08.02.16	670171	LTE_CA_B4_B7_B12_BWset-Core	REL-13	Dec.15	100	Rogers Communications	No input fro rapporteur but combination is included in big CRs R4-158446, -7774…-7777, -8006, -8007
11.08.02.16	670271	LTE_CA_B4_B7_B12_BWset-Perf	REL-13	Dec.15	100	Rogers Communications	No input fro rapporteur but combination is included in big CRs R4-158446, -7774…-7777, -8006, -8007
11.08.02.17	690175	LTE_CA_B5_B40_B40-Core	REL-13	Dec.15	100	ZTE	TS 36.101 CR agreed in R4-158446.
11.08.02.17	690275	LTE_CA_B5_B40_B40-Perf	REL-13	Dec.15	100	ZTE	TS 36.307 CRs agreed in R4-157776, R4-157777.
11.08.02.18	670174	LTE_CA_B7_B20_B38-Core	REL-13	Dec.15	100	Nokia Networks	TS 36.101 CR agreed in R4-158446. TS 36.104 CR agreed in R4-158006. CR to 36.133 not needed.
11.08.02.18	670274	LTE_CA_B7_B20_B38-Perf	REL-13	Dec.15	100	Nokia Networks	TS 36.307 CRs agreed in R4-157774, R4-157775, R4-157776, R4-157777. TS 36.141 CR agreed in R4-158007.
11.08.02.19	680179	LTE_CA_B7_B42_B42-Core	REL-13	Dec.15	100	Huawei	TS 36.101 CR agreed in R4-158446. TS 36.104 CR agreed in R4-158006.
11.08.02.19	680279	LTE_CA_B7_B42_B42-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157776, R4-157777. TS 36.141 CR agreed in R4-158007.
11.08.02.20	660196	LTE_CA_B8_B42_B42-Core	REL-13	March 16	40	Softbank Mobile	MSD agreement and final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.20	660296	LTE_CA_B8_B42_B42-Perf	REL-13	March 16	40	Softbank Mobile	Final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.21	660197	LTE_CA_B28_B40_B40-Core	REL-13	Dec.15	100	Huawei	Agreed CRs: R4-157773, R4-158006
11.08.02.21	660297	LTE_CA_B28_B40_B40-Perf	REL-13	Dec.15	100	Huawei	Agreed CRs: R4-157774, R4-157775, R4-157776, R4-157777, R4-158007
11.08.02.22	680182	LTE_CA_B28_B41_B41-Core	REL-13	Dec.15	100	KDDI	R4-158006, R4-158446
11.08.02.22	680282	LTE_CA_B28_B41_B41-Perf	REL-13	Dec.15	100	KDDI	R4-157776, R4-157777, R4-158007
11.08.02.23	680183	LTE_CA_B28_B42_B42-Core	REL-13	Dec.15	100	KDDI	R4-158006, R4-158446
11.08.02.23	680283	LTE_CA_B28_B42_B42-Perf	REL-13	Dec.15	100	KDDI	R4-157776, R4-157777, R4-158007
11.08.03.01	670178	LTE_CA_B1_B3_B5_B40-Core	REL-13	Dec.15	100	SK Telecom	Approved CR:R4-157426
11.08.03.01	670278	LTE_CA_B1_B3_B5_B40-Perf	REL-13	Dec.15	100	SK Telecom	Approved CRs: R4-157429, R4-157430
11.08.03.02	670179	LTE_CA_B1_B3_B7_B8-Core	REL-13	Dec.15	100	Nokia Networks	CR for core part, TS36.101 CR3338 and TS36.104 CR0733, are approved in RAN4. tdoc# are R4-1547426 and R4-158008. (UE tx/rx relaxation and MSD are approved in TP (R4-157358) to TR36.854-13 during RAN4#77.)

Samsung Exhibit 1025, Page 982 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #70 agenda	UID	Acronym	REL	target after RAN #70	% complete	rapporteur	Open issues / Other notes
11.08.03.02	670279	LTE_CA_B1_B3_B7_B8-Perf	REL-13	Dec.15	100	Nokia Networks	CRs for performance part, TS36.141 CR0813, TS36.307 CR0601, CR0602, CR0603 and 0604 are approved in RAN4#77. tdoc# are R4-158009, R4-157427, R4-157428, R4-157429 and R4-157430.
11.08.03.03	690182	LTE_CA_B1_B3_B8_B40-Core	REL-13	Dec.15	100	KT	Agreed CR: R4-157426, R4-158008
11.08.03.03	690282	LTE_CA_B1_B3_B8_B40-Perf	REL-13	Dec.15	100	KT	Agreed CR: R4-158009, R4-157429 , R4-157430
11.08.03.04	680186	LTE_CA_B1_B3_B19_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.04	680286	LTE_CA_B1_B3_B19_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.
11.08.03.05	680187	LTE_CA_B1_B3_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.05	680287	LTE_CA_B1_B3_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.
11.08.03.06	680190	LTE_CA_B1_B19_B21_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.06	680290	LTE_CA_B1_B19_B21_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.
11.08.03.07	680188	LTE_CA_B1_B19_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.07	680288	LTE_CA_B1_B19_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.
11.08.03.08	680191	LTE_CA_B1_B21_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.08	680291	LTE_CA_B1_B21_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.
11.08.03.09	670177	LTE_CA_B2_B2_B4_B4-Core	REL-13	Dec.15	100	Nokia Networks	BS CR 36.104 R4-152732 BS CR 36.141 R4-152733 UE CR 36.101 R4-153921 UE RRM 36.133 R4-157511
11.08.03.09	670277	LTE_CA_B2_B2_B4_B4-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence REL-11 CR R4-153796 Release independence REL-12 CR R4-153797 Release independence REL-13 CR R4-153798
11.08.03.10	680194	LTE_CA_B2_B2_B4_B5-Core	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.10	680294	LTE_CA_B2_B2_B4_B5-Perf	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.11	670176	LTE_CA_B2_B2_B4_B12-Core	REL-13	Dec.15	100	Nokia Networks	BS CR 36.104 R4-152732 BS CR 36.141 R4-152733 UE CR 36.101 R4-153921 UE RRM 36.133 R4-157511
11.08.03.11	670276	LTE_CA_B2_B2_B4_B12-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence REL-11 CR R4-153796 Release independence REL-12 CR R4-153797 Release independence REL-13 CR R4-153798
11.08.03.12	681100	LTE_CA_B2_B2_B5_B12-Core	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)

Samsung Exhibit 1025, Page 983 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #70 agenda	UID	Acronym	REL	target after RAN #70	% complete	rapporteur	Open issues / Other notes
11.08.03.12	681200	LTE_CA_B2_B2_B5_B12-Perf	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.13	661104	LTE_CA_B2_B2_B5_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.13	661204	LTE_CA_B2_B2_B5_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.14	680195	LTE_CA_B2_B2_B12_B12-Core	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.14	680295	LTE_CA_B2_B2_B12_B12-Perf	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.15	661103	LTE_CA_B2_B2_B12_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.15	661203	LTE_CA_B2_B2_B12_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.16	661105	LTE_CA_B2_B2_B29_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.16	661205	LTE_CA_B2_B2_B29_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.17	670175	LTE_CA_B2_B4_B4_B12-Core	REL-13	Dec.15	100	Nokia Networks	BS CR 36.104 R4-152732 BS CR 36.141 R4-152733 UE CR 36.101 R4-153921 UE RRM 36.133 R4-157511
11.08.03.17	670275	LTE_CA_B2_B4_B4_B12-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence REL-11 CR R4-153796 Release independence REL-12 CR R4-153797 Release independence REL-13 CR R4-153798
11.08.03.18	680193	LTE_CA_B2_B4_B5_B12-Core	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.18	680293	LTE_CA_B2_B4_B5_B12-Perf	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.19	670180	LTE_CA_B2_B4_B5_B29-Core	REL-13	Dec.15	100	Huawei	Agreed CRs: R4-155368, R4-155072. Way forward on measurement requirements for 3rd and 4th activated SCells agreed in R4-157511.
11.08.03.19	670280	LTE_CA_B2_B4_B5_B29-Perf	REL-13	Dec.15	100	Huawei	Agreed CRs: R4-154084, R4-154085, R4-155371, R4-155372, R4-155073
11.08.03.20	661107	LTE_CA_B2_B4_B5_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.20	661207	LTE_CA_B2_B4_B5_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.21	680185	LTE_CA_B2_B4_B7_B12-Core	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.

Samsung Exhibit 1025, Page 984 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #70 agenda	UID	Acronym	REL	target after RAN #70	% complete	rapporteur	Open issues / Other notes
11.08.03.21	680285	LTE_CA_B2_B4_B7_B12-Perf	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.03.22	661106	LTE_CA_B2_B4_B12_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.22	661206	LTE_CA_B2_B4_B12_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.23	661108	LTE_CA_B2_B4_B29_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.23	661208	LTE_CA_B2_B4_B29_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.24	681101	LTE_CA_B2_B5_B12_B12-Core	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.24	681201	LTE_CA_B2_B5_B12_B12-Perf	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.25	690185	LTE_CA_B3_B7_B7_B28-Core	REL-13	Dec.15	100	Telstra	Agreed CR:R4-157426
11.08.03.25	690285	LTE_CA_B3_B7_B7_B28-Perf	REL-13	Dec.15	100	Telstra	Agreed CRs: R4-157428, R4-157429, R4-157430
11.08.03.26	680189	LTE_CA_B3_B19_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.26	680289	LTE_CA_B3_B19_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.
11.08.03.27	690183	LTE_CA_B3_B28_B40_B40-Core	REL-13	Dec.15	100	Huawei	TS36.101 CR agreed in R4-157426 TS36.104 CR agreed in R4-158008
11.08.03.27	690283	LTE_CA_B3_B28_B40_B40-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157429, R4-157430 TS 36.141 CR agreed in R4-158009
11.08.03.28	680196	LTE_CA_B4_B4_B5_B30-Core	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.03.28	680296	LTE_CA_B4_B4_B5_B30-Perf	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.03.29	680197	LTE_CA_B4_B4_B12_B30-Core	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.03.29	680297	LTE_CA_B4_B4_B12_B30-Perf	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.03.30	680198	LTE_CA_B4_B4_B29_B30-Core	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.03.30	680298	LTE_CA_B4_B4_B29_B30-Perf	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.

Samsung Exhibit 1025, Page 985 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #70 agenda	UID	Acronym	REL	target after RAN #70	% complete	rapporteur	Open issues / Other notes
11.08.03.31	680192	LTE_CA_B19_B21_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.31	680292	LTE_CA_B19_B21_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.
11.08.03.32	661109	LTE_CA_B25_B41_B41_B41-Core	REL-13	Dec.15	100	Alcatel-Lucent	TS 36.101 CR agreed in R4-153921; TS 36.104 CR agreed in R4-152732; TS 36.133 CRs agreed in R4-152980, R4-153683. Way forward on measurement requirements for 3rd and 4th activated SCells agreed in R4-157511.
11.08.03.32	661209	LTE_CA_B25_B41_B41_B41-Perf	REL-13	Dec.15	100	Alcatel-Lucent	TS 36.307 CRs agreed in R4-153796, R4-153797, R4-153798; TS 36.141 CR agreed in R4-152733.
11.08.03.33	690184	LTE_CA_B28_B40_B40_B40-Core	REL-13	Dec.15	100	Huawei	TS36.101 CR agreed in R4-157426
11.08.03.33	690284	LTE_CA_B28_B40_B40_B40-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157429, R4-157430
11.08.03.34	690179	LTE_CA_B39_B39_B41_B41-Core	REL-13	Dec.15	100	CMCC	TS36.101 CR agreed in R4-157426
11.08.03.34	690279	LTE_CA_B39_B39_B41_B41-Perf	REL-13	Dec.15	100	CMCC	TS 36.307 CRs agreed in R4-157427 , R4-157428, R4-157429, R4-157430
11.08.03.35	690178	LTE_CA_B39_B41_B41_B41-Core	REL-13	Dec.15	100	CMCC	TS36.101 CR agreed in R4-157426
11.08.03.35	690278	LTE_CA_B39_B41_B41_B41-Perf	REL-13	Dec.15	100	CMCC	TS 36.307 CRs agreed in R4-157427 , R4-157428, R4-157429, R4-157430
11.08.03.36	680184	LTE_CA_B41_B41_B42_B42-Core	REL-13	Dec.15	100	ZTE	TS 36.101 CR agreed in157426.
11.08.03.36	680284	LTE_CA_B41_B41_B42_B42-Perf	REL-13	Dec.15	100	ZTE	TS 36.307 CRs agreed in R4-157427, R4-157428, R4-157429, R4-157430.
11.08.04.1	690191	LTE_CA_B1_B3_B7_B7_B28-Core	REL-13	March 16	95	Telstra	All requirements ready except for the generic MSD values for Band 1 and Band 28 to be included. CA combination will be included in Big CRs in next RAN4#78. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.04.1	690291	LTE_CA_B1_B3_B7_B7_B28-Perf	REL-13	March 16	95	Telstra	All requirements ready and approved in a TR. CA combination will be included in Big CRs in next RAN4#78. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.04.2	690189	LTE_CA_B1_B3_B19_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO	No open issues. CR for TS36.101 (R4-157346) was agreed in RAN4#77. CR for TS36.104 is not nessesary since this combination is already captured in this spec. CRs for TS36.133 (R4-158375, R4-158373) were agreed in RAN4#77.
11.08.04.2	690289	LTE_CA_B1_B3_B19_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO	No open issues. CRs for TS36.307(R4-157348, R4-157349) were agreed in RAN4#77. CR for TS36.141 is not nessesary since this combination is already captured in this spec. CR for TS36.133 (R4-155648) was agreed in RAN4#77.

Samsung Exhibit 1025, Page 986 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #70 agenda	UID	Acronym	REL	target after RAN #70	% complete	rapporteur	Open issues / Other notes
11.08.04.3	690190	LTE_CA_B1_B19_B21_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO	No open issues. CR for TS36.101 (R4-157346) was agreed in RAN4#77. CR for TS36.104 is not nessesary since this combination is already captured in this spec. CRs for TS36.133 (R4-158375, R4-158373) were agreed in RAN4#77.
11.08.04.3	690290	LTE_CA_B1_B19_B21_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO	No open issues. CRs for TS36.307(R4-157348, R4-157349) were agreed in RAN4#77. CR for TS36.141 is not nessesary since this combination is already captured in this spec. CR for TS36.133 (R4-155648) was agreed in RAN4#77.
11.08.04.4	690192	LTE_CA_B3_B3_B7_B7_B28-Core	REL-13	March 16	95	Telstra	All requirements ready and approved in a TR. CA combination will be included in Big CRs in the next RAN4#78. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.04.4	690292	LTE_CA_B3_B3_B7_B7_B28-Perf	REL-13	March 16	95	Telstra	All requirements ready and approved in a TR. CA combination will be included in Big CRs in next RAN4#78. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.05.1	661110	LTE_CA_2UL_R13-A1-Core	REL-13	Dec.15	100	Huawei	TS 36.101 CRs agreed in R4-155825, R4-157045.
11.08.05.1	661210	LTE_CA_2UL_R13-A1-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-156028, R4-155828, R4-157046, R4-157047.
11.08.05.2	661111	LTE_CA_2UL_R13-A2-Core	REL-13	Dec.15	100	Qualcomm	Core specifications for CA_1A-28A combination have already been endorsed. No further work is required in Rel-13 to complete this WI.
11.08.05.2	661211	LTE_CA_2UL_R13-A2-Perf	REL-13	Dec.15	100	Qualcomm	Release independent specifications for CA_1A-28A combination have already been endorsed. No further work is required in Rel-13 to complete this WI.
11.08.05.3	661112	LTE_CA_2UL_R13-A3-Core	REL-13	Dec.15	100	Ericsson	CA_18A-28A (only combination in WID after RAN#67) completed and included in agreed CR to 36.101 (R4-153755). No other band combination proposed for Rel-13. GNSS protection: LS received from RAN2 on IDC enhancements for UL CA operations introduced from Rel-11. No further action expected from RAN4 at this stage.
11.08.05.3	661212	LTE_CA_2UL_R13-A3-Perf	REL-13	Dec.15	100	Ericsson	CA_18A-28A (only combination in WID after RAN#67) completed and included in agreed CR (R4-153266). No other band combination proposed for Rel-13.
11.08.05.4	670182	LTE_CA_2UL_R13-A4-Core	REL-13	Dec.15	100	Nokia Networks	UE CR 36.101 R4-155825
11.08.05.4	670282	LTE_CA_2UL_R13-A4-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence R4-155828, R4-155829 and R4-156028

Samsung Exhibit 1025, Page 987 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #70 agenda	UID	Acronym	REL	target after RAN #70	% complete	rapporteur	Open issues / Other notes
11.08.05.5	670181	LTE_CA_2UL_FDD_TDD-Core	REL-13	Dec.15	100	KDDI	NONE (CRs were already approved in RAN#69 and no new combination had been introduced between RAN#69 and RAN#70 and WI can be closed.)
11.08.05.5	670281	LTE_CA_2UL_FDD_TDD-Perf	REL-13	Dec.15	100	KDDI	NONE (CRs were already approved in RAN#69 and no new combination had been introduced between RAN#69 and RAN#70 and WI can be closed.)
11.08.06.1	670183	LTE_CA_3DL_2UL-Core	REL-13	Dec.15	100	Nokia Networks	UE CR 36.101 R4-158263
11.08.06.1	670283	LTE_CA_3DL_2UL-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence R4-157405 and R4-157406
11.08.06.2	681102	LTE_CA_3DL_2UL_inter_intra-Core	REL-13	Dec.15	100	Nokia Networks	TP to 3DL/2UL TR 36.879-13 agreed in R4-156524 TP to 3DL/2UL TR 36.879-13 agreed in R4-156525 BS CR 36.101 R4-157873
11.08.06.2	681202	LTE_CA_3DL_2UL_inter_intra-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence REL-11 CR R4-157837 Release independence REL-12 CR R4-157868 Release independence REL-13 CR R4-157871
11.08.07.1	690194	LTE_CA_3DL3UL_B39_B39_B41-Core	REL-13	Dec.15	100	CATT	Agreed CR： R4-158317, R4-158374
11.08.07.1	690294	LTE_CA_3DL3UL_B39_B39_B41-Perf	REL-13	Dec.15	100	CATT	Agreed CR： R4-157235, R4-157236
11.08.07.2	690193	LTE_CA_3DL3UL_B39_B41_B41-Core	REL-13	Dec.15	100	CATT	CRs agreed: R4-158317
11.08.07.2	690293	LTE_CA_3DL3UL_B39_B41_B41-Perf	REL-13	Dec.15	100	CATT	CRs agreed: R4-147235, R4-157236
11.08.08.1	681103	LTE_CA_C_B5-Core	REL-13	Dec.15	100	Intel	CR TS 36.101 agreed in R4-158254; CR TS 36.104 agreed in R4-156968
11.08.08.1	681203	LTE_CA_C_B5-Perf	REL-13	Dec.15	100	Intel	CR TS 36.141 agreed in R4-156969; CR TS 36.307 agreed in R4-156970, R4-158255, R4-158256 and R4-158257
11.08.08.2	670185	LTE_CA_C_B8-Core	REL-13	Dec.15	100	CMCC	TS 36.101 CR agreed in R4-156784 TS 36.104 CR agreed in R4-155981
11.08.08.2	670285	LTE_CA_C_B8-Perf	REL-13	Dec.15	100	CMCC	TS 36.307 CRs agreed in R4-155983 , R4-155984, R4-155985,R4-155986 TS 36.141 CR agreed in R4-155982.
11.08.09.1	681105	LTE_CA_NC_B5-Core	REL-13	Dec.15	100	Intel	CR TS 36.101 agreed in R4-156971; CR TS 36.104 agreed in R4-156972
11.08.09.1	681205	LTE_CA_NC_B5-Perf	REL-13	Dec.15	100	Intel	CR TS 36.141 agreed in R4-156973; CR TS 36.307 agreed in R4-156974, R4-158259 and R4-158260
11.08.09.2	690195	LTE_CA_NC_B7_BWset-Core	REL-13	Dec.15	100	Huawei	TS 36.101 CR R4-157432 was agreed
11.08.09.2	690295	LTE_CA_NC_B7_BWset-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs TS R4-157433 and R4-157434 were agreed
11.08.10.1	670186	LTE_CA_C_B42_4DL-Core	REL-13	Dec.15	100	CATT	CRs agreed: R4-156793, R4-157450
11.08.10.1	670286	LTE_CA_C_B42_4DL-Perf	REL-13	Dec.15	100	CATT	CRs agreed: R4-155480, R4-157218, R4-156844

Samsung Exhibit 1025, Page 988 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #70 agenda	UID	Acronym	REL	target after RAN #70	% complete	rapporteur	Open issues / Other notes
11.08.11.1	661113	LTE_CA_NC_B41_4DL-Core	REL-13	Dec.15	100	Alcatel-Lucent	TS 36.101 CR agreed in R4-158261. Way forward on measurement requirements for 3rd and 4th activated SCells agreed in R4-157511.
11.08.11.1	661213	LTE_CA_NC_B41_4DL-Perf	REL-13	Dec.15	100	Alcatel-Lucent	TS 36.307 CRs agreed in R4-157860, R4-157861 and R4-157862.
11.08.11.2	681106	LTE_CA_NC_B42_4DL-Core	REL-13	Dec.15	100	Huawei	TS36.101 CR agreed in R4-157589
11.08.11.2	681206	LTE_CA_NC_B42_4DL-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-155510, R4-155511, R4-155512,
12.1.1	690180	LTE_CA_B4_B4_B5_B12-Core	REL-14 => REL-13	Dec.15	100	US Cellular	Agreed CRs R4-157426, -7430, -8008, -8009). WI was Rel-14 but moved back to Rel-13 and included in big CRs.
12.1.1	690280	LTE_CA_B4_B4_B5_B12-Perf	REL-14 => REL-13	Dec.15	100	US Cellular	Agreed CRs R4-157426, -7430, -8008, -8009). WI was Rel-14 but moved back to Rel-13 and included in big CRs.
12.1.2	690181	LTE_CA_B2_B4_B4_B5-Core	REL-14 => REL-13	Dec.15	100	US Cellular	Agreed CRs R4-157426, -7430, -8008, -8009). WI was Rel-14 but moved back to Rel-13 and included in big CRs.
12.1.2	690281	LTE_CA_B2_B4_B4_B5-Perf	REL-14 => REL-13	Dec.15	100	US Cellular	Agreed CRs R4-157426, -7430, -8008, -8009). WI was Rel-14 but moved back to Rel-13 and included in big CRs.
12.1.3	690186	LTE_CA_B4_B5_B12_B12-Core	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped
12.1.3	690286	LTE_CA_B4_B5_B12_B12-Perf	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped
12.1.4	690187	LTE_CA_B4_B4_B12_B12-Core	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped
12.1.4	690287	LTE_CA_B4_B4_B12_B12-Perf	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped
12.1.5	690188	LTE_CA_B2_B4_B12_B12-Core	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped
12.1.5	690288	LTE_CA_B2_B4_B12_B12-Perf	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped

RP-152155 CR for clearification of band combination in 36.133 RAN4 CR Pack Rel-13 LTE_CA_3DL3UL_B39_B39_B41, LTE_CA_3DL3UL_B39_B41_B41, LTE_CA_B1_B19_B21_B42_B42-Core, LTE_CA_B1_B3_B19_B42_B42-Core, LTE_CA_B1_B3_B7_B7_B28-Core, LTE_CA_B2_B2_B12_B30-Core, LTE_CA_B2_B2_B29_B30-Core, LTE_CA_B2_B2_B4_B12-Core, LTE_CA_B2_B2_B4_B4-Core, LTE_CA_B2_B2_B5_B30-Core, LTE_CA_B2_B4_B12_B30-Core, LTE_CA_B2_B4_B29_B30-Core, LTE_CA_B2_B4_B4_B12-Core, LTE_CA_B2_B4_B5_B29-Core, LTE_CA_B2_B4_B5_B30-Core, LTE_CA_B25_B41_B41_B41-Core, LTE_CA_B3_B3_B7_B7_B28-Core, LTE_CA_C_B42_4DL-Core, LTE_CA_NC_B41_4DL-Core

Samsung Exhibit 1025, Page 989 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

11.8.1 Inter-band CA related WIs (2DL/1UL)

RP-152156 Inter-band CA related WIs (2DL/1UL) RAN4 CR Pack Rel-13 LTE_CA_B1_B40-Core, LTE_CA_B20_B40-Core, LTE_CA_B20_B40-Perf, LTE_CA_B3_B41-Core, LTE_CA_B3_B41-Perf, LTE_CA_B5_B38-Core, LTE_CA_B5_B38-Perf
conclusion: approved

11.8.1.1 LTE Advanced inter-band CA of Band 1 and Band 40 [LTE_CA_B1_B40]

11.08.01.1	650141	LTE_CA_B1_B40-Core	REL-13	Dec.15	100	KT	Agreed CR: R4-157768 , R4-153757
11.08.01.1	650241	LTE_CA_B1_B40-Perf	REL-13	Dec.15	100	KT	Agreed CR: R4-153758, R4-153935, R4-153936

No contributions

Core and Perf. part WI completed

11.8.1.2 LTE Advanced inter-band CA of Band 3 and Band 41 [LTE_CA_B3_B41]

11.08.01.2	660182	LTE_CA_B3_B41-Core	REL-13	Dec.15	100	China Telecom	TS 36.101 CR agreed in R4-157768. TS 36.104 CR agreed in R4-158004.
11.08.01.2	660282	LTE_CA_B3_B41-Perf	REL-13	Dec.15	100	China Telecom	TS 36.307 CRs agreed in R4-157771, R4-157772. TS 36.141 CR agreed in R4-158005.

No contributions

Core and Perf. part WI completed

11.8.1.3 LTE Advanced inter-band CA for Band 5 and Band 38 [**New WI:** LTE_CA_B5_B38]

11.08.01.3	690173	LTE_CA_B5_B38-Core	REL-13	Dec.15	100	Huawei	TS 36.101 CR agreed in R4-157768. TS 36.104 CR agreed in R4-158004.
11.08.01.3	690273	LTE_CA_B5_B38-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157771, R4-157772. TS 36.141 CR agreed in R4-158005.

No contributions

Core and Perf. part WI completed

11.8.1.4 LTE Advanced inter-band CA of Band 8 and Band 27 [LTE_CA_B8_B27]

11.08.01.4	620123	LTE_CA_B8_B27-Core	REL-13	Dec.15	30	KT	Request to stop WI. We will re-open WI when the B8+B27 filter performance is acceptable => WI stopped
11.08.01.4	620223	LTE_CA_B8_B27-Perf	REL-13	Dec.15	30	KT	Request to stop WI. We will re-open WI when the B8+B27 filter performance is acceptable => WI stopped

No contributions

WIs LTE_CA_B8_B27-Core and LTE_CA_B8_B27-Perf are stopped at RAN #70.

11.8.1.5 LTE Advanced inter-band CA of Band 20 and Band 40 [LTE_CA_B20_B40]

11.08.01.5	650140	LTE_CA_B20_B40-Core	REL-13	Dec.15	100	Ericsson	TS 36.101 CR agreed in R4-157768. TS 36.104 CR agreed in R4-158004.
11.08.01.5	650240	LTE_CA_B20_B40-Perf	REL-13	Dec.15	100	Ericsson	TS 36.307 CRs agreed in R4-157771, R4-157772. TS 36.141 CR agreed in R4-158005.

No contributions

Samsung Exhibit 1025, Page 990 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Core and Perf. part WI completed

11.8.1.6 European 700 Supplemental Downlink band (738-758 MHz) in E-UTRA and LTE CA (2DL/1UL) with Band 20 [LTE_CA_700EU_B20]

11.08.01.6	680175	LTE_CA_700EU_B20-Core	REL-13	Dec.15	100	TeliaSonera	CRs were agreed in RAN4#76bis, R4-156796, -6890, -6891, -6561, -6099, -6100, -6102, -6490, -6101. R3 CRs agreed in R3-152682, -2436)
11.08.01.6	680275	LTE_CA_700EU_B20-Perf	REL-13	Dec.15	100	TeliaSonera	CRs were agreed in RAN4#76bis, R4-156848, -5894…-5896, -6892, -6893, -6562

RP-152044 Revised WID for European 700 Supplemental Downlink band (738-758 MHz) in E-UTRA and LTE Carrier Aggregation (2DL/1UL) with Band 20 TeliaSonera WID revised RAN4 s (2DL/1UL) Rel-13 LTE_CA_700EU_B20
last approved WID: RP-151228
conclusion: approved

RP-152104 RAN3 CRs for European 700 Supplemental Downlink band RAN3 CR Pack Rel-13 LTE_CA_700EU_B20-Core
conclusion: approved

RP-152157 European 700 Supplemental Downlink band (738-758 MHz) in E-UTRA and LTE Carrier Aggregation (2DL/1UL) with Band 20 RAN4 CR Pack Rel-13 LTE_CA_700EU_B20-Core, LTE_CA_700EU_B20-Perf
conclusion: approved

RP-152042 TR 36.895 v1.0.0 on European 700 Supplemental Downlink band (738-758 MHz) in E-UTRA TeliaSonera draft TR 36.895 RAN4 Rel-13 LTE_CA_700EU_B20-Core
RAN4 TR 36.895 submitted for 1-step approval;
conclusion: revised in RP-152194 to align with drafting rules

RP-152194 TR 36.895 v1.0.1 on European 700 Supplemental Downlink band (738-758 MHz) in E-UTRA TeliaSonera draft TR 36.895 RAN4 Rel-13 LTE_CA_700EU_B20-Core
revision of RP-152042; RAN4 TR 36.895 submitted for 1-step approval
conclusion: revised in RP-152240

RP-152240 TR 36.895 v1.1.0 on European 700 Supplemental Downlink band (738-758 MHz) in E-UTRA TeliaSonera draft TR 36.895 RAN4 Rel-13 LTE_CA_700EU_B20-Core
RAN4 TR 36.895 submitted for 1-step approval;
conclusion: TR 36.895 is approved as v13.0.0

Core and Perf. part WI are completed

11.8.2 3 Band Carrier Aggregation (3DL/1UL)

RP-152161 3 Band Carrier Aggregation (3DL/1UL) RAN4 CR Pack Rel-13 LTE_CA_B1_B11_B18-Core, LTE_CA_B1_B11_B18-Core, LTE_CA_B1_B11_B18-Perf, LTE_CA_B1_B3_B40-Core, LTE_CA_B1_B3_B40-Perf, LTE_CA_B1_B3_B7-Core, LTE_CA_B1_B3_B7-Perf, LTE_CA_B1_B8_B40-Core, LTE_CA_B1_B8_B40-Perf, LTE_CA_B28_B40_B40-Core, LTE_CA_B28_B40_B40-Perf, LTE_CA_B28_B41_B41-Core, LTE_CA_B28_B41_B41-Perf, LTE_CA_B28_B42_B42-Core, LTE_CA_B28_B42_B42-Perf, LTE_CA_B3_B41_B41-Core, LTE_CA_B3_B41_B41-Perf, LTE_CA_B3_B41_B42-Core, LTE_CA_B3_B41_B42-Perf, LTE_CA_B3_B7_B38-Core, LTE_CA_B3_B7_B38-Perf, LTE_CA_B3_B8_B40-Core, LTE_CA_B3_B8_B40-Perf, LTE_CA_B4_B4_B7_BWset-Core, LTE_CA_B4_B4_B7_BWset-Perf, LTE_CA_B4_B7_B12_BWset-Core, LTE_CA_B4_B7_B12_BWset-Perf, LTE_CA_B5_B40_B40-Core, LTE_CA_B5_B40_B40-Perf, LTE_CA_B7_B20_B38-Core, LTE_CA_B7_B20_B38-Perf, LTE_CA_B7_B42_B42-Core, LTE_CA_B7_B42_B42-Perf
conclusion: approved

RP-152176 Introduction of additional band combinations for 3DL inter-band CA RAN4 CR Pack Rel-13 LTE_CA_B1_B3_B7-Core, LTE_CA_B1_B3_B40-Core, LTE_A_B1_B8_B40-Core, LTE_CA_B1_B11_B18-Core, LTE_CA_B3_B7_B38-Core, LTE_CA_B3_B8_B40-Core,

Samsung Exhibit 1025, Page 991 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

LTE_CA_B3_B41_B41-Core, LTE_CA_B3_B41_B42-Core, LTE_CA_B4_B4_B7_BWset-Core, LTE_CA_B4_B7_B12_BWSet-Core, LTE_CA_B5_B40_B40-Core, LTE_CA_B7_B20_B38-Core, LTE_CA_B7_B42_B42-Core, LTE_CA_B28_B40_B40-Core, LTE_CA_B28_B41_B41-Core, LTE_CA_B28_B42_B42-Core
discussion: MCC: late submission; R4-158446: Big CR to introduce 3DL CA combinations; an error was discovered in the CR; company CR in RP-151972 to correct it;
conclusion: revised in RP-151972

RP-151972 Revision of the RAN4 approved R4-158446 (big CR 3DL 36.101) Ericsson CR36.101 3358 2 B Rel-13LTE_CA_B1_B8_B40-Core, LTE_CA_B3_B8_B40-Core, LTE_CA_B28_B40_B40-Core, LTE_CA_B1_B3_B7-Core, LTE_CA_B4_B4_B7_BWset-Core, LTE_CA_B4_B7_B12_BWset-Core, LTE_CA_B7_B20_B38-Core, LTE_CA_B7_B42_B42-Core, LTE_CA_B3_B7_B38-Core, LTE_CA_B28_B41_B41-Core, LTE_CA_B28_B42_B42-Core, LTE_CA_B1_B11_B18-Core, LTE_CA_B5_B40_B40-Core, LTE_CA_B3_B41_B42-Core, LTE_CA_B3_B41_B41-Core
company CR; CR is replacing RAN4 agreed CR R4-158446 (corrects typo, bandwidth for 1A-3A-40A and 1A-8A-40A and corrects that the fallback 8A-28A was included) of RP-152176
discussion: MCC: RP-152176 is under AI 11.8.2 but for open WIs; moved from AI 11.4.2 to AI 11.8.2
conclusion: approved

11.8.2.1 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 3 and Band 7

[LTE_CA_B1_B3_B7]

11.08.02.01	661100	LTE_CA_B1_B3_B7-Core	REL-13	Dec.15	100	Huawei	TS36.101 CR agreed in R4-158446 TS36.104 CR agreed in R4-158006
11.08.02.01	661200	LTE_CA_B1_B3_B7-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157774, R4-157775, R4-157776, R4-157777 TS 36.141 CR agreed in R4-158007

No contributions

Core and Perf. part WI completed

11.8.2.2 LTE Advanced 3 band CA (3DL/1UL) of Band 1, Band 3 and Band 40

[LTE_CA_B1_B3_B40]

11.08.02.02	660190	LTE_CA_B1_B3_B40-Core	REL-13	Dec.15	100	KT	Agreed CR: R4-157773 R4-158006
11.08.02.02	660290	LTE_CA_B1_B3_B40-Perf	REL-13	Dec.15	100	KT	Agreed CR: R4-158007, R4-157776 , R4-157777

No contributions

Core and Perf. part WI completed

11.8.2.3 LTE Advanced 3 band CA (3DL/1UL) of Band 1, Band 8 and Band 28

[LTE_CA_B1_B8_B28]

11.08.02.03	660187	LTE_CA_B1_B8_B28-Core	REL-13	March 16	40	Softbank Mobile	Delta Tib, Rib agreement and final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.03	660287	LTE_CA_B1_B8_B28-Perf	REL-13	March 16	40	Softbank Mobile	Final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-151719 Work item exception for LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 1, Band 8 and Band 28 SoftBank Corp. WI exception request RAN4 s (3DL/1UL) Rel-13 LTE_CA_B1_B8_B28-Core
conclusion: approved

11.8.2.4 LTE Advanced 3 band CA (3DL/1UL) of Band 1, Band 8 and Band 40

[LTE_CA_B1_B8_B40]

11.08.02.04	660191	LTE_CA_B1_B8_B40-Core	REL-13	Dec.15	100	KT	Agreed CR: R4-157773, R4-158006

Samsung Exhibit 1025, Page 992 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.08.02.04	660291	LTE_CA_B1_B8_B40-Perf	REL-13	Dec.15	100	KT	Agreed CR: R4-158007, R4-157776, R4-157777

No contributions

Core and Perf. part WI completed

11.8.2.5 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 11 and Band 18

[**New WI**: LTE_CA_B1_B11_B18]

11.08.02.05	690174	LTE_CA_B1_B11_B18-Core	REL-13	Dec.15	100	KDDI	R4-158006, R4-158446
11.08.02.05	690274	LTE_CA_B1_B11_B18-Perf	REL-13	Dec.15	100	KDDI	R4-157774, R4-157775, R4-157776, R4-157777, R4-158007

No contributions

Core and Perf. part WI completed

11.8.2.6 LTE Advanced 3 Band CA (3DL/1UL) of Band 2, Band 4 and Band 7

[LTE_CA_B2_B4_B7]

11.08.02.06	670173	LTE_CA_B2_B4_B7-Core	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.06	670273	LTE_CA_B2_B4_B7-Perf	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-152020 Work item exception for LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 2, Band 4 and Band 7 Rogers CommunicationsWI exception request RAN4 s (3DL/1UL) Rel-13 LTE_CA_B2_B4_B7-Core
conclusion: approved

RP-151782 Revised WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 4 and Band 7 Rogers CommunicationsWID revised RAN4 s (3DL/1UL) Rel-13LTE_CA_B2_B4_B7
last approved WID: RP-150432; completion date postponed to March 16
conclusion: approved

11.8.2.7 LTE Advanced 3 Band CA (3DL/1UL) of Band 2, Band 7 and Band 12

[LTE_CA_B2_B7_B12]

11.08.02.07	670172	LTE_CA_B2_B7_B12-Core	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.07	670272	LTE_CA_B2_B7_B12-Perf	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-152021 Work item exception for LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 2, Band 7 and Band 12 Rogers CommunicationsWI exception request RAN4 s (3DL/1UL) Rel-13 LTE_CA_B2_B7_B12-Core
conclusion: approved

RP-151785 Revised WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 7 and Band 12 Rogers CommunicationsWID revised RAN4 s (3DL/1UL) Rel-13LTE_CA_B2_B7_B12
last approved WID: RP-150431; completion date postponed to March 16
conclusion: approved

11.8.2.8 LTE Advanced 3 Band CA (3DL/1UL) for Band 3, Band 7 and Band 38

[LTE_CA_B3_B7_B38]

11.08.02.08	680181	LTE_CA_B3_B7_B38-Core	REL-13	Dec.15	100	Nokia Networks	TS 36.101 CR agreed in R4-158446. TS 36.104 CR agreed in R4-158006.

Samsung Exhibit 1025, Page 993 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.08.02.08	680281	LTE_CA_B3_B7_B38-Perf	REL-13	Dec.15	100	Nokia Networks	TS 36.307 CRs agreed in R4-157774, R4-157775, R4-157776, R4-157777. TS 36.141 CR agreed in R4-158007.

No contributions

Core and Perf. part WI completed

11.8.2.9 LTE Advanced 3 Band CA (3DL/1UL) for Band 3, Band 8 and Band 27

[LTE_CA_B3_B8_B27]

11.08.02.09	620132	LTE_CA_B3_B8_B27-Core	REL-13	Dec.15	25	KT	Request to stop WI. We will re-open WI when the B8+B27 filter performance is acceptable => WI stopped
11.08.02.09	620232	LTE_CA_B3_B8_B27-Perf	REL-13	Dec.15	25	KT	Request to stop WI. We will re-open WI when the B8+B27 filter performance is acceptable => WI stopped

No contributions

WIs LTE_CA_B3_B8_B27-Core and LTE_CA_B3_B8_B27-Perf are stopped at RAN #70.

11.8.2.10 LTE Advanced 3 band CA (3DL/1UL) of Band 3, Band 8 and Band 28

[LTE_CA_B3_B8_B28]

11.08.02.10	660195	LTE_CA_B3_B8_B28-Core	REL-13	March 16	40	Softbank Mobile	Delta Tib, Rib agreement and final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.10	660295	LTE_CA_B3_B8_B28-Perf	REL-13	March 16	40	Softbank Mobile	Final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-151720 Work item exception for LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 3, Band 8 and Band 28 SoftBank Corp. WI exception request RAN4 s (3DL/1UL) Rel-13 LTE_CA_B3_B8_B28-Core
conclusion: approved

11.8.2.11 LTE Advanced 3 band CA (3DL/1UL) of Band 3, Band 8 and Band 40

[LTE_CA_B3_B8_B40]

11.08.02.11	660192	LTE_CA_B3_B8_B40-Core	REL-13	Dec.15	100	KT	Agreed CR: R4-157773 R4-155070
11.08.02.11	660292	LTE_CA_B3_B8_B40-Perf	REL-13	Dec.15	100	KT	Agreed CR: R4-155071, R4-154532, R4-154533

No contributions

Core and Perf. part WI completed

11.8.2.12 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 20 and Band 32

[LTE_CA_B3_B20_B32]

11.08.02.12	680178	LTE_CA_B3_B20_B32-Core	REL-13 => REL-14	March 16	50	Ericsson	ΔTIB and ΔRIB values needs to be defined. Proponent should provide the exception sheet to keep the WI in Rel-13. => no exception provided, WI shifted to REL-14
11.08.02.12	680278	LTE_CA_B3_B20_B32-Perf	REL-13 => REL-14	March 16	50	Ericsson	ΔTIB and ΔRIB values needs to be defined. Proponent should provide the exception sheet to keep the WI in Rel-13. => no exception provided, WI shifted to REL-14

Samsung Exhibit 1025, Page 994 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

No contributions

WIs are not completed in Dec.15 (=freeze of REL-13), no REL-13 exception request sheet was provided to RAN #70, target dates were shifted into REL-14 period (March 16) => WIs are shifted from REL-13 to REL-14 (no possibility to come back to REL-13)

Although all REL-14 CA combinations shall be covered in basket CA WIs, LTE_CA_B3_B20_B32-Core and LTE_CA_B3_B20_B32-Perf will be kept open as separate WIs in REL-14 so far but they have to be integrated into REL-14 basket WIs at RAN #71.

Note: No REL-14 specs will be introduced at March 16 (which is supposed to be the freeze of REL-13 ASN.1).

11.8.2.13 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 41, and Band 41

[**New WI**: LTE_CA_B3_B41_B41]

11.08.02.13	690177	LTE_CA_B3_B41_B41-Core	REL-13	Dec.15	100	ZTE	TS 36.101 CR agreed in R4-158446.
11.08.02.13	690277	LTE_CA_B3_B41_B41-Perf	REL-13	Dec.15	100	ZTE	TS 36.307 CRs agreed in R4-157776, R4-157777.

No contributions

Core and Perf. part WI completed

11.8.2.14 LTE Advanced 3 Band CA (3DL/1UL) for Band 3, Band 41 and Band 42

[**New WI**: LTE_CA_B3_B41_B42]

11.08.02.14	690176	LTE_CA_B3_B41_B42-Core	REL-13	Dec.15	100	Huawei	TS 36.101 CR agreed in R4-158446. TS 36.104 CR agreed in R4-158006.
11.08.02.14	690276	LTE_CA_B3_B41_B42-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157776, R4-157777. TS 36.141 CR agreed in R4-158007.

RP-151817 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) for Band 3, Band 41 and Band 42 Huawei, HiSilicon WID revised RAN4 s (3DL/1UL) Rel-13 LTE_CA_B3_B41_B42

last approved WID: RP-151365; channel bandwidth deleted which is not aligned with the fall back mode

conclusion: approved

Core and Perf. part WI completed

11.8.2.15 Additional bandwidth combination set for LTE Advanced 3 Band CA (3DL/1UL) of Band 4, Band 4 and Band 7 [LTE_CA_B4_B4_B7_BWset]

11.08.02.15	670170	LTE_CA_B4_B4_B7_BWset-Core	REL-13	Dec.15	100	Rogers Communications	No input fro rapporteur but combination is included in big CRs R4-158446, -7774…-7777, -8006, -8007
11.08.02.15	670270	LTE_CA_B4_B4_B7_BWset-Perf	REL-13	Dec.15	100	Rogers Communications	No input fro rapporteur but combination is included in big CRs R4-158446, -7774…-7777, -8006, -8007

No contributions

Core and Perf. part WI completed

11.8.2.16 Additional bandwidth combination set for LTE Advanced 3 Band CA (3DL/1UL) of Band 4, Band 7 and Band 12 [LTE_CA_B4_B7_B12_BWset]

11.08.02.16	670171	LTE_CA_B4_B7_B12_BWset-Core	REL-13	Dec.15	100	Rogers Communications	No input fro rapporteur but combination is included in big CRs R4-158446, -7774…-7777, -8006, -8007
11.08.02.16	670271	LTE_CA_B4_B7_B12_BWset-Perf	REL-13	Dec.15	100	Rogers Communications	No input fro rapporteur but combination is included in big CRs R4-158446, -7774…-7777, -8006, -8007

No contributions

Samsung Exhibit 1025, Page 995 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Core and Perf. part WI completed

11.8.2.17 LTE Advanced 3 Band CA (3DL/1UL) of Band 5, Band 40, and Band 40

[**New WI**: LTE_CA_B5_B40_B40]

11.08.02.17	690175	LTE_CA_B5_B40_B40-Core	REL-13	Dec.15	100	ZTE	TS 36.101 CR agreed in R4-158446.
11.08.02.17	690275	LTE_CA_B5_B40_B40-Perf	REL-13	Dec.15	100	ZTE	TS 36.307 CRs agreed in R4-157776, R4-157777.

No contributions

Core and Perf. part WI completed

11.8.2.18 LTE Advanced 3 Band CA (3DL/1UL) of Band 7, Band 20 and Band 38

[LTE_CA_B7_B20_B38]

11.08.02.18	670174	LTE_CA_B7_B20_B38-Core	REL-13	Dec.15	100	Nokia Networks	TS 36.101 CR agreed in R4-158446. TS 36.104 CR agreed in R4-158006. CR to 36.133 not needed.
11.08.02.18	670274	LTE_CA_B7_B20_B38-Perf	REL-13	Dec.15	100	Nokia Networks	TS 36.307 CRs agreed in R4-157774, R4-157775, R4-157776, R4-157777. TS 36.141 CR agreed in R4-158007.

No contributions

Core and Perf. part WI completed

11.8.2.19 LTE Advanced 3 Band CA (3DL/1UL) for Band 7, Band 42 and Band 42

[LTE_CA_B7_B42_B42]

11.08.02.19	680179	LTE_CA_B7_B42_B42-Core	REL-13	Dec.15	100	Huawei	TS 36.101 CR agreed in R4-158446. TS 36.104 CR agreed in R4-158006.
11.08.02.19	680279	LTE_CA_B7_B42_B42-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157776, R4-157777. TS 36.141 CR agreed in R4-158007.

No contributions

Core and Perf. part WI completed

11.8.2.20 LTE Advanced 3 Band CA (3DL/1UL) of Band 8, Band 42 and Band 42

[LTE_CA_B8_B42_B42]

11.08.02.20	660196	LTE_CA_B8_B42_B42-Core	REL-13	March 16	40	Softbank Mobile	MSD agreement and final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.02.20	660296	LTE_CA_B8_B42_B42-Perf	REL-13	March 16	40	Softbank Mobile	Final TR/CR. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-151721 Work item exception for LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 8, Band 42 and Band 42SoftBank Corp. WI exception request RAN4 s (3DL/1UL) Rel-13 LTE_CA_B8_B42_B42-Core
conclusion: approved

11.8.2.21 LTE Advanced 3 Band CA (3DL/1UL) of Band 28, Band 40 and Band 40

[LTE_CA_B28_B40_B40]

11.08.02.21	660197	LTE_CA_B28_B40_B40-Core	REL-13	Dec.15	100	Huawei	Agreed CRs: R4-157773, R4-158006
11.08.02.21	660297	LTE_CA_B28_B40_B40-Perf	REL-13	Dec.15	100	Huawei	Agreed CRs: R4-157774, R4-157775, R4-157776, R4-157777, R4-158007

Samsung Exhibit 1025, Page 996 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

No contributions

Core and Perf. part WI completed

11.8.2.22 LTE Advanced 3 Band CA (3DL/1UL) of Band 28, Band 41 and Band 41
[LTE_CA_B28_B41_B41]

11.08.02.22	680182	LTE_CA_B28_B41_B41-Core	REL-13	Dec.15	100	KDDI	R4-158006, R4-158446
11.08.02.22	680282	LTE_CA_B28_B41_B41-Perf	REL-13	Dec.15	100	KDDI	R4-157776, R4-157777, R4-158007

No contributions

Core and Perf. part WI completed

11.8.2.23 LTE Advanced 3 Band CA (3DL/1UL) of Band 28, Band 42 and Band 42
[LTE_CA_B28_B42_B42]

11.08.02.23	680183	LTE_CA_B28_B42_B42-Core	REL-13	Dec.15	100	KDDI	R4-158006, R4-158446
11.08.02.23	680283	LTE_CA_B28_B42_B42-Perf	REL-13	Dec.15	100	KDDI	R4-157776, R4-157777, R4-158007

No contributions

Core and Perf. part WI completed

11.8.3 4 Band Carrier Aggregation (4DL/1UL)

RP-152162 4 Band Carrier Aggregation RAN4 CR Pack Rel-13 LTE_CA_B1_B19_B21_B42-Core, LTE_CA_B1_B3_B19_B42-Core, LTE_CA_B1_B3_B5_B40-Core, LTE_CA_B1_B3_B5_B40-Perf, LTE_CA_B1_B3_B7_B8-Core, LTE_CA_B1_B3_B7_B8-Perf, LTE_CA_B1_B3_B8_B40-Core, LTE_CA_B1_B3_B8_B40-Perf, LTE_CA_B2_B2_B12_B12-Core, LTE_CA_B2_B2_B12_B12-Perf, LTE_CA_B2_B2_B4_B5-Core, LTE_CA_B2_B2_B4_B5-Perf, LTE_CA_B2_B2_B5_B12-Core, LTE_CA_B2_B2_B5_B12-Perf, LTE_CA_B2_B4_B12_B30-Core, LTE_CA_B2_B4_B29_B30-Core, LTE_CA_B2_B4_B4_B5-Core, LTE_CA_B2_B4_B4_B5-Perf, LTE_CA_B2_B4_B5_B12-Core, LTE_CA_B2_B4_B5_B12-Perf, LTE_CA_B2_B4_B5_B29-Core, LTE_CA_B2_B4_B5_B29-Perf, LTE_CA_B2_B4_B5_B30-Core, LTE_CA_B2_B5_B12_B12-Core, LTE_CA_B2_B5_B12_B12-Perf, LTE_CA_B28_B40_B40_B40-Core, LTE_CA_B28_B40_B40_B40-Perf, LTE_CA_B3_B28_B40_B40-Core, LTE_CA_B3_B28_B40_B40-Perf, LTE_CA_B3_B7_B7_B28-Core, LTE_CA_B3_B7_B7_B28-Perf, LTE_CA_B39_B39_B41_B41-Core, LTE_CA_B39_B39_B41_B41-Perf, LTE_CA_B39_B41_B41_B41-Core, LTE_CA_B39_B41_B41_B41-Perf, LTE_CA_B4_B4_B5_B12-Core, LTE_CA_B4_B4_B5_B12-Perf, LTE_CA_B41_B41_B42_B42-Core, LTE_CA_B41_B41_B42_B42-Perf,
conclusion: approved

RP-151923 TR 36.854-13 v1.0.0 on LTE Advanced 4 Band Carrier Aggregation (4DL/1UL); Release 13 Nokia Networks draft TR 36.854-13 RAN4 Rel-13 LTE_CA_B2_B2_B5_B30-Core
RAN4 TR 36.854-13 submitted for information;
conclusion: revised in RP152195

RP-152195 TR 36.854-13 v1.1.0 on LTE Advanced 4 Band Carrier Aggregation (4DL/1UL); Release 13 Nokia Networks draft TR 36.854-13 RAN4 Rel-13 LTE_CA_B2_B2_B5_B30-Core
revision of RP-151923; RAN4 TR 36.854-13 submitted for information;
conclusion: noted

11.8.3.1 LTE Advanced 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 5 and Band 40
[LTE_CA_B1_B3_B5_B40]

11.08.03.01	670178	LTE_CA_B1_B3_B5_B40-Core	REL-13	Dec.15	100	SK Telecom	Approved CR:R4-157426
11.08.03.01	670278	LTE_CA_B1_B3_B5_B40-Perf	REL-13	Dec.15	100	SK Telecom	Approved CRs: R4-157429, R4-157430

No contributions

Samsung Exhibit 1025, Page 997 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Core and Perf. part WI completed

11.8.3.2 LTE Advanced 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 7 and Band 8

[LTE_CA_B1_B3_B7_B8]

11.08.03.02	670179	LTE_CA_B1_B3_B7_B8-Core	REL-13	Dec.15	100	Nokia Networks	CR for core part, TS36.101 CR3338 and TS36.104 CR0733, are approved in RAN4. tdoc# are R4-1547426 and R4-158008. (UE tx/rx relaxation and MSD are approved in TP (R4-157358) to TR36.854-13 during RAN4#77.)
11.08.03.02	670279	LTE_CA_B1_B3_B7_B8-Perf	REL-13	Dec.15	100	Nokia Networks	CRs for performance part, TS36.141 CR0813, TS36.307 CR0601, CR0602, CR0603 and 0604 are approved in RAN4#77. tdoc# are R4-158009, R4-157427, R4-157428, R4-157429 and R4-157430.

No contributions

Core and Perf. part WI completed

11.8.3.3 LTE Advanced 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 8 and Band 40

[**New WI**: LTE_CA_B1_B3_B8_B40]

11.08.03.03	690182	LTE_CA_B1_B3_B8_B40-Core	REL-13	Dec.15	100	KT	Agreed CR: R4-157426, R4-158008
11.08.03.03	690282	LTE_CA_B1_B3_B8_B40-Perf	REL-13	Dec.15	100	KT	Agreed CR: R4-158009, R4-157429 , R4-157430

No contributions

Core and Perf. part WI completed

11.8.3.4 LTE Advanced 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 19 and Band 42

[LTE_CA_B1_B3_B19_B42]

11.08.03.04	680186	LTE_CA_B1_B3_B19_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.04	680286	LTE_CA_B1_B3_B19_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.

No contributions

Core and Perf. part WI completed

11.8.3.5 LTE Advanced 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 42 and Band 42

[LTE_CA_B1_B3_B42_B42]

11.08.03.05	680187	LTE_CA_B1_B3_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.05	680287	LTE_CA_B1_B3_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.

No contributions

Core and Perf. part WI completed

11.8.3.6 LTE Advanced 4 Band CA (4DL/1UL) of Band 1, Band 19, Band 21 and Band 42

[LTE_CA_B1_B19_B21_B42]

Samsung Exhibit 1025, Page 998 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.08.03.06	680190	LTE_CA_B1_B19_B21_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.06	680290	LTE_CA_B1_B19_B21_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.

No contributions

Core and Perf. part WI completed

11.8.3.7 LTE Advanced 4 Band CA (4DL/1UL) of Band 1, Band 19, Band 42 and Band 42
[LTE_CA_B1_B19_B42_B42]

11.08.03.07	680188	LTE_CA_B1_B19_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.07	680288	LTE_CA_B1_B19_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.

No contributions

Core and Perf. part WI completed

11.8.3.8 LTE Advanced 4 Band CA (4DL/1UL) of Band 1, Band 21, Band 42 and Band 42
[LTE_CA_B1_B21_B42_B42]

11.08.03.08	680191	LTE_CA_B1_B21_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.08	680291	LTE_CA_B1_B21_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.

No contributions

Core and Perf. part WI completed

11.8.3.9 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 4
[LTE_CA_B2_B2_B4_B4]

11.08.03.09	670177	LTE_CA_B2_B2_B4_B4-Core	REL-13	Dec.15	100	Nokia Networks	BS CR 36.104 R4-152732 BS CR 36.141 R4-152733 UE CR 36.101 R4-153921 UE RRM 36.133 R4-157511
11.08.03.09	670277	LTE_CA_B2_B2_B4_B4-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence REL-11 CR R4-153796 Release independence REL-12 CR R4-153797 Release independence REL-13 CR R4-153798

No contributions

Core and Perf. part WI completed

11.8.3.10 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 5
[LTE_CA_B2_B2_B4_B5]

11.08.03.10	680194	LTE_CA_B2_B2_B4_B5-Core	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.10	680294	LTE_CA_B2_B2_B4_B5-Perf	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)

No contributions

Core and Perf. part WI completed

Samsung Exhibit 1025, Page 999 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.8.3.11 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 12
[LTE_CA_B2_B2_B4_B12]

11.08.03.11	670176	LTE_CA_B2_B2_B4_B12-Core	REL-13	Dec.15	100	Nokia Networks	BS CR 36.104 R4-152732 BS CR 36.141 R4-152733 UE CR 36.101 R4-153921 UE RRM 36.133 R4-157511
11.08.03.11	670276	LTE_CA_B2_B2_B4_B12-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence REL-11 CR R4-153796 Release independence REL-12 CR R4-153797 Release independence REL-13 CR R4-153798

No contributions

Core and Perf. part WI completed

11.8.3.12 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 5 and Band 12
[LTE_CA_B2_B2_B5_B12]

11.08.03.12	681100	LTE_CA_B2_B2_B5_B12-Core	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.12	681200	LTE_CA_B2_B2_B5_B12-Perf	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)

No contributions

Core and Perf. part WI completed

11.8.3.13 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 5 and Band 30
[LTE_CA_B2_B2_B5_B30]

11.08.03.13	661104	LTE_CA_B2_B2_B5_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.13	661204	LTE_CA_B2_B2_B5_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.

No contributions

Core and Perf. part WI completed

11.8.3.14 LTE Advanced 4-Band CA (4DL/1UL) of Band 2, Band 2, Band 12 and Band 12
[LTE_CA_B2_B2_B12_B12]

11.08.03.14	680195	LTE_CA_B2_B2_B12_B12-Core	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.14	680295	LTE_CA_B2_B2_B12_B12-Perf	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)

No contributions

Core and Perf. part WI completed

11.8.3.15 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 12 and Band 30
[LTE_CA_B2_B2_B12_B30]

11.08.03.15	661103	LTE_CA_B2_B2_B12_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.

Samsung Exhibit 1025, Page 1000 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.08.03.15	661203	LTE_CA_B2_B2_B12_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.

No contributions

Core and Perf. part WI completed

11.8.3.16 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 29 and Band 30
[LTE_CA_B2_B2_B29_B30]

11.08.03.16	661105	LTE_CA_B2_B2_B29_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.16	661205	LTE_CA_B2_B2_B29_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.

No contributions

Core and Perf. part WI completed

11.8.3.17 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 4 and Band 12
[LTE_CA_B2_B4_B4_B12]

11.08.03.17	670175	LTE_CA_B2_B4_B4_B12-Core	REL-13	Dec.15	100	Nokia Networks	BS CR 36.104 R4-152732 BS CR 36.141 R4-152733 UE CR 36.101 R4-153921 UE RRM 36.133 R4-157511
11.08.03.17	670275	LTE_CA_B2_B4_B4_B12-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence REL-11 CR R4-153796 Release independence REL-12 CR R4-153797 Release independence REL-13 CR R4-153798

No contributions

Core and Perf. part WI completed

11.8.3.18 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 5 and Band 12
[LTE_CA_B2_B4_B5_B12]

11.08.03.18	680193	LTE_CA_B2_B4_B5_B12-Core	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.18	680293	LTE_CA_B2_B4_B5_B12-Perf	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)

No contributions

Core and Perf. part WI completed

11.8.3.19 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 5 and Band 29
[LTE_CA_B2_B4_B5_B29]

11.08.03.19	670180	LTE_CA_B2_B4_B5_B29-Core	REL-13	Dec.15	100	Huawei	Agreed CRs: R4-155368, R4-155072. Way forward on measurement requirements for 3rd and 4th activated SCells agreed in R4-157511.
11.08.03.19	670280	LTE_CA_B2_B4_B5_B29-Perf	REL-13	Dec.15	100	Huawei	Agreed CRs: R4-154084, R4-154085, R4-155371, R4-155372, R4-155073

Samsung Exhibit 1025, Page 1001 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

No contributions

Core and Perf. part WI completed

11.8.3.20 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 5 and Band 30
[LTE_CA_B2_B4_B5_B30]

11.08.03.20	661107	LTE_CA_B2_B4_B5_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.20	661207	LTE_CA_B2_B4_B5_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.

No contributions

Core and Perf. part WI completed

11.8.3.21 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 7 and Band 12
[LTE_CA_B2_B4_B7_B12]

11.08.03.21	680185	LTE_CA_B2_B4_B7_B12-Core	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.03.21	680285	LTE_CA_B2_B4_B7_B12-Perf	REL-13	March 16	0	Rogers Communications	WI is not ready. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-152022 Work item exception for LTE Advanced 4 band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 7 and Band 12 Rogers CommunicationsWI exception request RAN4 s (4DL/1UL) Rel-13LTE_CA_B2_B4_B7_B12-Core
conclusion: approved

RP-151786 Revised WI: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 7 and Band 12 Rogers CommunicationsWID revised RAN4 s (4DL/1UL) Rel-13 LTE_CA_B2_B4_B7_B12
last approved WID: RP-150628; completion date postponed to March 16
conclusion: approved

11.8.3.22 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 12 and Band 30
[LTE_CA_B2_B4_B12_B30]

11.08.03.22	661106	LTE_CA_B2_B4_B12_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.
11.08.03.22	661206	LTE_CA_B2_B4_B12_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.

No contributions

Core and Perf. part WI completed

11.8.3.23 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30
[LTE_CA_B2_B4_B29_B30]

11.08.03.23	661108	LTE_CA_B2_B4_B29_B30-Core	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.

Samsung Exhibit 1025, Page 1002 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.08.03.23	661208	LTE_CA_B2_B4_B29_B30-Perf	REL-13	Dec.15	100	AT&T	UE CRs agreed in R4-153921, -3796...-3798. BS CRs agreed in R4-152732, -2733. RRM CRs agreed in R4-152980, -3683, -8375.

No contributions

Core and Perf. part WI completed

11.8.3.24 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 5, Band 12 and Band 12

[LTE_CA_B2_B5_B12_B12]

11.08.03.24	681101	LTE_CA_B2_B5_B12_B12-Core	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)
11.08.03.24	681201	LTE_CA_B2_B5_B12_B12-Perf	REL-13	Dec.15	100	U.S. Cellular	Agreed CRs R4-157426, -7430, -8008, -8009)

No contributions

Core and Perf. part WI completed

11.8.3.25 LTE Advanced 4 Band CA (4DL/1UL) of Band 3, Band 7, Band 7 and Band 28

[**New WI**: LTE_CA_B3_B7_B7_B28]

11.08.03.25	690185	LTE_CA_B3_B7_B7_B28-Core	REL-13	Dec.15	100	Telstra	Agreed CR:R4-157426
11.08.03.25	690285	LTE_CA_B3_B7_B7_B28-Perf	REL-13	Dec.15	100	Telstra	Agreed CRs: R4-157428, R4-157429, R4-157430

No contributions

Core and Perf. part WI completed

11.8.3.26 LTE Advanced 4 Band CA (4DL/1UL) of Band 3, Band 19, Band 42 and Band 42

[LTE_CA_B3_B19_B42_B42]

11.08.03.26	680189	LTE_CA_B3_B19_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.26	680289	LTE_CA_B3_B19_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.

No contributions

Core and Perf. part WI completed

11.8.3.27 LTE Advanced 4 Band CA (4DL/1UL) for Band 3, Band 28, Band 40 and Band 40

[**New WI**: LTE_CA_B3_B28_B40_B40]

11.08.03.27	690183	LTE_CA_B3_B28_B40_B40-Core	REL-13	Dec.15	100	Huawei	TS36.101 CR agreed in R4-157426 TS36.104 CR agreed in R4-158008
11.08.03.27	690283	LTE_CA_B3_B28_B40_B40-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157429, R4-157430 TS 36.141 CR agreed in R4-158009

No contributions

Core and Perf. part WI completed

11.8.3.28 LTE Advanced 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 5 and Band 30

[LTE_CA_B4_B4_B5_B30]

11.08.03.28	680196	LTE_CA_B4_B4_B5_B30-Core	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.

Samsung Exhibit 1025, Page 1003 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.08.03.28	680296	LTE_CA_B4_B4_B5_B30-Perf	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-152122 Core part: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 4, Band 4, Band 5 and Band 30 ATT WI exception request RAN4 s (4DL/1UL) Rel-13 LTE_CA_B4_B4_B5_B30-Core
conclusion: approved

11.8.3.29 LTE Advanced 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 12 and Band 30
[LTE_CA_B4_B4_B12_B30]

11.08.03.29	680197	LTE_CA_B4_B4_B12_B30-Core	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.03.29	680297	LTE_CA_B4_B4_B12_B30-Perf	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-152123 Core part: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 4, Band 4, Band 12 and Band 30 ATT WI exception request RAN4 s (4DL/1UL) Rel-13 LTE_CA_B4_B4_B12_B30-Core
conclusion: approved

11.8.3.30 LTE Advanced 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 29 and Band 30
[LTE_CA_B4_B4_B29_B30]

11.08.03.30	680198	LTE_CA_B4_B4_B29_B30-Core	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.03.30	680298	LTE_CA_B4_B4_B29_B30-Perf	REL-13	March 16	50	AT&T	UE ΔTIB,c and ΔRIB,c are missing. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-152124 Core part: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 4, Band 4, Band 29 and Band 30 ATT WI exception request RAN4 s (4DL/1UL) Rel-13 LTE_CA_B4_B4_B29_B30-Core
conclusion: approved

11.8.3.31 LTE Advanced 4 Band CA (4DL/1UL) of Band 19, Band 21, Band 42 and Band 42
[LTE_CA_B19_B21_B42_B42]

11.08.03.31	680192	LTE_CA_B19_B21_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue since CR for TS36.133 (R4-158375) was agreed in RAN4#77.
11.08.03.31	680292	LTE_CA_B19_B21_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO, INC.	No open issue.

No contributions

Core and Perf. part WI completed

11.8.3.32 LTE Advanced 4 Band CA (4DL/1UL) of Band 25, Band 41, Band 41 and Band 41
[LTE_CA_B25_B41_B41_B41]

11.08.03.32	661109	LTE_CA_B25_B41_B41_B41-Core	REL-13	Dec.15	100	Alcatel-Lucent	TS 36.101 CR agreed in R4-153921; TS 36.104 CR agreed in R4-152732; TS 36.133 CRs agreed in R4-152980, R4-153683. Way forward on measurement requirements for 3rd and 4th activated SCells agreed in R4-157511.

Samsung Exhibit 1025, Page 1004 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.08.03.32	661209	LTE_CA_B25_B41_B41_B41-Perf	REL-13	Dec.15	100	Alcatel-Lucent	TS 36.307 CRs agreed in R4-153796, R4-153797, R4-153798; TS 36.141 CR agreed in R4-152733.

No contributions

Core and Perf. part WI completed

11.8.3.33 LTE Advanced 4 Band CA (4DL/1UL) for Band 28, Band 40, Band 40 and Band 40

[**New WI**: LTE_CA_B28_B40_B40_B40]

11.08.03.33	690184	LTE_CA_B28_B40_B40_B40-Core	REL-13	Dec.15	100	Huawei	TS36.101 CR agreed in R4-157426
11.08.03.33	690284	LTE_CA_B28_B40_B40_B40-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-157429, R4-157430

No contributions

Core and Perf. part WI completed

11.8.3.34 LTE Advanced 4 Band CA (4DL/1UL) of Band 39, Band 39, Band 41 and Band 41

[**New WI**: LTE_CA_B39_B39_B41_B41]

11.08.03.34	690179	LTE_CA_B39_B39_B41_B41-Core	REL-13	Dec.15	100	CMCC	TS36.101 CR agreed in R4-157426
11.08.03.34	690279	LTE_CA_B39_B39_B41_B41-Perf	REL-13	Dec.15	100	CMCC	TS 36.307 CRs agreed in R4-157427 , R4-157428, R4-157429, R4-157430

No contributions

Core and Perf. part WI completed

11.8.3.35 LTE Advanced 4 Band CA (4DL/1UL) of Band 39, Band 41, Band 41 and Band 41

[**New WI**: LTE_CA_B39_B41_B41_B41]

11.08.03.35	690178	LTE_CA_B39_B41_B41_B41-Core	REL-13	Dec.15	100	CMCC	TS36.101 CR agreed in R4-157426
11.08.03.35	690278	LTE_CA_B39_B41_B41_B41-Perf	REL-13	Dec.15	100	CMCC	TS 36.307 CRs agreed in R4-157427 , R4-157428, R4-157429, R4-157430

No contributions

Core and Perf. part WI completed

11.8.3.36 LTE Advanced 4 Band CA (4DL/1UL) of Band 41, Band 41, Band 42 and Band 42

[LTE_CA_B41_B41_B42_B42]

11.08.03.36	680184	LTE_CA_B41_B41_B42_B42-Core	REL-13	Dec.15	100	ZTE	TS 36.101 CR agreed in157426.
11.08.03.36	680284	LTE_CA_B41_B41_B42_B42-Perf	REL-13	Dec.15	100	ZTE	TS 36.307 CRs agreed in R4-157427, R4-157428, R4-157429, R4-157430.

No contributions

Core and Perf. part WI completed

11.8.4 5 Band Carrier Aggregation (5DL/1UL)

RP-152163 5 Band Carrier Aggregation (5DL/1UL) RAN4 CR Pack Rel-13 LTE_CA_B1_B19_B21_B42_B42-Core, LTE_CA_B1_B19_B21_B42_B42-Perf, LTE_CA_B1_B3_B19_B42_B42-Core, LTE_CA_B1_B3_B19_B42_B42-Perf, LTE_CA_B1_B3_B7_B7_B28-Core, LTE_CA_B1_B3_B7_B7_B28-Perf, LTE_CA_B3_B3_B7_B7_B28-Core, LTE_CA_B3_B3_B7_B7_B28-Perf

Samsung Exhibit 1025, Page 1005 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

RP-151740 Rel-13 TR 36.857-13 v1.0.0 "LTE Advanced 5 Band Carrier Aggregation (5DL/1UL)"NTT DOCOMO draft TR 36.857-13 RAN4 Rel-13 LTE_CA_B1_B3_B19_B42_B42-Core
RAN4 TR 36.857-13 is submitted for 1-step approval;
conclusion: revised in RP-152190 to align with drafting rules

RP-152190 Rel-13 TR 36.857-13 v1.0.1 "LTE Advanced 5 Band Carrier Aggregation (5DL/1UL)"NTT DOCOMO draft TR 36.857-13 RAN4 Rel-13 LTE_CA_B1_B3_B19_B42_B42-Core
revision of RP-151740; RAN4 TR 36.857-13 is submitted for 1-step approval
conclusion: TR 36.857-13 is approved as v13.0.0

11.8.4.1 LTE Advanced 5 Band CA (5DL/1UL) of Band 1, Band 3, Band 7, Band 7 and Band 28 [**New WI**: LTE_CA_B1_B3_B7_B7_B28]

11.08.04.1	690191	LTE_CA_B1_B3_B7_B7_B28-Core	REL-13	March 16	95	Telstra	All requirements ready except for the generic MSD values for Band 1 and Band 28 to be included. CA combination will be included in Big CRs in next RAN4#78. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.04.1	690291	LTE_CA_B1_B3_B7_B7_B28-Perf	REL-13	March 16	95	Telstra	All requirements ready and approved in a TR. CA combination will be included in Big CRs in next RAN4#78. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-151987 Exception for LTE Advanced 5 Band Carrier Aggregation (5DL/1UL) of Band 1, Band 3, Band 7, Band 7 and Band 28 Telstra Corporation Limited WI exception request RAN4 s (5DL/1UL) Rel-13 LTE_CA_B1_B3_B7_B7_B28-Core
conclusion: approved

11.8.4.2 LTE Advanced 5 Band CA (5DL/1UL) of Band 1, Band 3, Band 19, Band 42 and Band 42 [**New WI**: LTE_CA_B1_B3_B19_B42_B42]

11.08.04.2	690189	LTE_CA_B1_B3_B19_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO	No open issues. CR for TS36.101 (R4-157346) was agreed in RAN4#77. CR for TS36.104 is not nessesary since this combination is already captured in this spec. CRs for TS36.133 (R4-158375, R4-158373) were agreed in RAN4#77.
11.08.04.2	690289	LTE_CA_B1_B3_B19_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO	No open issues. CRs for TS36.307(R4-157348, R4-157349) were agreed in RAN4#77. CR for TS36.141 is not nessesary since this combination is already captured in this spec. CR for TS36.133 (R4-155648) was agreed in RAN4#77.

No contributions

Core and Perf. part WI completed

11.8.4.3 LTE Advanced 5 Band CA (5DL/1UL) of Band 1, Band 19, Band 21, Band 42 and Band 42 [**New WI**: LTE_CA_B1_B19_B21_B42_B42]

11.08.04.3	690190	LTE_CA_B1_B19_B21_B42_B42-Core	REL-13	Dec.15	100	NTT DOCOMO	No open issues. CR for TS36.101 (R4-157346) was agreed in RAN4#77. CR for TS36.104 is not nessesary since this combination is already captured in this spec. CRs for TS36.133 (R4-158375, R4-158373) were agreed in RAN4#77.

Samsung Exhibit 1025, Page 1006 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.08.04.3	690290	LTE_CA_B1_B19_B21_B42_B42-Perf	REL-13	Dec.15	100	NTT DOCOMO	No open issues. CRs for TS36.307(R4-157348, R4-157349) were agreed in RAN4#77. CR for TS36.141 is not nessesary since this combination is already captured in this spec. CR for TS36.133 (R4-155648) was agreed in RAN4#77.

No contributions

Core and Perf. part WI completed

11.8.4.4 LTE Advanced 5 Band CA (5DL/1UL) of Band 3, Band 3, Band 7, Band 7 and Band 28 [**New WI**: LTE_CA_B3_B3_B7_B7_B28]

11.08.04.4	690192	LTE_CA_B3_B3_B7_B7_B28-Core	REL-13	March 16	95	Telstra	All requirements ready and approved in a TR. CA combination will be included in Big CRs in the next RAN4#78. Proponent should provide the exception sheet to keep the WI in Rel-13.
11.08.04.4	690292	LTE_CA_B3_B3_B7_B7_B28-Perf	REL-13	March 16	95	Telstra	All requirements ready and approved in a TR. CA combination will be included in Big CRs in next RAN4#78. Proponent should provide the exception sheet to keep the WI in Rel-13.

RP-151989 Exception for LTE Advanced 5 Band Carrier Aggregation (5DL/1UL) of Band 3, Band 3, Band 7, Band 7 and Band 28 Telstra Corporation Limited WI exception request RAN4 s (5DL/1UL) Rel-13 LTE_CA_B3_B3_B7_B7_B28-Core
conclusion: approved

11.8.5 Inter-band CA related WIs (2UL)

RP-151816 TR 36.860-13 V1.0.0 LTE Advanced Dual Uplink Inter-band Carrier Aggregation Huawei, HiSilicon draft TR 36.860-13 RAN4 Rel-13 LTE_CA_2UL_R13-A1-Core
RAN4 TR 36.860-13 is submitted for 1-step approval
conclusion: TR 36.860-13 is approved as v13.0.0

11.8.5.1 LTE Advanced dual uplink inter-band CA Class A1 in REL-13 [LTE_CA_2UL_R13-A1]

11.08.05.1	661110	LTE_CA_2UL_R13-A1-Core	REL-13	Dec.15	100	Huawei	TS 36.101 CRs agreed in R4-155825, R4-157045.
11.08.05.1	661210	LTE_CA_2UL_R13-A1-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-156028, R4-155828, R4-157046, R4-157047.

No contributions

Core and Perf. part WI completed

11.8.5.2 LTE Advanced dual uplink inter-band CA Class A2 in REL-13 [LTE_CA_2UL_R13-A2]

11.08.05.2	661111	LTE_CA_2UL_R13-A2-Core	REL-13	Dec.15	100	Qualcomm	Core specifications for CA_1A-28A combination have already been endorsed. No further work is required in Rel-13 to complete this WI.
11.08.05.2	661211	LTE_CA_2UL_R13-A2-Perf	REL-13	Dec.15	100	Qualcomm	Release independent specifications for CA_1A-28A combination have already been endorsed. No further work is required in Rel-13 to complete this WI.

No contributions

Samsung Exhibit 1025, Page 1007 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Core and Perf. part WI completed

11.8.5.3 LTE Advanced dual uplink inter-band CA Class A3 in REL-13

[LTE_CA_2UL_R13-A3]

11.08.05.3	661112	LTE_CA_2UL_R13-A3-Core	REL-13	Dec.15	100	Ericsson	CA_18A-28A (only combination in WID after RAN#67) completed and included in agreed CR to 36.101 (R4-153755). No other band combination proposed for Rel-13. GNSS protection: LS received from RAN2 on IDC enhancements for UL CA operations introduced from Rel-11. No further action expected from RAN4 at this stage.
11.08.05.3	661212	LTE_CA_2UL_R13-A3-Perf	REL-13	Dec.15	100	Ericsson	CA_18A-28A (only combination in WID after RAN#67) completed and included in agreed CR (R4-153266). No other band combination proposed for Rel-13.

No contributions

Core and Perf. part WI completed

11.8.5.4 LTE Advanced dual uplink inter-band CA Class A4 in REL-13

[LTE_CA_2UL_R13-A4]

11.08.05.4	670182	LTE_CA_2UL_R13-A4-Core	REL-13	Dec.15	100	Nokia Networks	UE CR 36.101 R4-155825
11.08.05.4	670282	LTE_CA_2UL_R13-A4-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence R4-155828, R4-155829 and R4-156028

No contributions

Core and Perf. part WI completed

11.8.5.5 LTE Advanced dual uplink inter-band CA FDD-TDD

[LTE_CA_2UL_FDD_TDD]

11.08.05.5	670181	LTE_CA_2UL_FDD_TDD-Core	REL-13	Dec.15	100	KDDI	NONE (CRs were already approved in RAN#69 and no new combination had been introduced between RAN#69 and RAN#70 and WI can be closed.)
11.08.05.5	670281	LTE_CA_2UL_FDD_TDD-Perf	REL-13	Dec.15	100	KDDI	NONE (CRs were already approved in RAN#69 and no new combination had been introduced between RAN#69 and RAN#70 and WI can be closed.)

No contributions

Core and Perf. part WI completed

11.8.6 WIs related to pairing of 3DL and 2UL inter-band CA

RP-151930 TR 36.879-13 v1.0.0 on LTE Advanced 3DL/2UL inter-band Carrier Aggregation LG Electronics
draft TR 36.879-13 RAN4 Rel-13 LTE_CA_3DL_2UL-Core
RAN4 TR 36.879-13 submitted for 1-step approval
conclusion: TR 36.879-13 is approved as v13.0.0.

11.8.6.1 LTE Advanced 3DL/2UL inter-band CA [LTE_CA_3DL_2UL]

11.08.06.1	670183	LTE_CA_3DL_2UL-Core	REL-13	Dec.15	100	Nokia Networks	UE CR 36.101 R4-158263
11.08.06.1	670283	LTE_CA_3DL_2UL-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence R4-157405 and R4-157406

Samsung Exhibit 1025, Page 1008 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151919 Revised WI: LTE Advanced 3DL/2UL inter-band Carrier Aggregation Nokia Networks, LG Electronics WID revised RAN4 s (3DL/2UL) Rel-13 LTE_CA_3DL_2UL
last approved WD: RP-151230; information about agreed CR added
conclusion: revised in RP-152239

RP-152239 Revised WI: LTE Advanced 3DL/2UL inter-band Carrier Aggregation Nokia Networks, LG Electronics WID revised RAN4 s (3DL/2UL) Rel-13 LTE_CA_3DL_2UL
conclusion: approved

RP-152164 LTE Advanced 3DL/2UL inter-band Carrier Aggregation RAN4 CR Pack Rel-13 LTE_CA_3DL_2UL-Core, LTE_CA_3DL_2UL-Perf
conclusion: approved

Core and Perf. part WI completed

11.8.6.2 LTE Advanced 3DL/2UL mixed intra- and inter-band CA

[LTE_CA_3DL_2UL_inter_intra]

11.08.06.2	681102	LTE_CA_3DL_2UL_inter_intra-Core	REL-13	Dec.15	100	Nokia Networks	TP to 3DL/2UL TR 36.879-13 agreed in R4-156524 TP to 3DL/2UL TR 36.879-13 agreed in R4-156525 BS CR 36.101 R4-157873
11.08.06.2	681202	LTE_CA_3DL_2UL_inter_intra-Perf	REL-13	Dec.15	100	Nokia Networks	Release independence REL-11 CR R4-157837 Release independence REL-12 CR R4-157868 Release independence REL-13 CR R4-157871

RP-151935 Revised WI: LTE Advanced 3DL/2UL mixed intra- and inter-band Carrier Aggregation Nokia Networks, LG Electronics WID revised RAN4 s (3DL/2UL) Rel-13 LTE_CA_3DL_2UL_inter_intra
last approved WID: RP-151576; information about agreed CR added
conclusion: approved

RP-152165 LTE Advanced 3DL/2UL mixed intra- and inter-band Carrier Aggregation RAN4 CR Pack Rel-13 LTE_CA_3DL_2UL_inter_intra-Core, LTE_CA_3DL_2UL_inter_intra-Perf
conclusion: approved

Core and Perf. part WI completed

11.8.7 WIs related to pairing of 3DL and 3UL inter-band CA

RP-152166 WIs related to pairing of 3DL and 3UL inter-band CA RAN4 CR Pack Rel-13 LTE_CA_3DL3UL_B39_B41_B41-Perf; LTE_CA_3DL3UL_B39_B39_B41-Perf
conclusion: approved

11.8.7.1 LTE Advanced 3 Band CA (3DL/3UL) of Band 39, Band 39 and Band 41

[LTE_CA_3DL3UL_B39_B39_B41]

11.08.07.1	690194	LTE_CA_3DL3UL_B39_B39_B41-Core	REL-13	Dec.15	100	CATT	Agreed CR： R4-158317, R4-158374
11.08.07.1	690294	LTE_CA_3DL3UL_B39_B39_B41-Perf	REL-13	Dec.15	100	CATT	Agreed CR： R4-157235, R4-157236

RP-151850 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/3UL) of Band 39, Band 39 and Band 41 CATT WID revised RAN4 s (3DL/3UL) Rel-13 LTE_CA_3DL3UL_B39_B39_B41
last approved WID: RP-151403; to revise TR information
conclusion: approved

RP-151853 TR 36.899-13 V1.0.0 on LTE Advanced inter-band Carrier Aggregation (3DL/3UL) CATT draft TR 36.899-13 RAN4 Rel-13 LTE_CA_3DL3UL_B39_B39_B41-Core
RAN4 TR 36.899-13 is submitted for 1-step approval;
conclusion: revised in RP-152191 to align with drafting rules

RP-152191 TR 36.899-13 V1.0.1 on LTE Advanced inter-band Carrier Aggregation (3DL/3UL) CATT draft TR 36.899-13 RAN4 Rel-13 LTE_CA_3DL3UL_B39_B39_B41-Core

Samsung Exhibit 1025, Page 1009 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

revision of RP-151853; RAN4 TR 36.899-13 is submitted for 1-step approval
conclusion: TR 36.899-13 is approved as v13.0.0.

Core and Perf. part WI completed

11.8.7.2 LTE Advanced 3 Band CA (3DL/3UL) of Band 39, Band 41 and Band 41
[LTE_CA_3DL3UL_B39_B41_B41]

11.08.07.2	690193	LTE_CA_3DL3UL_B39_B41_B41-Core	REL-13	Dec.15	100	CATT	CRs agreed: R4-158317
11.08.07.2	690293	LTE_CA_3DL3UL_B39_B41_B41-Perf	REL-13	Dec.15	100	CATT	CRs agreed: R4-147235, R4-157236

RP-151846 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/3UL) of Band 39, Band 41 and Band 41 CATT WID revised RAN4 s (3DL/3UL) Rel-13 LTE_CA_3DL3UL_B39_B41_B41
last approved WID: RP-151402; to revise TR information
conclusion: approved

Core and Perf. part WI completed

11.8.8 Intra-band CA related WIs (contiguous 2DL)

11.8.8.1 LTE Advanced intra-band contiguous CA in Band 5 [LTE_CA_C_B5]

11.08.08.1	681103	LTE_CA_C_B5-Core	REL-13	Dec.15	100	Intel	CR TS 36.101 agreed in R4-158254; CR TS 36.104 agreed in R4-156968
11.08.08.1	681203	LTE_CA_C_B5-Perf	REL-13	Dec.15	100	Intel	CR TS 36.141 agreed in R4-156969; CR TS 36.307 agreed in R4-156970, R4-158255, R4-158256 and R4-158257

RP-151871 Revised WID: LTE Advanced Carrier Aggregation of Intra-band Contiguous of Band 5 Intel WID revised RAN4 s (C) Rel-13 LTE_CA_C_B5
last approved WID: RP-151035; to add TR information
conclusion: approved

RP-152167 LTE Advanced intra-band contiguous Carrier Aggregation in Band 5 RAN4 CR Pack Rel-13 LTE_CA_C_B5-Core, LTE_CA_C_B5-Perf
conclusion: approved

Core and Perf. part WI completed

11.8.8.2 LTE Advanced intra-band contiguous CA in Band 8 [LTE_CA_C_B8]

11.08.08.2	670185	LTE_CA_C_B8-Core	REL-13	Dec.15	100	CMCC	TS 36.101 CR agreed in R4-156784 TS 36.104 CR agreed in R4-155981
11.08.08.2	670285	LTE_CA_C_B8-Perf	REL-13	Dec.15	100	CMCC	TS 36.307 CRs agreed in R4-155983 , R4-155984, R4-155985,R4-155986 TS 36.141 CR agreed in R4-155982.

RP-152168 LTE Advanced intra-band contiguous Carrier Aggregation in Band 8 RAN4 CR Pack Rel-13 LTE_CA_C_B8-Core, LTE_CA_C_B8-Perf
conclusion: approv ed

Core and Perf. part WI completed

11.8.9 Intra-band CA related WIs (non-contiguous 2DL)

11.8.9.1 LTE Advanced intra-band non-contiguous CA in Band 5
[LTE_CA_NC_B5]

11.08.09.1	681105	LTE_CA_NC_B5-Core	REL-13	Dec.15	100	Intel	CR TS 36.101 agreed in R4-156971; CR TS 36.104 agreed in R4-156972

Samsung Exhibit 1025, Page 1010 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.08.09.1	681205	LTE_CA_NC_B5-Perf	REL-13	Dec.15	100	Intel	CR TS 36.141 agreed in R4-156973; CR TS 36.307 agreed in R4-156974, R4-158259 and R4-158260

RP-151872 LTE Advanced Carrier Aggregation of Intra-band non-contiguous of Band 5 Intel WID revised RAN4 s (NC) Rel-13 LTE_CA_NC_B5
last approved WID: RP-151036; to add TR information; moved from AI 11.8.8.1 to AI 11.8.9.1
conclusion: approved

RP-152169 LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 5 RAN4 CR Pack Rel-13 LTE_CA_NC_B5-Core, LTE_CA_NC_B5-Perf
conclusion: approved

Core and Perf. part WI completed

11.8.9.2 Additional bandwidth combination set for LTE Advanced intra-band non-contiguous CA in Band 7 [**New WI**: LTE_CA_NC_B7_BWset]

11.08.09.2	690195	LTE_CA_NC_B7_BWset-Core	REL-13	Dec.15	100	Huawei	TS 36.101 CR R4-157432 was agreed
11.08.09.2	690295	LTE_CA_NC_B7_BWset-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs TS R4-157433 and R4-157434 were agreed

RP-151815 Revision of WI: Additional bandwidth combination set for LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 7 Huawei, Bell Mobility, TELUS WID revised RAN4 s (NC) Rel-13 LTE_CA_NC_B7_BWset
last approved WID: RP-151462; Core and Perf. part box ticked, UID added
conclusion: approved

RP-152170 Additional bandwidth combination set for LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 7 RAN4 CR Pack Rel-13 LTE_CA_NC_B7_BWset-Core, LTE_CA_NC_B7_BWset-Perf
conclusion: approved

Core and Perf. part WI completed

11.8.10 Intra-band CA related WIs (contiguous 4DL)

11.8.10.1 LTE Advanced intra-band contiguous CA in Band 42 for 4DL [LTE_CA_C_B42_4DL]

11.08.10.1	670186	LTE_CA_C_B42_4DL-Core	REL-13	Dec.15	100	CATT	CRs agreed: R4-156793, R4-157450
11.08.10.1	670286	LTE_CA_C_B42_4DL-Perf	REL-13	Dec.15	100	CATT	CRs agreed: R4-155480, R4-157218, R4-156844

RP-151843 TR 36.833-7-42 v1.0.0 on LTE advanced intra-band contiguous CA in Band 42 for 4DL CATT draft TR 36.833-7-42 RAN4 Rel-13 LTE_CA_C_B42_4DL-Core
RAN4 TR 36.833-7-42 submitted for 1-step approval
conclusion: TR 36.833-7-42 is approved as v13.0.0.

RP-152158 LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 4DL RAN4 CR Pack Rel-13 LTE_CA_C_B42_4DL-Core, LTE_CA_C_B42_4DL-Perf
conclusion: approved

Core and Perf. part WI completed

11.8.11 Intra-band CA related WIs (non-contiguous 4DL)

11.8.11.1 LTE Advanced intra-band non-contiguous CA in Band 41 for 4DL [LTE_CA_NC_B41_4DL]

Samsung Exhibit 1025, Page 1011 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.08.11.1	661113	LTE_CA_NC_B41_4DL-Core	REL-13	Dec.15	100	Alcatel-Lucent	TS 36.101 CR agreed in R4-158261. Way forward on measurement requirements for 3rd and 4th activated SCells agreed in R4-157511.
11.08.11.1	661213	LTE_CA_NC_B41_4DL-Perf	REL-13	Dec.15	100	Alcatel-Lucent	TS 36.307 CRs agreed in R4-157860, R4-157861 and R4-157862.

RP-151678 TR 36.833-8-41 v2.0.0 on LTE-Advanced intra-band non-contiguous Carrier Aggregation (CA) in Band 41 for 4 downlinks (4DL), presented for approval Alcatel-Lucent, Sprint draft TR 36.833-8-41 RAN4 Rel-13 LTE_CA_NC_B41_4DL-Core
RAN4 TR 36.833-8-41 v2.0.0 is submitted for approval
conclusion: TR 36.833-8-41 is approved as v13.0.0.

RP-152159 LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 41 for 4DL RAN4 CR Pack Rel-13 LTE_CA_NC_B41_4DL-Core, LTE_CA_NC_B41_4DL-Perf
conclusion: approved

Core and Perf. part WI completed

11.8.11.2 LTE Advanced intra-band non-contiguous CA in Band 42 for 4DL
[LTE_CA_NC_B42_4DL]

11.08.11.2	681106	LTE_CA_NC_B42_4DL-Core	REL-13	Dec.15	100	Huawei	TS36.101 CR agreed in R4-157589
11.08.11.2	681206	LTE_CA_NC_B42_4DL-Perf	REL-13	Dec.15	100	Huawei	TS 36.307 CRs agreed in R4-155510, R4-155511, R4-155512,

RP-152160 LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 42 for 4DL RAN4 CR Pack Rel-13 LTE_CA_NC_B42_4DL-Core, LTE_CA_NC_B42_4DL-Perf
conclusion: approved

Core and Perf. part WI completed

11.9 Open LTE only related WIs (spectrum and not CA related)

11.9.1 2GHz FDD LTE Band for Region 1 (1980-2010MHz and 2170-2200MHz Bands)
[LTE_1980_2170_REG1]

RP-151723 Status Report of WI 2GHz FDD LTE Band for Region 1 (1980-2010MHz and 2170-2200MHz Bands); rapporteur: Dish Network RAN4 WI status report Rel-13 LTE_1980_2170_REG1
conclusion: noted, approved: Core: 100%, Dec.15; Perf.:100%, Dec.15; Core and Perf. part WI completed

RP-151732 Work Item Proposal: 2 GHz LTE Band for Region 1 Dish Network WID revised RAN4 s Rel-13 LTE_1980_2170_REG1
last approved WID: RP-150424; revised to amend the list of affected specifications
conclusion: approved

RP-152105 RAN3 CRs for 2GHz FDD LTE Band for Region 1 RAN3 CR Pack Rel-13 LTE_1980_2170_REG1-Core
conclusion: approved

RP-152171 2GHz FDD LTE Band for Region 1 (1980-2010MHz and 2170-2200MHz Bands) RAN4 CR Pack Rel-13 LTE_1980_2170_REG1-Core, LTE_1980_2170_REG1-Perf
conclusion: approved

RP-151726 TR 36.862 v1.0.0 on 2 GHz LTE Band in Region 1 Dish Network draft TR 36.862 RAN4 Rel-13 LTE_1980_2170_REG1-Core
RAN4 TR 36.862 is submitted for 1-step approval;
conclusion: revised in RP-152187 to align with drafting rules

RP-152187 TR36.862 v1.0.1 on 2 GHz LTE Band in Region 1 Dish Network draft TR 36.862 RAN4 Rel-13 LTE_1980_2170_REG1-Core
revision of RP-151726; RAN4 TR 36.862 is submitted for 1-step approval

Samsung Exhibit 1025, Page 1012 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: TR 36.862 is approved as v13.0.0

11.9.2 AWS-Extension Band for LTE [LTE_AWS_EXT]

RP-151733 Status report of WI AWS-Extension Band for LTE; rapporteur: Ericsson RAN4 WI status report Rel-13 LTE_AWS_EXT
conclusion: noted, approved: Core: 100%, Dec.15; Perf.:100%, Dec.15; Core and Perf. part WI completed

RP-152106 RAN3 CRs for AWS-Extension Band for LTE RAN3 CR Pack Rel-13 LTE_AWS_EXT-Core
conclusion: approved

RP-152172 AWS-Extension Band for LTE RAN4 CR Pack Rel-13 LTE_AWS_EXT-Core, LTE_AWS_EXT-Perf
conclusion: approved

RP-151734 TR 36.869 v1.0.0 for approval: Advanced Wireless Services (AWS) extension band for LTE Ericsson draft TR 36.869 RAN4 Rel-13 LTE_AWS_EXT-Core
RAN4 TR 36.869 is submitted for 1-step approval;
conclusion: revised in RP-152189 to align with drafting rules

RP-152189 TR 36.869 v1.1.0 for approval: Advanced Wireless Services (AWS) extension band for LTE Ericsson draft TR 36.869 RAN4 Rel-13 LTE_AWS_EXT-Core
revision of RP-151734; RAN4 TR 36.869 is submitted for 1-step approval;
conclusion: TR 36.869 is approved as v13.0.0

11.9.3 Introduction of 1447-1467MHz Band for TD-LTE in China [LTE_TDD_1447MHz_China]

RP-151812 Status report for WI: Introduction of 1447-1467MHz Band for TD-LTE in China, rapporteur: Huawei RAN4 WI status report Rel-13 LTE_TDD_1447MHz_China
conclusion: noted, approved: Core: 100%, Dec.15; Perf.:100%, Dec.15; Core and Perf. part WI completed

RP-152107 RAN3 CRs for Introduction of 1447-1467MHz Band for TD-LTE in China RAN3 CR Pack Rel-13 LTE_TDD_1447MHz_China-Core
conclusion: approved

RP-152173 Introduction of 1447-1467MHz Band for TD-LTE in China RAN4 CR Pack Rel-13 "LTE_TDD_1447MHz_China-Core
conclusion: approved

RP-151813 TR 36.892 v1.0.0: Introduction of 1447-1467MHz Band for TD-LTE in China Huawei draft TR 36.892 RAN4 Rel-13 LTE_TDD_1447MHz_China-Core
RAN4 TR 36.892 submitted for 1-step approval
conclusion: TR 36.892 is approved as v13.0.0

11.9.4 700MHz E-UTRA FDD Band for Arab Region [LTE_FDD_700_ARAB]

RP-151715 Status report of WI 700MHz E-UTRA FDD Band for Arab Region; rapporteur: Etisalat RAN4 WI status report Rel-13 LTE_FDD_700_ARAB
conclusion: noted, approved: Core: 80%, March 16; Perf.: 0%, March 16

RP-151716 Work item except for WI 700MHz E-UTRA FDD Band for Arab Region Motorola Solutions UK Ltd. WI exception request RAN4 s Rel-13 LTE_FDD_700_ARAB-Core
conclusion: approved

11.10 Small Technical Enhancements and Improvements for Rel-13 [TEI13]

RAN2:

RP-152084 RAN2 agreed CRs on Small Technical Enhancements and Improvements for Rel-13 RAN2 CR Pack Rel-13 TEI13
conclusion: approved

Samsung Exhibit 1025, Page 1013 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN3:
RP-152108 RAN3 CRs for TEI13 RAN3 CR Pack Rel-13 TEI13
conclusion: approved

RAN4:
RP-152134 RAN4 CRs on Small Technical Enhancements and Improvements for Rel-13 RAN4 CR Pack Rel-13 TEI13
conclusion: approved

12 Work items with target Rel-14 (not related to conformance testing)

12.1 Open LTE only related WIs

NOTE: For the status report see AI 11.8.

12.1.1 LTE Advanced 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 5 and Band 12
[**New WI**: LTE_CA_B4_B4_B5_B12]

12.1.1	690180	LTE_CA_B4_B4_B5_B12-Core	REL-14 => REL-13	Dec.15	100	US Cellular	Agreed CRs R4-157426, -7430, -8008, -8009). WI was Rel-14 but moved back to Rel-13 and included in big CRs.
12.1.1	690280	LTE_CA_B4_B4_B5_B12-Perf	REL-14 => REL-13	Dec.15	100	US Cellular	Agreed CRs R4-157426, -7430, -8008, -8009). WI was Rel-14 but moved back to Rel-13 and included in big CRs.

No contributions

As LTE_CA_B4_B4_B5_B12-Core and LTE_CA_B4_B4_B5_B12-Perf are completed in Dec.15, the WIs are kept as REL-13 WIs and corresponding CRs are introduced in REL-13.

Core and Perf. part WI completed

12.1.2 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 4 and Band 5
[**New WI**: LTE_CA_B2_B4_B4_B5]

12.1.2	690181	LTE_CA_B2_B4_B4_B5-Core	REL-14 => REL-13	Dec.15	100	US Cellular	Agreed CRs R4-157426, -7430, -8008, -8009). WI was Rel-14 but moved back to Rel-13 and included in big CRs.
12.1.2	690281	LTE_CA_B2_B4_B4_B5-Perf	REL-14 => REL-13	Dec.15	100	US Cellular	Agreed CRs R4-157426, -7430, -8008, -8009). WI was Rel-14 but moved back to Rel-13 and included in big CRs.

No contributions

As LTE_CA_B2_B4_B4_B5-Core and LTE_CA_B2_B4_B4_B5-Perf are completed in Dec.15, the WIs are kept as REL-13 WIs and corresponding CRs are introduced in REL-13.

Core and Perf. part WI completed

12.1.3 LTE Advanced 4 Band CA (4DL/1UL) of Band 4, Band 5, Band 12 and Band 12
[**New WI**: LTE_CA_B4_B5_B12_B12]

12.1.3	690186	LTE_CA_B4_B5_B12_B12-Core	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis.

Samsung Exhibit 1025, Page 1014 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

							=> WI stopped
12.1.3	690286	LTE_CA_B4_B5_B12_B12-Perf	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped

No contributions

LTE_CA_B4_B5_B12_B12-Core and LTE_CA_B4_B5_B12_B12-Perf are stopped because these CA combinations are now integrated into the new REL-14 CA basket WIs that are introduced at RAN #70 (see 4DL/1UL in RP-152249, 3DL/1UL in RP-152278 and 2DL/1UL in RP-152196).

Core part and Perf. part WI is stopped

12.1.4 LTE Advanced 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 12 and Band 12

[**New WI**: LTE_CA_B4_B4_B12_B12]

12.1.4	690187	LTE_CA_B4_B4_B12_B12-Core	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped
12.1.4	690287	LTE_CA_B4_B4_B12_B12-Perf	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped

No contributions

LTE_CA_B4_B4_B12_B12-Core and LTE_CA_B4_B4_B12_B12-Perf are stopped because these CA combinations are now integrated into the new REL-14 CA basket WIs that are introduced at RAN #70 (see 4DL/1UL in RP-152249, 3DL/1UL in RP-152278 and 2DL/1UL in RP-152196).

Core part and Perf. part WI is stopped

12.1.5 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 12 and Band 12

[**New WI**: LTE_CA_B2_B4_B12_B12]

12.1.5	690188	LTE_CA_B2_B4_B12_B12-Core	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped
12.1.5	690288	LTE_CA_B2_B4_B12_B12-Perf	REL-14	March 16	90	US Cellular	Rel-14 WI is not ready. Combination will be stopped and moved to Rel-14 basket Wis. => WI stopped

No contributions

LTE_CA_B2_B4_B12_B12-Core and LTE_CA_B2_B4_B12_B12-Perf are stopped because these CA combinations are now integrated into the new REL-14 CA basket WIs that are introduced at RAN #70 (see 4DL/1UL in RP-152249, 3DL/1UL in RP-152278 and 2DL/1UL in RP-152196).

Core part and Perf. part WI is stopped

Samsung Exhibit 1025, Page 1015 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

13 Study Items

13.1 Closed study items

RAN1:

RP-152028 CR to clarify baseline performance of existing positioning techniques RAN1 CR Pack 37.857 0001 1 F Rel-13 FS_UTRA_LTE_iPos_enh
conclusion: approved

13.2 Open UTRA related SIs

No contributions

13.3 Open UTRA & LTE related SIs

No contributions

13.4 Open LTE only related SIs

13.4.1 REL-13 Study on LTE FDD in the bands 1980-2010 MHz and 2170-2200 MHz
[FS_LTE_1980_2170_Korea]

RP-151851 Status Report for SI Study on LTE FDD in the bands 1980-2010 MHz and 2170-2200 MHz; rapporteur: KT Corp. RAN4 WI status report Rel-13 FS_LTE_1980_2170_Korea
conclusion: noted, approved: 100%, Dec.15; SI is completed

RP-151855 Revised SID: Study on LTE FDD in the bands 1980-2010 MHz and 2170-2200 MHz KT Corp. SID revised RAN4 s Rel-13 FS_LTE_1980_2170_Korea
last approved SID: RP-150119
conclusion: approved

RP-151858 TR 36.861 v2.0.0 Study on LTE FDD in the bands 1980-2010MHz and 2170-2200MHz, for 1-step approval KT Corp. draft TR 36.861 RAN4 Rel-13 FS_LTE_1980_2170_Korea
RAN4 TR 36.861 submitted for 1-step approval
conclusion: TR 36.861 is approved as v13.0.0

13.4.2 REL-13 Study on LTE Advanced inter-band Carrier Aggregation of Band 20 and Band 28
[FS_LTE_CA_B20_B28]

RP-152041 Status report for SI Study on LTE Advanced inter-band Carrier Aggregation of Band 20 and Band 28; rapporteur: TeliaSonera RAN4 WI status report Rel-13 FS_LTE_CA_B20_B28
discussion: MCC: late submission
conclusion: noted, approved:100%, Dec.15; SI is completed
Note: SI contents is captured in existing TR 36.852-13.

13.4.3 REL-13 Study on new AWS-3/4 Band for LTE
[**New SI**: FS_LTE_AWS_3_4]

RP-151729 Status report of SI FS_LTE_AWS_3_4; rapporteur: DISH Network; source: RAN4; rapporteur: Dish Network RAN4 WI status report Rel-13 FS_LTE_AWS_3_4
conclusion: noted, approved: 100%, Dec.15; SI is completed

RP-151730 Revision of SI FS_LTE_AWS_3_4 Dish Network SID revised RAN4 s Rel-13 FS_LTE_AWS_3_4
last approved SID: RP-151626; updated with SI acronym and unique identifier
conclusion: approved

RP-151728 TR 36.870 v1.0.0 on Study on New AWS-3/4 Band for LTE Dish Network draft TR 36.870 RAN4 Rel-13 FS_LTE_AWS_3_4
RAN4 TR 36.870 is submitted for 1-step approval;
conclusion: revised in RP-152188 to align with drafting rules

Samsung Exhibit 1025, Page 1016 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-152188 TR 36.870 v1.0.1 on Study on New AWS-3/4 Band for LTE Dish Networkdraft TR 36.870RAN4 Rel-13FS_LTE_AWS_3_4
revision of RP-151728; RAN4 TR 36.870 is submitted for 1-step approval
conclusion: TR 36.870 is approved as v13.0.0

13.4.4 REL-13 Study on performance enhancements for high speed scenario in LTE [FS_LTE_high_speed]

RP-151793 Status report of SI Study on performance enhancements for high speed scenario in LTE; rapporteur: NTT DOCOMOC, INC. RAN4 WI status report Rel-13FS_LTE_high_speed
conclusion: noted, approved: 100%, Dec.15; SI is completed

RP-151814 TR 36.878 v2.0.0 on Performance enhancements for high speed scenario, for approval Huawei draft TR 36.878RAN4 Rel-13FS_LTE_high_speed
RAN4 TR 36.878 is submitted for approval
conclusion: TR 36.878 is approved as v13.0.0

13.4.5 REL-13 Study on Downlink Multiuser Superposition Transmission for LTE [FS_LTE_MUST]

RP-151921 Status Report for SI: Study on Downlink Multiuser Superposition Transmission; rapporteur: MediaTek RAN2 WI status report Rel-13FS_LTE_MUST
conclusion: revised in RP-152177
RP-152177 Status Report for SI: Study on Downlink Multiuser Superposition Transmission; rapporteur: MediaTek RAN2 WI status report Rel-13FS_LTE_MUST
discussion: MCC: late submission
conclusion: noted, approved: 100%, Dec.15; SI is completed

RP-151924 TR 36.859 v1.0.1 on Study on Downlink Multiuser Superposition Transmission for LTE MediaTek Inc. draft TR 36.859RAN1 Rel-13FS_LTE_MUST
RAN1 TR 36.859 submitted for 1-step approval
conclusion: TR 36.859 is approved as v13.0.0

13.4.6 REL-13 Study on Measurement gap enhancement for LTE [FS_LTE_meas_gap]

RP-151873 Status report of SI Study on Measurement gap enhancement; rapporteur: Intel CorporationRAN4 WI status report Rel-13FS_LTE_meas_gap
conclusion: noted, approved: 100%, Dec.15; SI is completed

RP-151875 TR 36.894 v1.0.0 on Measurement gap enhancement for EUTRA Intel Corporation draft TR 36.894 RAN4 Rel-13FS_LTE_meas_gap
RAN4 TR 36.894 submitted for 1-step approval;
conclusion: revised in RP-152192 to align with drafting rules
RP-152192 TR 36.894 v1.0.1 on Measurement gap enhancement for EUTRA Intel Corporation draft TR 36.894 RAN4 Rel-13FS_LTE_meas_gap
RAN4 TR 36.894 submitted for 1-step approval
conclusion: TR 36.894 is approved as v13.0.0

13.4.7 REL-13 Study on Network Assistance for Network Synchronization in LTE [FS_LTE_NW_SYNC]

RP-151807 Status report for SI: Network Assistance for Network Synchronization in LTE, rapporteur: Huawei RAN3 WI status report Rel-13FS_LTE_NW_SYNC
discussion: Ericsson: The status report shifts the target date one quarter and add 1 TU for RAN3, but the update to the TU does not show any change bars. The RAN# for the new target date is also wrong, should be RAN#71 (and not RAN#70);
MCC: with shifting the target date by 3 months the SI is shifted to REL-14
conclusion: revised in RP-152204
RP-152204 Status report for SI: Network Assistance for Network Synchronization in LTE, rapporteur: Huawei RAN3 WI status report Rel-13FS_LTE_NW_SYNC
revision of RP-151807 which was flagged by Ericsson and MCC; MCC: late submission
discussion: RAN3 chair: date was fixed
conclusion: noted, approved: 60%, March 16; SI is shifted to REL-14

Samsung Exhibit 1025, Page 1017 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151808 TR 36.898 v1.0.0 on Network Assistance for Network Synchronization in LTE, for information RAN3 draft TR 36.898 RAN3 Rel-13 FS_LTE_NW_SYNC
RAN3 TR36.898 is submitted for information
conclusion: noted

13.4.8 REL-14 Study on Latency reduction techniques for LTE [FS_LTE_LATRED]

RP-151909 Status report for SI Study on Latency reduction techniques for LTE; rapporteur: Ericsson RAN2 WI status report Rel-14 FS_LTE_LATRED
conclusion: noted, approved: 50%, June 16

13.4.9 REL-14 Feasibility Study on LTE-based V2X Services [FS_LTE_V2X]

RP-151661 LS on study on PC5 transport for V2V services (R1-157903; to: RAN; cc: -; contact: LG) RAN1 LS in Rel-14 FS_LTE_V2X
no explicit RAN action requested
conclusion: noted, no LS answer

RP-151941 Status report of SI: Feasibility Study on LTE-based V2X Services; rapporteur: LG Electronics RAN1 WI status report Rel-14 FS_LTE_V2X
conclusion: noted, approved: 35%, June 16

13.4.10 REL-14 Study on High Power LTE UE for Band 41 [FS_LTE_B41_HPUE]

RP-152111 Status report of SI Study on High Power LTE UE for Band 41; rapporteur: Sprint RAN4 WI status report Rel-14 FS_LTE_B41_HPUE
discussion: MCC: late submission; SI is shifted by 1 year?, outside of REL-14; no % complete provided; revision necessary
discussion: NEC: Dec.16 is the target?
Sprint: Dec.16
conclusion: revised in RP-152248
RP-152248 Status report of SI Study on High Power LTE UE for Band 41; rapporteur: Sprint RAN4 WI status report Rel-14 FS_LTE_B41_HPUE
conclusion: noted, approved: 10%, Dec.16

Samsung Exhibit 1025, Page 1018 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

14 New Work Items/Study Items

14.1 New core functions

RAN chairman: As announced at RAN#70 we won't approve new R2/3/4 (non-spectrum) proposals as these groups will be focusing on R13 completion. If RAN1 has some availability, we would could start new work in RAN1.

Time budgets:

RP-152202 Status of time budgets for RAN1/2/3/4 REL-13 & beyond WIs/SIs after RAN #69
RAN1/RAN2/RAN3/RAN4 chairmen discussion Rel-13 -
note: The status after RAN #69 was endorsed in RP-151600.
conclusion: revised in RP-152298

RP-152298 Status of time budgets for RAN1/2/3/4 REL-13 & beyond WIs/SIs after RAN #69
RAN1/RAN2/RAN3/RAN4 chairmen discussion Rel-13 -
conclusion: RP-152298 was endorsed during RAN #70 but afterwards some corrections were needed; revised in RP-152300 (during email discussion)

RP-152300 Status of time budgets for RAN1/2/3/4 REL-13 & beyond WIs/SIs after RAN #70
RAN1/RAN2/RAN3/RAN4 chairmen discussion Rel-13 -
conclusion: endorsed (via email discussion)

14.1.1 WIs/SIs led by RAN1

SDL TDD:

RP-151908 Way forward on possible new configuration for TD-LTE NTT DOCOMO discussion
Rel-13 - Way forward on new possible configuration for TD-LTE is provided based on the discussion in PCG#35.
proposal: New possible configurations for TD-LTE shall be introduced into REL-13
conclusion: noted

RP-152186 PCG#35_26: Way forward on handling the all DL configuration for LTE TDD CCSA discussion
This is PCG Tdoc PCG#35_26 which is provided to RAN on request of the RAN chairman
Proposed way forward: TDD SDL configuration is standardized only in the 5G new radio/phase 1
discussion: RAN chair: applicable to all or just for new bands? seems for all new bands
ZTE: we can go for the comprise to consider all bands if it is for 5G new radio but this was not our original proposal
conclusion: noted

discussion about RP-151908 & RP-152186:
Vodafone: agrees with this paper
Deutsche Telekom: supports the NTT DOCOMO and would like to have something before 5G
TeliaSonera: SI showed that it is feasible and supports NTT DOCOMO
KT: supports this for REL-13
CATT: SI revealed significant coexistence issues
Telefonica: coexistence issues depend on where you are in the world so we support NTT DOCOMO's proposal
Sprint: not yet convinced that it is technically feasible in all cases
Huawei: does not agree that it is feasible
RAN chair: would a SI help to solve the open issues?
Nokia Networks: technically there is no open issue anymore by measurement we could identify whether there is a problem
RAN chair: could we agree the CCSA proposal as a baseline and then discuss
NTT DOCOMO: why should we go for this?
RAN chair: it means in worst case you will have it in REL-15 and we can then still see how to address short term needs (e.g. Orange has a proposal) so is rather a fallback than a baseline
Deutsche Telekom: European regulators make steps already in the direction of FDD SDL and we want to have it for TDD so there are already urgent needs

Samsung Exhibit 1025, Page 1019 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

KT: we have an FDD - TDD configuration already in REL-12 so this needs to be approved from REL-13
CATT: wants to consider it only for 5G and not for LTE
Nokia Networks: if we go FDD SDL, then this would be worse for TDD as with TDD SDL UEs will support other TDD modes as well
RAN chair: suggests offline discussion of the proponents
LG: we have not yet discussed the duplex scheme for the new RAT so how can we say that TDD SDL would work there
RAN chair: in some countries the regulation talks about TDD
Vodafone: what is different in coexistence when considering a 5G radio compared to LTE
CATT: standalone and non-stand-alone could be considered in 5G
offline discussion (rapporteur: Balazs Bertanyi (Nokia Networks)

RP-152261 Summary on new TDD configuration discussions Nokia Networks report Rel-13-
report of offline discussion
proposal:
- *Downlink-only TDD configuration can be introduced to the new 5G RAT in phase-1 (Rel-15) in a band agnostic manner*
  - *The principles described in the conclusion of TR36.825 still apply when introducing DL-only TDD configuration*
- *No consensus to introduce new TDD configurations to LTE*

conclusion: noted, proposal is endorsed

LTE enhancements:

bandwidth flexibility for LTE

RP-151890 Motivation for new work item on bandwidth flexibility for LTE Huawei, HiSilicon discussionmotiv Rel-14-
Motivation for RP-151889
discussion: Nokia Networks: biggest impact is on RAN4 side, should be rather a RAN4 led WI
Huawei: we do not need to define a new bandwidth and RAN4 part is covered
Huawei: impact on standard in RAN1
Nokia Networks: impact on RF requirements if you modify the bandwidth
Qualcomm:2 issues mentioned in the past: impact on cell search, how does UE find this bandwidth
RAN chair: consider to have it as a RAN4 led WI
ALU: should be rather a SI than a WI
RAN chair: it's a fair request to clarify the use cases, so from operators we could have a list what they are requesting
conclusion: noted, should be RAN4 led, SI or WI is to be discussed, and come back in March 16, list of actual use cases from operators should be brought where this is beneficial

RP-151889 New work item proposal: bandwidth flexibility for LTE Huawei, HiSilicon WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1;
conclusion: postponed

V2V for LTE

RP-151942 Motivation for WI on " Support for V2V services based on LTE sidelink" LG Electronics, Huawei, HiSilicon, CATT discussionmotiv Rel-14-
discussion: Orange: V2V over PC5 possible, was this evaluated in RAN1?
LG: yes
Telecom Italia: does not think that there is already a clear conclusion from the SI
conclusion: noted

RP-151943 New WI proposal: Support for V2V services based on LTE sidelink LG Electronics, Huawei, HiSilicon, CATT WID new RAN1 Rel-14-
conclusion: revised in RP-152200

RP-152200 New WI proposal: Support for V2V services based on LTE sidelink LG Electronics, Huawei, HiSilicon, CATT WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1; MCC: there is an ongoing REL-14 WI FS_LTE_V2X
discussion: Sprint: looking at co-existence issues planned?

Samsung Exhibit 1025, Page 1020 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

LG: transmission of RF will include co-existence aspects
RAN1 chair: what is the minimum requirement of the WI? so that we have a realistic scope
conclusion: revised in RP-152254

RP-152254 New WI proposal: Support for V2V services based on LTE sidelink LG Electronics, Huawei, HiSilicon, CATT WID new RAN1 Rel-14-
revision of RP-152200; new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_SL_V2V;
MCC: there is an ongoing REL-14 WI FS_LTE_V2X;
discussion: AT&T: please add us as supporting company
RAN1 chair: concerned that for V2V scope is still very wide and not consistent with TUs
RAN chair: resource allocation and synchroni sation is too big,
remove 4. and 5. and focus un dedicated spectrum only would be my preference
LG: how many TUs would we need to cover this scope?
Huawei: if we reduce more, we may not have a complete feature anymore
Ericsson: increasing TUs makes sense, 4TUs reasonable
RAN1 vice-chair (ALU): agrees, 4 or 5TUs would be more realistic
Qualcomm: we have no problem with down-scoping
Nokia Networks: we would support increasing TUs
RAN1 chair: worried that some companies complain about unrealistic time units only if they are not interested in the WI
ALU: we can increase TUs or reduce scope but more comments were in favour of increasing TUs
conclusion: revised in RP-152269

RP-152269 New WI proposal: Support for V2V services based on LTE sidelink LG Electronics, Huawei, HiSilicon, CATT WID new RAN1 Rel-14-
conclusion: revised in RP-152293

RP-152293 New WI proposal: Support for V2V services based on LTE sidelink LG Electronics, Huawei, HiSilicon, CATT WID new RAN1 Rel-14-
discussion: RAN chair: which TUs did you increase?
LG: from 2 TUs to 3TUs
Ericsson: for 1 quarter we increased by 1 TU and we are now confident that we will be able to finish the work with that?
Telecom Italia: concerned about this approach
RAN chair: RAN1 chair is ok with this
Nokia Networks: where are we now after approving LAA and V2V in terms of remaining RAN1 capacity?
RAN chair: 2 TUs left
Nokia Networks: 7 TUs were free and 7 are used or not?
RAN chair: no originally 9 TUs left, 2 TUs were from 5G channel modelling
conclusion: approved

RP-151881 Motivation for new WI on LTE-based V2V Huawei, HiSilicon discussionmotiv Rel-14-
discussion: Huawei: project in China which is described only in Chinese
conclusion: noted

discussion of RP-151942/RP-152200/RP-151881:
Orange: what does China consider: V2V over PC5 or V2V in general?
Huawei: with direct communication
Orange: what does China consider: V2V or V2X?
Huawei: V2V and V2I
Orange: this should be well coordinated over whole 3GPP
RAN chair: LG is taking care of this
Orange: in some SA groups they just study so far
Huawei: interoperability testing required in the Chinese project so specifications are needed
LG: would actually better if RAN1 studies first
Vodafone: we are interested in V2X but V2V is an important component so we should move forward
Nokia Networks: study phase for looking at the detailed objectives needed
Qualcomm: co-existence study with unknown technique can delay the whole topic
Huawei: time budget in RAN1 for the SI for very reasonable and we discussed already several aspects in the SI

Flexible duplex:

Samsung Exhibit 1025, Page 1021 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151939 Motivation for SI on "flexible duplex operation for E-UTRAN", flexible duplex– towards 5G efficient duplex mechanisms LG Electronics discussion motiv Rel-14-
discussion: Telecom Italia: in how far is co-existence considered here?
RAN chair: main point is to study co-existence aspects
Orange: we should clarify that in some areas of the world this is not possible
RAN chair: we can copy the results of the regulatory SI into this SI
Qualcomm: objective 2 is very unclear
China Telecom; has strong demand for this also for UL and thinks the regulatory SI showed that it is possible
Sprint: in region 2 it will be problematic
conclusion: noted

RP-151940 New SID: Study on flexible duplex operation for E-UTRAN LG Electronics, China TelecomSID new RAN1 Rel-14-
ew SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_flex_duplex; compare RP-151310
conclusion: revised in RP-152288
RP-152288 New SID: Study on flexible duplex operation for E-UTRAN LG Electronics, China TelecomSID new RAN1 Rel-14-
conclusion: postponed

LAA for LTE:
RP-151979 Motivation for New Work Item on enhanced LAA for LTE Ericsson discussion motiv Rel-14-
Motivation for New Work Item on enhanced LAA for LTE
discussion: Broadcom: phasing for UL CA feature (RAN #70 - RAN #72) and Dual connectivity later: rationale?
Ericsson: to finish UL more quickly
NTT DOCOMO: DL part unclear, what kind of interference mitigation scheme do you consider?
LG: we did not study Dual Connectivity aspect in the SI, scope is very brought, what is the intention?
Ericsson: study was more on co-existence and dual connectivity does not impact this
RAN3 chair: how do you manage GBR without RAN3?
Huawei: Dual Connectivity was not part of the study, so agrees with LG
Orange: use and deployment scenario from operators for this?
conclusion: noted

RP-151978 New Work Item on enhanced LAA for LTE Ericsson WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_eLAA; follow-up WI of REL-13 WI LTE_LAA
conclusion: revised in RP-152256
RP-152256 New Work Item on enhanced LAA for LTE Ericsson WID new RAN1 Rel-14-
revision of RP-151978; new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_eLAA; follow-up WI of REL-13 WI LTE_LAA;
discussion: Blackberry: addition of 10MHz bandwidth is for a very specific deployment or co-existence issues would need to be considered
Broadcom: add RAN1 to this bullet, this would solve it
Orange: technical contents is stable but time unit request is still unrealistic and needs to be adjusted
Ericsson: we discussed the TUs with RAN1 and RAN4 chairman
Telecom Italia: we are fed up by having unrealistic numbers
Orange: scope has been reduced but length of WI was reduced
Qualcomm: RAN1 added to the bullet, should be RAN4 first and then RAN1
RAN chair: we could say: "not more than 50% overshoot of the allocated TUs"
ALU: clarification on 50% rule needed? applies for all WIs, limitation also for offline sessions?
RAN chair: yes, all WIs but we do not count what companies do offline
RAN2 chair: will track how much times are used per WI
Nokia Networks: offline discussion is a discussion in the coffee break but not an extra meeting room for hours
RAN chair: agrees

Samsung Exhibit 1025, Page 1022 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Orange: we need clear guidelines from RAN
RAN chair: wants to leave this to WG chairs
conclusion: revised in RP-152266 to add RAN1

RP152266 New Work Item on enhanced LAA for LTE Ericsson WID new RAN1 Rel-14-
conclusion: revised in RP-152272

RP-152272 New Work Item on enhanced LAA for LTE Ericsson WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_eLAA; follow-up WI of REL-13 WI LTE_LAA
conclusion: approved

RP-151886 Motivation and scope of Rel-14 work on LAA Huawei, HiSilicon discussionmotiv Rel-14-
conclusion: noted

RP-151824 Motivation for WI on enhanced LAA for LTE Qualcomm Incorporated discussionmotiv Rel-14 - Related to WID new RP-151800
conclusion: withdrawn

RP-151800 New Work Item on enhanced LAA for LTE Qualcomm Incorporated WID new RAN1 Rel-14 - new WI for LTE only; leading WG: RAN1
conclusion: withdrawn

RP-151725 Supporting dual connectivity in LAAZTE Corporation discussion Rel-14-
conclusion: noted

RP-151975 On LTE LAA evolution in Rel. 14 Nokia Networks discussion Rel-14-
conclusion: noted

discussion of RP-151979/RP-151978/RP-151725/RP-151975:
Orange: which sort of cost reduction can we achieve?
Nokia Networks: with LAA you are roughly limited to 1W so tx power
LG: split bearer or SC bearer supported?
Nokia Networks: assumes both
Verizon: considers dual connectivity for REL-14
Qualcomm: to Orange comment: if it was useful for licensed and why should this be differen for unlicensed?
Huawei: UL for LAA SCell has higher priority for us and there seem to be consensus for this
Vodafone: Dual Connectivity could be considered later

Multiuser Superposition Transmission/Interference Cancellation:

RP-151925 Motivation on New WI Proposal for MUST MediaTek Inc. discussion motiv Rel-14-
conclusion: noted

RP-151926 New Work Item Proposal: Downlink Multiuser Superposition Transmission for LTE MediaTek Inc. WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1; follow-up WI of SI FS_LTE_MUST
conclusion: revised in RP-152207

RP-152207 New Work Item Proposal: Downlink Multiuser Superposition Transmission for LTE MediaTek Inc. WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1; follow-up WI of SI FS_LTE_MUST
conclusion: revised in RP-152265

RP-152265 New Work Item Proposal: Downlink Multiuser Superposition Transmission for LTE MediaTek Inc. WID new RAN1 Rel-14-
discussion: Nokia Networks: is like a receiver enhancement and RAN4 budget has to be checked; also some text was removed from WID
Mediatek: not much work in RAN4 forseen, anyway RAN1 discussion needed first, so RAN4 TU allocation is reasonable
Ericsson: 0.5 TU is not enough for RAN4, you need at least 1TU; a lot of discussion expected about which parameters can be detected blindly
ALU: outcome of SI was that gains are not so high and occur in network conditions that are very special
RAN chair: SI was not very conclusive
NTT DOCOMO: we are interested in this feature

Samsung Exhibit 1025, Page 1023 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Orange: we were supporting the SI but think now that it is not high priority
Qualcomm: there were also concerns on the value of the WI
RAN chair: understood but there are also a big number of supporters
Nokia Networks: we wanted to look also at other receiver enhancements and this discussion did not happen so far
conclusion: revised in RP-152289

RP-152289 New Work Item Proposal: Downlink Multiuser Superposition Transmission for LTE MediaTek Inc. WID new RAN1 Rel-14-
discussion: Nokia Networks: is this really operators' priority?
Orange: is lower priority, no need to start it now where priority is on REL-13
Telecom Italia: concerned that there seems to the intention to squeeze now 4 new RAN1 WIs in during a quarter where REL-13 should have highest priority
Samsung: unclear regarding of sequence of work in different WGs
Qualcomm: multiple power ratios not needed
RAN1 vice-chair (ALU): downselection cannot be done in RAN1, this is a RAN job
Huawei: still thinks this can be done in RAN1
T-Mobile USA: this topic is lower priority for us
Ericsson: agrees with ALU that downselection is a RAN task and also does not see a need to start this WI now
Mediatek: remaing part is about details within one category so we downselected already
ZTE: MUST and MIMO are orthogonal so different things
Telecom Italia: this is rather a SI than a WI; suggest to continue the SI
RAN chair: suggest to have a RAN email discussion to converge by March 16
Mediatek: we have 35 supporting companies and we have reduced the scope already as much as we can
Samsung: Core part is planned to be completed by Q2/2016 so there seems to be still some space to start the WI later and still complete it in REL-14
Huawei :who is really objecting to this WI?
Ericsson: are we asking then also for the other WIs who will object?
RAN chair:
conclusion: postponed, RAN email discussion to clarify scope and objectives

RP-151882 Motivation for new WI on multiuser superposition transmission for LTE Huawei, HiSilicon discussion motiv Rel-14-
discussion: RAN chair: so mostly in line with Mediatek proposal
ZTE: downelection of multiuser superposition planned in WI?
Huawei: at the beginning of the WI
conclusion: noted

RP-151746 Motivation for New Study Item Proposal: Multi-User Interference Cancellation for LTE China Mobile Com. Corporation discussionmotiv Rel-14-
conclusion: noted

RP-151747 New Study Item Proposal: Study on Multi-User Interference Cancellation for LTE China Mobile Com. Corporation SID new RAN1 Rel-14-
new SI for LTE only; leading WG: RAN1; WI code not yet allocated, no TR needed?
discussion: ALU: RP-152005 and RP-152006 are related as well
conclusion: postponed

RP-152006 Motivation on New WI Proposal for Enhanced Downlink Multiuser MIMO Transmission for LTE Nokia Networks discussionmotiv Rel-14-
under RAN4 leadership (see AI 14.1.4)
conclusion: noted

RP-152005 New work item proposal: Enhanced Downlink Multiuser MIMO Transmission for LTE Nokia Networks WID new RAN4 Rel-14-
under RAN4 leadership (see AI 14.1.4)
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_DL_MUMIMO; under which WI was DL Multiuser MIMO introduced?
discussion: AT&T: looks a bit more like a study is needed
conclusion: postponed

Samsung Exhibit 1025, Page 1024 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

discussion of the Multiuser Superposition Transmission/Interference Cancellation proposals:
Vodafone: a lot of MIMO proposals and we are not sure about the gains
RAN chair: MIMO proposals are coming later
ALU: actually there are some links between these WIs here and the MIMO proposals
Ericsson: assumptions for MUST not relatistic as considered operating point is not what we see in today's networks
ZTE: superposition topics and MIMO topics need to be seperated
ALU: suggessts to have an email discussion to see where are the remaining MIMO gains as we had a number of MIMO WIs in the past and agrees that for the superposition proposal the operating point where the gains are shown is not realistic
RAN chair: email discussion about the gains is a good idea
Huawei: history for MUST: a SI was discussed for superposition and IC and then IC was removed from the SI but now it is proposed for a WI

MIMO enhancements:

RP-151857 Motivation for New WI Proposal: Enhancements on Full-Dimension (FD) MIMO for LTESamsung discussionmotiv Rel-14- related to RP-151856
discussion: Samsung: larger number of CSI support was already studied although we went at the end just for 16 antenna ports, so we do not think we need another SI phase
RAN 1chair: recommends to reduce the wide scope of this
conclusion: noted

RP-151856 New WI Proposal: Enhancements on Full-Dimension (FD) MIMO for LTE Samsung WID new RAN1 Rel-14-
ew WI for LTE only; leading WG: RAN1; WI code to be used: LTE_eFDMIMO; follow-up WI of REL-13 WI LTE_EBF_FDMIMO-Core
discussion: Qualcomm: reason for 3rd bullet (Uplink DRMS...) unclear
ALU: agrees with Qualcomm
Intel: shares the view that scope needs to reduced and the baseline needs to be clarified
conclusion: revised in RP-152262

RP-152262 New WI Proposal: Enhancements on Full-Dimension (FD) MIMO for LTE Samsung WID new RAN1 Rel-14-
discussion: Huawei: addition on further issue but then reduction of time units, proposal will realistically need 5TUs
Samsung: was not an extension of scope but a clarification that it was already included in the past; scope is narrowed down
Intel: TUs were even further reduced, does not agree with this
Vodafone: operators have no common understanding what they get from this WI
RAN chair: what about an email discussion until March to converge on the scope and operator interests?
Samsung: different companies have different interests, so email discussion will not help
RAN chair: some companies need clarifications on the gains of the different components
conclusion: revised in RP-152287

RP-152262 New WI Proposal: Enhancements on Full-Dimension (FD) MIMO for LTE Samsung WID new RAN1 Rel-14-
discussion: Huawei: is still a huge WI so we would like to have it approved
Qualcomm: unclear why UL-DMR was not deleted? should not impact UL
NTT DOCOMO: supports it but still needs some down scoping
Nokia Networks: is it just removing this UL part would is needed to approve this WI
NEC: 2TUs not realistic
ZTE: WI is unreasonable, things are added in a WI that are not studied so far
CATT: ZTE co-signed the previous version and this one is a subset
Telecom Italia: suggests to not approve this WI and focus on REL-13 completion
conclusion: revised in RP-152287

RP-152287 New WI Proposal: Enhancements on Full-Dimension (FD) MIMO for LTE Samsung WID new RAN1 Rel-14-
revision of RP-152262; new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_eFDMIMO; follow-up WI of REL-13 WI LTE_EBF_FDMIMO-Core;
conclusion: postponed, RAN email discussion about the scope etc. until RAN #71

RP-151839 Motivation for the new work item proposal: Rel-14 Enhanced MIMO beamforming CATT discussion motiv Rel-14- motivation for RP-151838;

Samsung Exhibit 1025, Page 1025 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: revised in RP-152180

RP-152180 Motivation for the new work item proposal: Rel-14 Enhanced MIMO beamforming for LTE CATT discussionmotiv Rel-14-
revision of RP-151839; motivation for RP-152179
conclusion: noted

RP-151883 Motivation for new SI on Enhanced MIMO beamforming Huawei, HiSilicon discussionmotiv Rel-14-
conclusion: withdrawn

RP-151838 Rel-14 New Work Item on Enhanced MIMO beamforming for LTE CATT WID new RAN1 Rel-14-
conclusion: revised in RP-152179

RP-152179 Rel-14 New Work Item on Enhanced MIMO beamforming for LTE CATT WID new RAN1 Rel-14-
revision of RP-151838; new WI for LTE only; leading WG: RAN1;
conclusion: postponed

RP-151888 Motivation for new work item on Massive Beamforming for Scell Coverage Huawei, HiSilicon discussionmotiv Rel-14- Motivation for RP-151887
conclusion: noted

RP-151887 New work item proposal: Massive Beamforming for Scell Coverage in LTE Huawei, HiSilicon WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1;
conclusion: postponed

RP-151960 Future work on FD-MIMO and AAS Ericsson discussion Rel-14-
discussion: Huawei: Tdoc is related to AAS, better separate AAS and MIMO proposal
conclusion: noted

D2D enhancements/wearables

RP-151754 Motivation for SI: Further LTE D2D enhancement for eMBB and wearables Intel Corporation discussion motiv Rel-14-
conclusion: noted

RP-151753 New SI proposal: Study on further LTE D2D enhancement for eMBB and wearables Intel Corporation SID new RAN1 Rel-14-
new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_e2D2D
discussion: Intel: also Sony is supporting this SI proposal and needs to be added in the next revision
conclusion: revised in RP-152221

RP-152221 New SI proposal: Study on further LTE D2D enhancement for eMBB and wearables Intel Corporation SID new RAN1 Rel-14-
new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_e2D2D;
conclusion: postponed

RP-151934 Wearable Devices based on LTE technologies Huawei, HiSilicon discussion Rel-14-
conclusion: noted

RP-151971 Discussion on D2D enhancements for LTE in Rel-14 Huawei, HiSilicon discussion Rel-14-
discussion: AT&T: how could a user opt out from unintended power loss when used as relay?
Huawei: will have to be considered
conclusion: noted

RAN2 led proposals of AI 14.1.2:

(RP-151946, RP-151948, RP-151947, RP-152009, RP-152007 were originally submitted under AI 14.1.2, but they were moved here as related to the other D2D enhancements proposals)

RP-151946 Motivation for WI on D2D based MTC Qualcomm Incorporated discussionmotiv Rel-14-
Motivation paper for new WI proposal on D2D based MTC
discussion: Telecom Italia: which kind of devices are targeting?
Qualcomm: low cost and enhancement for link budget but no specifc air interface
conclusion: noted

Samsung Exhibit 1025, Page 1026 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151948 New WI proposal on D2D based MTC Qualcomm Incorporated WID new RAN2 Rel-14 -
new WI for UTRA and LTE?; leading WG: RAN2
conclusion: postponed

RP-151947 Motivation for new SI on enhanced connectivity for companion device LG Electronics discussion motiv Rel-14 -
conclusion: noted

RP-151949 New SI proposal: Study in enhanced connectivity for companion device LG Electronics SID new RAN2 Rel-14 -
MCC: Tdoc not available on the day before RAN; unclear whether for UTRA & LTE
conclusion: postponed

RP-152009 D2D Communication for commercial use cases ZTE Corporation discussion Rel-14 -
Motivation paper for a new WI on D2D Communication for commercial use cases
conclusion: noted

RP-152007 D2D Communication for commercial use cases ZTE Corporation WID new RAN2 Rel-14 -
new WI for LTE only; leading WG: RAN2
conclusion: postponed

discussion about D2D enhancement/wearables Tdocs:
RAN chair: we will not approve multiple WIs on this topic so we need to converge on some commonalities
Telecom Italia: related to ZTE: impact on legal interception needs to be checked
LG: sidelink enhancements for unicast can mean duplication of work with V2V, so better focus on 2nd point: UE to relay operation in REL-14
RAN chair: today we discuss here on LTE enhancements, 5G will be handled on Tue morning
Mediatekl: Intel, Huawei refer to SA1 requirements that do not exist, SA1 is having a study with 4 different substudies so taking conclusions now would be premature
Broadcom: most of the work belongs to SA2 not to RAN
Qualcomm: doubts that positioning should be addressed (Intel proposal)
RAN chair: try to converge, we will check during the week

eMBMS for digital TV:

RP-151916 Motivation for eMBMS enhancements for LTE Ericsson discussion motiv Rel-14 -
This paper motivates the RAN Work Item in RP-15914 about MBMS enhancements in order to satisfy the requirements identified in SA1 with the goal of enabling TV service support by 3GPP networks.
discussion: Telecom Italia: proposal is merging very different demands so we need to have a realistic scope
Orange: is a too premature WI, SA2 has just started to look into the use cases, if we need to start something already in RAN it should be a SI; it is also not clear whether operating MBMS over a standalone SDL is allowed from a regulatory view point
RAN chair: Huawei can check how single cell-PTM could address the use case
EBU: for us it is an important WI and an important market and therefore we are co-signing and supporting this WI
AT&T: also supports this WI
LG: would be better to address this in 5G
Dish: support this proposal, SA studies are less RAN centric
LG: longer cyclic prefix for unicast as well? objective c. and d.: difference unclear
Ericsson: longer CP only considered for the broadcast part, we do not propose a new frame structure
Telefonica: supports this WI
conclusion: noted

RP-151914 New WI proposal: eMBMS enhancements for LTE Ericsson, Qualcomm, Nokia, EBU WID new RAN1 Rel-14 -
new WI for LTE only; leading WG: RAN1; this RAN1 WI will enhance MBMS in order to satisfy the requirements identified in SA1 with the goal of enabling TV service support by 3GPP networks
conclusion: revised in RP-152273

Samsung Exhibit 1025, Page 1027 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-152273 New WI proposal: eMBMS enhancements for LTE Ericsson, Qualcomm, Nokia, EBU WID new RAN1 Rel-14-

discussion: Orange: has strong concern to start RAN work in an area where SA work has not completed their work (SA1 is ongoing, SA2 has done nothing so far), so we are objecting based on the time line (and not based of contents)
Huawei: still missing something in the WI
Ericsson: unicast and SC-PTM is already there, what is missing is the broadcast
Qualcomm: if this would be a SI instead of WI, would this be acceptable?
Orange: starting a SI in March 16 would be acceptable so that use cases can be looked at before
RAN chair: email discussion about scope to see what we can start in March?
Huawei: this MBMS WI and the MIMO WI have different status; MBMS part is less mature and seems to have bigger RAN2 impacts
Telecom Italia: supports Huawei that an email discussion on this topic does not make sense
AT&T: eMBMS is not a new topic so you are enhancing something, so waiting for SA1 does not make sense
Ericsson: agrees, SA1 is still working on use cases (but this seems to be the main use case) and SA2 is working on architectural changes
LG: wonders what the market interest is; sees also a regulatory issue
EBU: anonymous broadcast is an important issue so removing it is not a good approach, public and commercial broadcasting is a big market; we were supporting RP-151914 but we do no longer support the current version RP-152273, because the essence, i.e. the free-to-air or ananymous reception issue, has been deleted
Nokia Networks: wonders why the use case was not an issue for LG 15 months ago
Telecom Italia: new codecs, inter-site distance of 15km: so use cases are quite different compared to what we had in the past, that's why SA work is useful before
Orange: SA1 should decide which use cases should be followed and SA2 can then look at architectural impacts
RAN chair: for this email we will have an email discussion until March 16
LG: we should also discuss regulatory impacts
RAN chair: can be done in email discussion as well

conclusion: postponed, email discussion on RAN reflector between RAN #70 and RAN #71 to discuss the scope/use cases of this topic more

dense small cells/COMP:

RP-151790 Motivation of study on further enhancement for densely deployed small cell in LTE ZTE Corporation discussion motiv Rel-14-

motivation paper on SID further enhancement for densely deployed small cell in LTE

discussion: AT&T: fig.4 up and down unclear; you would put a faster moving UE rather on the macro cell
ZTE: is not about fast moving UEs but about switches between macro and small cell
ALU: is overlapping with COMP enhancements
Intel: agrees that it is overlapping with our WI (RP-151756/RP-151755) in several parts

conclusion: noted

RP-151791 New study on Study on enhancements of densely deployed small cells in LTE ZTE Corporation SID new RAN1 Rel-14-

moved from AI 15.1 to AI 14.1.1; compare RP-151194; new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_dense_SC

conclusion: revised in RP-152270

RP-152270 New study on Study on enhancements of densely deployed small cells in LTE ZTE Corporation SID new RAN1 Rel-14-

conclusion: postponed

RP-151756 Motivation for SI: Further enhancements to Coordinated Multi-Point (CoMP) and seamless mobility schemes Intel Corporation discussion motiv Rel-14-

conclusion: noted

RP-151755 New SI proposal: Study on Further enhancements to Coordinated Multi-Point (CoMP) and seamless mobility schemes for LTE Intel Corporation SID new RAN1 Rel-14-

new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_eCOMP_mob

conclusion: revised in RP-152222

Samsung Exhibit 1025, Page 1028 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-152222 New SI proposal: Study on Further enhancements to Coordinated Multi-Point (CoMP) and seamless mobility schemes for LTE Intel Corporation SID new RAN1 Rel-14-
new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_eCOMP_mob;
conclusion: postponed

Lean carrier (CRS light):

RP-151983 Motivation for New Work Item on Lean Carrier for LTE Ericsson discussion motiv Rel-14-
Motivation for New Work Item on Lean Carrier for LTE
conclusion: noted

RP-151982 New Work Item on Lean Carrier for LTE Ericsson WID new RAN1 Rel-14- new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_LC
conclusion: postponed

UL enhancements:

RP-151744 Motivation for New Work Item Proposal: UL Capacity Enhancement for LTE China Mobile Com. Corporation discussion motiv Rel-14-
discussion: NEC: UL256QAM proposal from Ericsson is very similar
conclusion: noted

RP-151745 New Work Item Proposal: UL Capacity Enhancement for LTE China Mobile Com. Corporation WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1; MCC: WI has no spec impact
conclusion: revised in RP-152223

RP-152223 New Work Item Proposal: UL Capacity Enhancement for LTE China Mobile Com. Corporation WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1; MCC: WI has no spec impact?
conclusion: postponed

RP-151981 Motivation for New Work Item on Uplink 256QAM for LTE Ericsson discussion motiv Rel-14-
Motivation for New Work Item on Uplink 256QAM for LTE
conclusion: noted

RP-151980 New Work Item on Uplink 256QAM for LTE Ericsson WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_UL_256QAM
conclusion: postponed

HSPA enhancements:

RP-151894 Motivation for new SI on Multi-Carrier Enhancements for UMTS Huawei, HiSilicon, China Unicom discussion motiv Rel-14-
Motivation for RP-151893
discussion: Telecom Italia: impacts on other WGs?
Huawei: has also TUs for RAN2 in next quarter but this can be discussed; no RAN4 impact forseen so far
Nokia Networks: from RAN2 we would like to have ASN.1 done first in next quarter, also just 3 supporting companies so far
conclusion: noted

RP-151893 New SI proposal: Study on Multi-Carrier Enhancements for UMTS Huawei, HiSilicon, China Unicom SID new RAN1 Rel-14-
new SI for UTRA only; leading WG: RAN1; only 3 supporting companies
conclusion: revised in RP-152227

RP-152227 New SI proposal: Study on Multi-Carrier Enhancements for UMTS Huawei, HiSilicon, China Unicom SID new RAN1 Rel-14-
revision of RP-151893; new SI for UTRA only; leading WG: RAN1; WI code to be used: FS_UTRA_MCe
discussion: Huawei: has only RAN1 impact
conclusion: was at first approved but later revised in RP-152290 (to correct time budget)

RP-152290 New SI proposal: Study on Multi-Carrier Enhancements for UMTS Huawei, HiSilicon, China Unicom SID new RAN1 Rel-14-
conclusion: approved

Samsung Exhibit 1025, Page 1029 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN chair: we have by far more WI/SI proposals that we can accomodate, we will see later how much RAN1 time budget is left for new WIs/SIs; companies are invited to converge and to come with a way forward paper; we will come back on Thu and if there are early proposals we may open it already

Way forwards for 14.1.1:

RP-152242 Way Forward on Rel-14 RAN1-led Work Items NTT DOCOMO, AT&T, CATR, CATT, KDDI, LGE, Huawei, HiSilicon, MediaTek, NEC, Samsung, Sharp, Softbank, ZTE discussion Rel-14-
Propose the following items to be approved with reduced scope except for V2V
LAA
V2V (RP-152254)
MUST
WI covering MIMO aspect

All these items have no impact on RAN2/3 in Q1
Note that the following TUs are needed in RAN4 in Q1
V2V: 1TU (R4RF C) and 1TU (R4RD C)
MUST: 0.5TU (R4RD C)
discussion: NTT DOCOMO: also supported by Verizon
Telecom Italia: how many TUs are left in RAN1?
RAN1 chair: 7 TUs
Ericsson: excluding 5G channel modelling?
RAN1 chair: yes, otherwise 9 TU
Sprint: how to address RAN2, RAN4 overload?
RAN chair: we will start in RAN1, then RAN2, RAN3, RAN4 will come later
conclusion: noted

RP-152230 Proposed Way Forward on LTE Rel-14 at RAN #70 Qualcomm, Ericsson, Nokia Networks, Alcatel-Lucent, AT&T, Dish, Telstra, EBU, Fraunhofer IIS, Sequans discussion Rel-14-
proposal: Approve the following
Enhanced LAA for LTE (RP-15xxxx): 5 TUs in RAN1
Support for V2V services based on LTE sidelink (RP-15xxxx): 2 TUs in RAN1
eMBMS enhancements for LTE (RP-15xxxx): 2 TUs in RAN1
discussion: Orange: worried about MBMS as SA ...
Sprint:
conclusion: noted

RP-152255 Alternative way forward on RAN1 led WIs/SIs KT, Telecom Italia, Orange, Intel, DT, Vodafone discussion Rel-14-
proposal:
Approve 2 new RAN1-led WIs which have common interests from both way forwards:
LAA enhancement
V2V
More TU to be allocated to followings:
Maintenance of Rel-13 specifications
Above 6GHz Channel Modeling
discussion: RAN chair: wants to avoid trading LTE evolution against 5G
Vodafone: suggests to go for the 2 WIs
DT: it seems we can decide already on 2 topics which are common to all 3 proposals
Huawei: supports Vodafone and DT
NTT DOCOMO: also number of supporting companies to be taken into account
Telecom Italia: for LAA there is still CR open
Orange: TUs are again too optimistic; LAA consumed double the number of TUs in the past, also V2V TUs are too optimistic
Telecom Italia: does not want to agree now on 2 proposals and on Thu evening we squeeze in further WIs
RAN1 chair: suggests also scope reductions
Nokia Networks: 1TU WIs never worked out, extreme case was 1 TU that took 15 hours of meeting time
Ericsson: wonders RAN4 led WI that is now a RAN1 led WI
Mediatek: MUST is not really RAN4 it is for RAN1
Nokia Networks: receiver enhancements without RAN4 involvement is not realistic

Samsung Exhibit 1025, Page 1030 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

ALU: 1 TU for MUST is unrealistic
KT: we need to be honest that time budget handling on WG level never worked out properly, so we should only approve 2 WIs
RAN1 chair: we really have to look at the scope to avoid the fish market
RAN chair: so tomorrow we will open LAA, V2V, MUST, MIMO and MBMS WIDs and check the scope and TUs
Vodafone: we reduced the scope already for LAA
Orange: for LAA 10TUs per meeting were used in the past, so 5TUs are not fitting
RAN1 chair: that's why I suggested scope reduction
Samsung: it seems completion dates of some proposals are much before the freeze of the REL
Nokia Networks: Dual connectivity was removed from LAA although a number of companies were supporting it, so that it can be considered later
Samsung: so there is a plan to have dual connectivity in REL-14, if not then we should correct the LAA target date to later
ALU: does not think LAA can be reduced further in scope
RAN1 chair: scope reduction was meant for V2V
Ericsson: for LAA, UL was done part of REL-13 and we therefore try to finish it earlier in REL-14
Samsung: it will not be sufficient to finish L1 part early in REL-14 if then higher layers take longer
RAN chair: could consider an email discussion on MIMO aspects
Dish: would like to consider MUST, MIMO and MBMS with equal prio
RAN chair: we could do this, please RAN1

conclusion: noted, offline discussion until Thu, we will then open LAA, V2V, MUST, MIMO and MBMS WIDs (in this sequence) and check the scope and TUs in order to take decisions

Thursday:
RAN chairman: As discussed on Wed we will discuss for approval the 5 items that were identified yesterday as high priority at this meeting. We will start first from the 2 items that had broader support (i.e. they were in the 3 WFs), LAA and V2V. Then open MUST, MIMO and eMBMS.

Items with less than 4 supporters: will be treated if time allows:

RP-151885 Motivation for new SI on New LTE Frame Structure for TDD Huawei, HiSilicon discussion motiv Rel-14-

RP-151884 New study item proposal: Study on New LTE Frame Structure for TDD Huawei, HiSilicon SID new RAN1 Rel-14-
new SI for LTE only; leading WG: RAN1; only 2 supporting companies
conclusion: both not treated

RP-151892 Motivation for new WI proposal: Advanced Carrier Aggregation Techniques for LTE Huawei, HiSilicon discussion motiv Rel-14-
Motivation for RP-151891

RP-151891 New WI proposal: Advanced Carrier Aggregation Techniques for LTE Huawei, HiSilicon WID new RAN1 Rel-14-
new WI for LTE only; leading WG: RAN1;
conclusion: both not treated

RP-151758 Motivation for SI: Uplink non-orthogonal transmission for small data Intel Corporation discussion motiv Rel-14-

RP-151757 New SI proposal: Study on Uplink non-orthogonal transmission for small data for LTE Intel Corporation SID new RAN1 Rel-14-
new SI for LTE only; leading WG: RAN1; only 1 supporting company
conclusion: both not treated

RP-152208 Uplink multi-user transmission for massive MTC ZTE Corporation discussion Rel-14-
related to RP-151757
conclusion: not treated

Samsung Exhibit 1025, Page 1031 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151974 Motivation for Further Enhanced Machine-Type Communications for LTE Ericsson discussion motiv Rel-14 -
RP-151973 New WI: Further Enhanced Machine-Type Communications for LTE Ericsson WID new RAN1 Rel-14 -
new WI for LTE only; leading WG: RAN1
conclusion: both not treated

14.1.2 WIs/SIs led by RAN2

treated under AI 14.1.1:

RP-151946 Motivation for WI on D2D based MTC Qualcomm Incorporated discussion motiv Rel-14 -
Motivation paper for new WI proposal on D2D based MTC
RP-151948 New WI proposal on D2D based MTC Qualcomm Incorporated WID new RAN2 Rel-14 -
new WI for UTRA and LTE?; leading WG: RAN2
RP-151947 Motivation for new SI on enhanced connectivity for companion device LG Electronics discussion motiv Rel-14 -
RP-151949 New SI proposal: Study in enhanced connectivity for companion device LG Electronics SID new RAN2 Rel-14 - MCC: Tdoc not available on the day before RAN; unclear whether for UTRA & LTE
RP-152009 D2D Communication for commercial use cases ZTE Corporation discussion Rel-14 -
Motivation paper for a new WI on D2D Communication for commercial use cases
RP-152007 D2D Communication for commercial use cases ZTE Corporation WID new RAN2 Rel-14 -
new WI for LTE only; leading WG: RAN2

Indoor positioning:

RP-152012 Motivation for new WI proposal: Further Indoor Positioning enhancements for UTRA and LTE NextNav discussion motiv Rel-14 -
conclusion: not treated

RP-152013 New work item proposal: Further Indoor Positioning enhancements for UTRA and LTE NextNav WID new RAN2 Rel-14 -
new WI for UTRA & LTE; leading WG: RAN2; follow-up of REL-13 WI UTRA_LTE_iPos_enh
conclusion: revised in RP-152252
RP-152252 New work item proposal: Further Indoor Positioning enhancements for UTRA and LTE NextNav WID new RAN2 Rel-14 -
revision of RP-152013; new WI for UTRA & LTE; leading WG: RAN2; follow-up of REL-13 WI UTRA_LTE_iPos_enh;
discussion: Ericsson: co-existence REL-13 work was not completed and is now moved to REL-14
RAN chair: if work starts in March, we should shift the approval to March
Huawei: yes, RAN1 issues can be discussed offline
RAN4 chair (Samsung): if we approve the WI in March 16, then we will have 2 Perf. parts ongoing on this, so consider carefully the time budgets
Qualcomm: as co-existence work will be done in REL-14 we can discuss this offline already to avoid similar problems in the future like we had with REL-13
Ericsson: RAT pressure sensors still included?
RAN chair: you can discuss this offline until March 16
conclusion: postponed until March 16

UMTS:

RP-152274 Way Forward for RAN2-led UMTS Work Items Huawei, HiSilicon, Ericsson discussion Rel-14 -
proposal: Approve 2 new RAN2-led WIs
RP-152286 DTX/DRX enhancements for CELL_FACH (RAN1/2/3)
RP-152267 RRC enhancements for UMTS (RAN2/3)
RAN1 work starts in Q1
RAN2/3 starts in Q2
discussion: Nokia Networks: we would approve a WI where there is no space in leading WG
NEC: where is RP-152267 coming from?
Ericsson: is a merge of RP-151999 and RP-152001
conclusion: noted, way forward endorsed

Samsung Exhibit 1025, Page 1032 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

DTX/DRX Enhancements in CELL_FACH:

RP-151896 Motivation for new WI on DTX/DRX Enhancements in CELL_FACH Huawei, HiSilicon, China Unicom discussion motiv Rel-14-
Motivation for RP-151895
conclusion: not trreated

RP-151895 New work item proposal: DTX/DRX Enhancements in CELL_FACH Huawei, HiSilicon, China Unicom WID new RAN2 Rel-14-
new WI for UTRA only; leading WG: RAN2;
conclusion: revised in RP-152260

RP-152260 New work item proposal: DTX/DRX Enhancements in CELL_FACH Huawei, HiSilicon, China Unicom WID new RAN2 Rel-14-
revision of RP-151895; new WI for UTRA only; leading WG: RAN2;
conclusion: revised in RP-152286

RP-152286 New work item proposal: DTX/DRX Enhancements in CELL_FACH Huawei, HiSilicon, China Unicom WID new RAN2 Rel-14-
new WI for UTRA only; leading WG: RAN2;
conclusion: approved

RRC optimization for UMTS:

RP-152000 Motivation for WI Generic filtered UPH measurements for UMTS Ericsson discussion motiv Rel-14-
conclusion: not treated

RP-151999 Generic filtered UPH measurements for UMTS Ericsson WID new RAN2 Rel-14-
new WI for UTRA only; leading WG: RAN2
conclusion: merged into RP-152267

RP-152002 Motivation for WI RRC support for Simultaneous RAB setup and release for UMTS Ericsson discussion motiv Rel-14-
conclusion: not treated

RP-152001 RRC support for Simultaneous RAB setup and release for UMTS Ericsson WID new RAN2 Rel-14-
new WI for UTRA only; leading WG: RAN2
conclusion: revised in RP-152267

RP-152267 New WI proposal: RRC optimization for UMTS Ericsson WID new RAN2 Rel-14-
new WI for UTRA only; leading WG: RAN2; WI code to be used: UTRA_RRCopt-Core; merging RP-151999 and RP-152001
conclusion: approved
Note: It was detected after RAN #70 that this WI has no time allocation for the next quarter and could have been started at RAN #71 instead of RAN #70 without problems. The approval of WIs/SIs that just start after a future RAN plenary has to be avoided in the future.

VoLTE:

RP-151749 Motivation for Study on Voice Codec Adaptation Enhancement for LTE China Mobile Com. Corporation discussion motiv Rel-14-
motivation for RP-151750
conclusion: not treated

RP-151750 New SI proposal: Study on Voice Codec Adaptation Enhancement for LTE China Mobile Com. Corporation SID new RAN2 Rel-14-
new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_VCA
conclusion: revised in RP-152224

RP-152224 New SI proposal: Study on enhancement of VoLTE China Mobile Com. Corporation SID new RAN2 Rel-14-
revision of RP-151750 (note: The SI was renamed as it is merging also aspects of RP-152206); new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_eVoLTE;
conclusion: not treated

Samsung Exhibit 1025, Page 1033 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151898 Motivation for new SI on VoLTE evolution for EVS full HD voice Huawei, HiSilicon, China Mobile, China Telecom discussionmotiv Rel-14-
Motivation for RP-151897
conclusion: not treated

RP-151897 New study item proposal: Study on VoLTE evolution for EVS full HD voice Huawei, HiSilicon, China Mobile, China Telecom SID new RAN2 Rel-14-
new SI for LTE only; leading WG: RAN2; WI code to be used: FS_VoLTE_EVSHD
conclusion: revised in RP-152206

RP-152206 New study item proposal: Study on VoLTE evolution for EVS full HD voice Huawei, HiSilicon, China Mobile, China Telecom SID new RAN2 Rel-14-
revision of RP-151897; new SI for LTE only; leading WG: RAN2; WI code to be used: FS_VoLTE_EVSHD;
conclusion: merged into RP-152224

Cell-specific Operation in CA:

RP-151796 Motivation for new WI on Cell-specific Operation in CA LG Electronics discussionmotiv Rel-14-
conclusion: not treated

RP-151795 New WI proposal on Cell-specific Operation in CALG Electronics WID new RAN2 Rel-14-
new WI for UTRA and LTE?; leading WG: RAN2
conclusion: not treated

SC-PTM enhancements for LTE:

RP-151900 Motivation for new WI on SC-PTM enhancements for LTE Huawei, HiSilicon discussion motiv Rel-14-
Motivation for RP-151899
conclusion: not treated

RP-151899 New work item proposal: SC-PTM enhancements for LTEHuawei, HiSilicon WID new RAN2 Rel-14-
new WI for LTE only; leading WG: RAN2;
conclusion: not treated

Signalling reduction for always-connected UEs in LTE:

RP-151902 Motivation for new WI on signalling reduction for always-connected UEs in LTE Huawei, HiSilicon discussionmotiv Rel-14-
Motivation for RP-151901
conclusion: not treated

RP-151901 New WI proposal: Signalling reduction for always-connected UEs in LTE Huawei, HiSilicon WID new RAN2 Rel-14-
new WI for LTE only; leading WG: RAN2;
conclusion: not treated

Further Enhancement on LTE-WLAN Aggregation:

RP-151927 Motivation for Further Enhancement on LTE-WLAN Aggregation MediaTek Inc. discussionmotiv Rel-14-
conclusion: withdrawn

Improved Mobility for Synchronous LTE Networks:

RP-151969 Motivation for WI Improved Mobility for Synchronous LTE Networks (MobSync) Nokia Networks discussionmotiv Rel-14-
conclusion: not treated

RP-151968 New WI: Improved Mobility for Synchronous LTE Networks (MobSync) Nokia Networks WID new RAN2 Rel-14-
new WI for LTE only; leading WG: RAN2; follow-up WI of REL-13 SI FS_LTE_LATRED
conclusion: not treated

Samsung Exhibit 1025, Page 1034 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Latency reduction for LTE:

RP-152015 Motivation slides for new WI proposal: L2 Latency reduction techniques for LTE Ericsson discussion motiv Rel-14-
new WI for LTE only; leading WG RAN2; related to SI FS_LTE_LATRED
conclusion: not treated

RP-152014 New WI proposal: L2 Latency reduction techniques for LTE Ericsson WID new RAN2 Rel-14-
new WI for LTE only; leading WG RAN2; follow-up WI of REL-13 SI FS_LTE_LATRED
conclusion: not treated

14.1.3 WIs/SIs led by RAN3

Context Aware Service Delivery in RAN:

RP-151751 Motivation for Study on Context Aware Service Delivery in RAN China Mobile Com. Corporation discussion motiv Rel-14-
conclusion: not treated

RP-151752 New SID proposal:Study on Context Aware Service Delivery in RAN China Mobile Com. Corporation SID new RAN3 Rel-14-
MCC: unclear whether SI is for UTRA & LTE; no TR needed? only 2 supporting companies
conclusion: not treated

HSPA and LTE Joint Operation:

RP-151877 Motivation for Study on HSPA and LTE Joint Operation China Unicom discussionmotiv Rel-14-
conclusion: not treated

RP-151876 New SI Proposal: Study on HSPA and LTE Joint Operation China Unicom SID new RAN3 Rel-14-
new SI for UTRA & LTE; leading WG: RAN3; WI code to be used: FS_UTRA_LTE_JOP
conclusion: not treated

S1 interface based Dual Connectivity Extension for LTE:

RP-152209 Motivation for WI proposal S1 interface based Dual Connectivity Extension for LTE ZTE Corporation discussionmotiv RAN3 Rel-14-
related to RP-152210
conclusion: not treated

RP-152210 New WI proposal: S1 interface based Dual Connectivity Extension for LTE ZTE Corporation, China Telecom WID new RAN3 Rel-14-
new WI for LTE only; leading WG: RAN3
conclusion: not treated

SON:

RP-151961 Possible areas for SON development in Rel.14 Nokia Networks discussion Rel-14-
conclusion: not treated

14.1.4 WIs/SIs led by RAN4

Way forward:

RP-152264 Way forward for RAN4 led WI in RAN#70 NTT DOCOMO, INC., Huawei, HiSilicon, , China Unicom, KDDI, China Mobile, KT, SK Telecom, CHTTL, CATT, Ericsson, Telstra, ATR, Potevio, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, SoftBank Corp., Telefonica, Acorn Technologies, Mitsubishi Electric Co., CATR, ETRI, ITRI, Media Tek, Sumitomo Elec. Industries, Ltd, NEC, China Telecom discussion Rel-14-
proposed way forward:
The following two WIs should be selected as candidate WIs to be approved in R#70 if the WID becomes stable.
- *RP-152205: Multi-Band Base Station testing with three or more bands*
- *RP-152264: New WI proposal: Performance enhancements for high speed scenario in LTE*

Samsung Exhibit 1025, Page 1035 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Note: The 2nd WI is in RP-152263 and not RP-152264.
discussion: RAN chair: RAN4 chair ok with this? seems so
Qualcomm: it should be at least be clarified that this will be handled with low priority
RAN chair: yes, this is confirmed
conclusion: noted, way forward was endorsed

high speed scenario in LTE:

RP-151903 Motivation for new WI on Performance enhancements for high speed scenario Huawei, HiSilicon, NTT DOCOMO, INC discussionmotiv Rel-14-
Motivation for RP-151792
conclusion: not treated

RP-151792 New WI proposal: Performance enhancements for high speed scenario in LTE NTT DOCOMO, Huawei, HiSilicon WID new RAN4 Rel-14- new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_high_speed; follow-up WI of SI REL-13 FS_LTE_high_speed
conclusion: revised in RP-152263

RP-152263 New WI proposal: Performance enhancements for high speed scenario in LTE NTT DOCOMO, Huawei, HiSilicon WID new RAN4 Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_high_speed; follow-up WI of SI REL-13 FS_LTE_high_speed;
discussion: Nokia Networks: we are also supporting this WI
conclusion: approved

Multi-Band Base Station testing with three or more bands:

RP-151679 Motivation for new Work Item proposal: Multi-Band Base Station testing with three or more bands Alcatel-Lucent discussionmotiv Rel-14-
In this contribution, we have provided a review of the proposals for the two main open issues that need to be solved for multi-band BS testing with three or more bands, and proposed a new Work Item to solve these issues.
conclusion: not treated

RP-151680 New Work Item proposal: Multi-Band Base Station testing with three or more bands Alcatel-Lucent WID new RAN4 Rel-14-
new WI for UTRA & LTE; leading WG: RAN4; WI code to be used: MB_BS_test_3B
conclusion: revised in RP-152205

RP-152205 New Work Item proposal: Multi-Band Base Station testing with three or more bands Alcatel-Lucent WID new RAN4 Rel-14-
revision of RP-151680; new WI for UTRA & LTE; leading WG: RAN4; WI code to be used: MB_BS_test_3B
conclusion: approved

Active Antenna System (AAS):

RP-151905 Motivation for new WI on Further Enhancement of Base Station (BS) RF and EMC requirements for Active Antenna System (AAS) Huawei discussionmotiv Rel-14-
Motivation for RP-151904
conclusion: not treated

RP-151904 Further Enhancement of Base Station (BS) RF and EMC requirements for Active Antenna System (AAS) Huawei WID new RAN4 Rel-14-
new WI for UTRA & LTE; leading WG: RAN4; follow-up WI of not yet completed REL-13 WI AAS_BS_LTE_UTRA
conclusion: not treated

Enhanced Downlink Multiuser MIMO Transmission for LTE:

RP-152003 Motivation on New WI Proposal for Enhanced Downlink Multiuser MIMO Transmission for LTE Nokia Networks discussionmotiv Rel-14-
conclusion: withdrawn, see RP-152006 instead

RP-152006 Motivation on New WI Proposal for Enhanced Downlink Multiuser MIMO Transmission for LTE Nokia Networks discussionmotiv Rel-14-
conclusion: treated under AI 14.1.1

Samsung Exhibit 1025, Page 1036 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-152005 New work item proposal: Enhanced Downlink Multiuser MIMO Transmission for LTE Nokia Networks WID new RAN4 Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_DL_MUMIMO;
conclusion: treated under AI 14.1.1

14.2 Spectrum related WIs/SIs

basket CA WIs:

RP-151911 New WID: Basket WI for LTE Advanced Intra-band CA including contiguous and non-contiguous spectrum Ericsson WID new RAN4 s (intra) Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_R14_intra
discussion: RAN chair: have baskets be seen in RAN4
Ericsson: discussion about 5B ongoing
conclusion: revised in RP-152250

RP-152250 New WID: Basket WI for LTE Advanced Intra-band CA including contiguous and non-contiguous spectrum Ericsson WID new RAN4 s (intra) Rel-14-
conclusion: approved

RP-151735 New WI: LTE Advanced inter-band CA Rel-14 for 2DL/1UL Qualcomm Incorporated WID new RAN4 s (2DL/1UL) Rel-14-
discussion: Intel: concern about B3/B39
Qualcomm: also B20/B28 is still open
RAN4 chair (Samsung): reminder that all new CA combinations have to be provided to RAN4 for review first
conclusion: revised in RP-152196

RP-152196 New WI: LTE Advanced inter-band CA Rel-14 for 2DL/1UL Qualcomm Incorporated WID new RAN4 s (2DL/1UL) Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_R14_2DL1UL
discussion: RAN4 chair: B20/B28 was added?
Qualcomm: yes
conclusion: approved

RP-151906 New WID: LTE Advanced inter-band CA Rel-14 for 3DL/1UL Huawei, HiSilicon WID new RAN4 s (3DL/1UL) Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_R14_3DL1UL
conclusion: revised in RP-152236

RP-152236 New WID: LTE Advanced inter-band CA Rel-14 for 3DL/1UL Huawei, HiSilicon WID new RAN4 s (3DL/1UL) Rel-14-
discussion: Intel: fine with having an evaluation phase for B3/B39 first
conclusion: revised in RP-152278

RP-152278 New WID: LTE Advanced inter-band CA Rel-14 for 3DL/1UL Huawei, HiSilicon WID new RAN4 s (3DL/1UL) Rel-14-
revision of RP-152236; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_R14_3DL1UL;
conclusion: approved

RP-151910 New WID: Basket WI for LTE Advanced Inter-band CA Rel-14 for 4DL/1UL Ericsson WID new RAN4 s (4DL/1UL) Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_R14_4DL1UL
discussion: Intel: we should have at least one operator as supporting company per combination
Ericsson: discussion about 5B ongoing
conclusion: revised in RP-152249

RP-152249 New WID: Basket WI for LTE Advanced Inter-band CA Rel-14 for 4DL/1UL Ericsson WID new RAN4 s (4DL/1UL) Rel-14-
discussion: RAN4 chair (Saumsung): B3/B39 is removed?
Ericsson: yes
conclusion: approved

RP-151671 New WI: LTE Advanced inter-band CA Rel-14 for 5DL/1UL Nokia Networks WID new RAN4 s (5DL/1UL) Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_R14_5DL1UL

Samsung Exhibit 1025, Page 1037 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

RP-151907 New WID: LTE Advanced inter-band CA Rel-14 for 2DL/2UL Huawei, HiSilicon WID new RAN4 s (2UL) Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_R14_2DL2UL
conclusion: revised in RP-152237

RP-152237 New WID: LTE Advanced inter-band CA Rel-14 for 2DL/2UL Huawei, HiSilicon WID new RAN4 s (2UL) Rel-14-
conclusion: approved

RP-151928 New WID:LTE Advanced inter-band CA Rel-14 for xDL/2UL with x=3,4,5 LG Electronics WID new RAN4 s (xDL/2UL) Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_R14_xDL2UL
conclusion: revised in RP-152246

RP-152246 New WID:LTE Advanced inter-band CA Rel-14 for xDL/2UL with x=3,4,5 LG Electronics WID new RAN4 s (xDL/2UL) Rel-14-
conclusion: approved

RP-151920 New WI: LTE Advanced Inter-band CA Rel-14 for 3DL/3UL Nokia Networks WID new RAN4 s (3DL/3UL) Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_R14_3DL3UL
discussion: RAN4 chair (Nokia Networks): there is no combination proposed so far but intention is to work on generic aspects so far
conclusion: revised in RP-152241

RP-152241 New WI: LTE Advanced Inter-band CA Rel-14 for 3DL/3UL Nokia Networks WID new RAN4 s (3DL/3UL) Rel-14-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_R14_3DL3UL;
conclusion: approved

RP-151736 New WI: LTE Advanced inter-band CA Rel-14 for 2DL/1UL Qualcomm Incorporated WID new RAN4 s (2DL/1UL) Rel-14-
conclusion: withdrawn (duplication to RP-151735)

other CA WIs:

RP-152114 New WI: LTE Advanced inter-band Carrier Aggregation of Band 20 and Band 28 TeliaSonera WID new RAN4 s (2DL/1UL) Rel-14-
new WI for LTE only; leading WG: RAN4; no WI code allocated as this CA combination should normally be included in the basket WI; RAN4 did not agree to add this combination into the CA basket WIs; note: This is a follow-up WI of REL-13 SI FS_LTE_CA_B20_B28; if inclusion of this CA is approved by RAN then WID has to be merged into RP-152196
discussion: TeliaSonera: Ericsson and Samsung are also supporting this now
Intel: only single filter vendor providing data, huge insertion loss, so not possible, filter only available in 2018, so premature to agree this now
TeliaSonera: we had 2 filter vendors, one anonymous in the report, oen terminal vendor co-signing
Intel: only single vendor visible, difficult to evaluate when it is avalaible on the market
Vodafone: supporting TeliaSonera
RAN4 chair (Samsung): suggest to discuss offline to see whether we can reach consensus
conclusion: revised in RP-152247

RP-152247 New WI: LTE Advanced inter-band Carrier Aggregation of Band 20 and Band 28 TeliaSonera WID new RAN4 s (2DL/1UL) Rel-14-
conclusion: merged into RP-152196

RP-151833 New WI: LTE Advanced Carrier Aggregation up to (5DL/1UL) of Band 7 and Band 46 Telstra Corporation Limited WID new RAN4 s (5DL/1UL) Rel-14-
conclusion: withdrawn (proposal is violating agreed basket WI approach for REL-14)

RP-151835 New WI: LTE Advanced Carrier Aggregation of (4DL/1UL) Band 7 and Band 46 Telstra Corporation Limited WID new RAN4 s (4DL/1UL) Rel-14-
conclusion: withdrawn (proposal is violating agreed basket WI approach for REL-14)

Samsung Exhibit 1025, Page 1038 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151836 New WI: LTE Advanced Carrier Aggregation of (3DL/1UL) Band 7 and Band 46 Telstra Corporation Limited WID new RAN4 s (3DL/1UL) Rel-14-
conclusion: withdrawn (proposal is violating agreed basket WI approach for REL-14)

LTE FDD in the Bands 1980-2010 MHz and 2170-2200MHz for Region 3:

RP-151727 Background on the New WID: 2 GHz LTE band for Region 3 Dish Networkdiscussion Rel-13-
This contribution provides some background on the New WID:2 GHz LTE band for Region 3 in RP-151953
discussion: LG: is also supporting this document
MCC: normally it has to be avoided to open a WI, approve CRs and close a WI at the same RAN meeting but in this case such an exceptional approach makes sense
conclusion: noted

RP-151953 New WID: LTE FDD in the Bands 1980-2010 MHz and 2170-2200MHz for Region 3 KT Corp. WID new RAN4 s Rel-13-
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_1980_2170_REG3; follow-up WI of SI FS_LTE_1980_2170_Korea and linked to WI LTE_1980_2170_REG1; note: It is proposed to open this WI in REL-13, approve CRs and close this WI at RAN #70;
conclusion: revised in RP-152238

RP-152238 New WID: LTE FDD in the Bands 1980-2010 MHz and 2170-2200MHz for Region 3 KT Corp. WID new RAN4 s Rel-13-
revision of RP-151953; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_1980_2170_REG3; follow-up WI of SI FS_LTE_1980_2170_Korea and linked to WI LTE_1980_2170_REG1; note: It is proposed to open this WI in REL-13, approve CRs and close this WI at RAN #70; only Core part and no Perf. part
conclusion: approved; with the approval of CRs in RP-152175 the Core part WI is already completed at RAN #70.

RP-152175 Endorsed CRs for the Introduction of Region 3 requirement in Band 65 RAN4 CR Pack Rel-13 LTE_1980_2170_REG3-Core
discussion: MCC: late submission; RAN4 endorsed CRs to introduce requiremensts of Region 3 in Band 65; CRs to be approved after approving the WID for B65 in region 3 in RP-151953; moved from AI 11.9.1 to AI 14.2
conclusion: approved
With the approval of these CRs the new WI LTE_1980_2170_REG3-Core is completed

LTE FDD 2.6 GHz Supplemental DL band (2570-2620 MHz) and LTE CA (2DL/1UL) with Band 3:

RP-152043 Motivation for new WI LTE FDD 2.6 GHz Supplemental DL band (2570-2620 MHz) and LTE Carrier Aggregation (2DL/1UL) with Band 3 ORANGEdiscussionmotiv Rel-14-
motivation for RP-152004
discussion: Sprint: what are the co-existence requirements for TDD and FDD between band 38 and band 7
Orange: co-existence studies were done by CEPT
Sprint: WID should be restricted to region 1
Orange: is done already in the WID RP-152215
Huawei: in which country is it possible to use it?
Orange: e.g. in Spain
conclusion: noted

RP-152004 New WI: LTE FDD 2.6 GHz Supplemental DL band (2570-2620 MHz) and LTE Carrier Aggregation (2DL/1UL) with Band 3 ORANGEWID new RAN4 s (2DL/1UL) Rel-14-
conclusion: revised in RP-152215

RP-152215 New WI: LTE FDD 2.6 GHz Supplemental DL band (2570-2620 MHz) and LTE Carrier Aggregation (2DL/1UL) with Band 3 for region 1 ORANGEWID new RAN4 s (2DL/1UL) Rel-14-
revision of RP-152004; new WI for LTE only; leading WG: RAN4; Introduction of a new LTE band FDD 2.6 GHz SDL band (2570-2620 MHz) and its LTE inter-band carrier aggregation with band 3; WI code to be used: LTE_FDD_2600_CA_B3
discussion: RAN3 chair: target date wrong
conclusion: revised in RP-152253

RP-152253 New WI: LTE FDD 2.6 GHz Supplemental DL band (2570-2620 MHz) and LTE Carrier Aggregation (2DL/1UL) with Band 3 ORANGEWID new RAN4 s (2DL/1UL) Rel-14-

Samsung Exhibit 1025, Page 1039 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

revision of RP-152215; new WI for LTE only; leading WG: RAN4; Introduction of a new LTE band FDD 2.6 GHz SDL band (2570-2620 MHz) and its LTE inter-band carrier aggregation with band 3; WI code to be used: LTE_FDD_2600_CA_B3;
conclusion: approved
note: WI is kept separate from CA basket WIs as it introduces also a new band; however:
1. CA aspects will affect the 2DL/1UL CA basket WI TR
2. if afterwards CA of this new band is considered with another band, then corresponding new CA combinations will be included in the basket CA WIs

AWS-3/4 Band for LTE:

RP-151731 New AWS-3/4 Band for LTE Dish NetworkWID new RAN4 s Rel-14 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_AWS_3_4; follow-up WI of REL-13 SI FS_LTE_AWS_3_4
conclusion: approved

14.3 UE conformance testing WIs/SIs led by RAN5

RP-151763 New Work Item proposal: UE Conformance Test Aspects - Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA Ericsson WID new RAN5 Rel-12 -
new test WI for UTRA and LTE; leading WG: RAN5; tested: Rel-12 LTE_UTRA_IncMon-Core; WI code to be used: LTE_UTRA_IncMon-UEConTest
conclusion: approved

RP-151764 New Work Item proposal: UE Conformance Test Aspects - Rel-13 LTE CA configurations Ericsson WID new RAN5 Rel-13 -
new test WI for LTE only; leading WG: RAN5; tested: Rel-13 CA combinations; WI code to be used: LTE_CA_Rel13-UEConTest
conclusion: approved

RP-151765 New Work Item proposal: UE Conformance Test Aspects - LTE DL 4 Rx antenna ports Ericsson WID new RAN5 Rel-13 -
new test WI for LTE only; leading WG: RAN5; tested: Rel-13 LTE_4Rx_AP_DL-Core; WI code to be used: LTE_4Rx_AP_DL-UEConTest
conclusion: approved

RP-151766 New Work Item proposal: UE Conformance Test Aspects - Licensed-Assisted Access using LTE Ericsson WID new RAN5 Rel-13 -
new test WI for LTE only; leading WG: RAN5; tested: Rel-13 LTE_LAA-Core; WI code to be used: LTE_LAA-UEConTest
conclusion: approved

RP-151767 New Work Item proposal: UE Conformance Test Aspects - AWS-Extension Band for LTE (Band 66) Ericsson WID new RAN5 Rel-13 -
new test WI for LTE only; leading WG: RAN5; tested: REL-13 LTE_AWS_EXT-Core; WI code to be used: LTE_AWS_EXT-UEConTest
conclusion: approved

Samsung Exhibit 1025, Page 1040 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

15 Next generation radio access technology

15.1 Communication with other organizations

Documents of this AI will be treated together with documents of AI 15.3.

RP-151668 LS on 5G use cases from verticals
(EC_LS_151201; to: RAN; cc: -; contact: EC) European Commission (EC) DG CONNECT - Unit El, Network Technologies LS in Rel-14 -
RAN action requested
discussion: RAN chair: at this stage we are not prioritizing any use case at the moment so the discussion is still open and will be handled in the RAN SI to be started this week
Orange: This input it coming at the right moment and it is important that research project can bring their results to 3GPP
Nokia Networks: supports this presentation
ALU: also supports this, do we need to add support of verticals also in the RAN SI?
Orange: these are actually families of uses cases and we have just described the corners of the triangle with our 3 use cases considered in 3GPP
RAN chair: suggests to keep the SI text simple so that we can easily document this in the SI TR
conclusion: noted, no LS answer

RP-152129 LS on NGMN Requirement metrics and deployment scenarios for 5G
(NGMN_LS_151204; to: RAN; cc: - ; contact: Telefonica) NGMN LS in Rel-14 -
no explicit RAN action requested
conclusion: noted, no LS answer

RP-152197 LS on NGMN view of 5G as an end-to-end ecosystem - Alignment of 3GPP SA and RAN
(NGMN_LS_20151204b; to: SA, RAN; cc: -; contact: Telefonica) NGMN LS in Rel-14 -
RAN action requested
conclusion: noted, no LS answer

15.2 Study on channel model for frequency spectrum above 6 GHz [new SI: FS_6GHz_CH_model]

RP-151854 Status report for SI Study on channel model for frequency spectrum above 6 GHz; rapporteur: Samsung
RAN1 WI status report Rel-14 FS_6GHz_CH_model
discussion: MCC: late submission; target date in [ ] ? [ ] will be ignored for the work plan
RAN1 chair: plans to ask former RAN4 chair (Nokia Networks) to chair the channel modelling session in RAN1
conclusion: noted, approved: 10%, June 16

RP-151847 Report of RAN email discussion about >6GHz channel modeling Samsung report Rel-14
FS_6GHz_CH_model
conclusion: revised in RP-152212

RP-152212 Report of RAN email discussion about >6GHz channel modeling Samsung report Rel-14
FS_6GHz_CH_model
discussion: RAN chair: discussion will now move to RAN1 after RAN #70
Orange: in the email discussion there was a question on the frequency bands that companies want to cover, is this included here?
Samsung: up to 100GHz
Vodafone: also link level simulations intended (e.g. throughput vs. pathloss)?
xy?: Geneva decided up to 20GHz
Samsung: we are not limted by the WRC-15 decision as anyway local regulations must be respected, so we can go beyond 20GHz
conclusion: noted

Samsung Exhibit 1025, Page 1041 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151956 5G Channel Model for 6 GHz–100 GHz NTT DOCOMO discussion Rel-14 FS_6GHz_CH_model

Proposal: Companies are encouraged to check and consider a white paper [3] for the SI on channel model for frequency spectrum above 6 GHz.

[3] Aalto University, BUPT, CMCC, Ericsson, Huawei, Intel, KT Corporation, Nokia, NTT DOCOMO, New York University, Qualcomm, Samsung, University of Bristol, University of Southern California, "5G Channel Model for bands up to 100 GHz", Globecom 2015, Dec. 2015 (http://www.5gworkshops.com).

discussion: ZTE: table 1 lists a lot of features, in email discussion we agreed to have 5 features; whitepaper addresses only 1.5 of them, what about the others that we agreed in the email discussion?
NTT DOCOMO: paper is only for information, we are open to further discuss other features

conclusion: noted

RP-151861 Measurement results for 28GHz in multiple deployment scenarios KT Corp. discussion Rel-14 FS_6GHz_CH_model

This contribution provides measurement results for 28GHz in multiple deployment scenarios.

conclusion: noted

RP-151724 Considerations on high-frequency channel modeling ZTE Corporation discussion Rel-14 FS_6GHz_CH_model

Observation 1: With the deployment scenarios for 5G communication decided in RAN plenary, it should be left to RAN1 to consider whether the channel modeling for various deployments in each classification group (indoor, UMi (O2O), etc) should be treated separately or consolidated.

Observation 2: The high-frequency channel modeling should at least contain following key features
The foliage, atmosphere and rain attenuations;
The blockage caused by the static/moving objects;
The spatial consistency.

Observation 3: The hybrid modeling methodology can balance between modeling accuracy and complexity, and therefore should be considered by RAN1 as one of modeling candidates.

discussion: RAN chair: we will not take decisions here, methodology will be discussed in RAN1

conclusion: noted

RP-151967 Views on channel modeling study for 5G Huawei, HiSilicon discussion Rel-14 FS_6GHz_CH_model

suggestions for further studies:

- *The potential use of spectrum in the frequency range of 6 GHz to 100 GHz for IMT that is allocated for mobile services should be suitably covered by the channel modelling studies.*
- *The frequency bands between 24.25 GHz and 86 GHz given in ITU-R Resolution COM6/20 (WRC-15) could have high priority for channel measurements and channel modelling development due to their potential allocation for IMT use beyond 2019.*
- *It would be preferable to have one unified channel model framework, perhaps including frequency dependent parameters for specific frequency bands (or band ranges), to efficiently address channel modelling needs for the wide range of frequency bands.*
- *Channel modelling for "5G" needs to support up to several giga hertz bandwidth. This should be modelled not only in the context of individual channels but also in the context of channel aggregations and multi-operator bands encompassing multiple giga-Hertz.*

conclusion: noted, will be discussed in RAN1 as well

15.3 New SI proposals

Requirements Study:

RP-151760 New Study Item Proposal: Study on Scenarios and Requirements for Next Generation Access Technologies China Mobile Com. Corporation SID new RAN Rel-14-

moved from AI 14.1.1 to AI 15.3;

conclusion: revised in RP-152182

RP-152182 New Study Item Proposal: Study on Scenarios and Requirements for Next Generation Access Technologies China Mobile Com. Corporation SID new RAN Rel-14-

new SI for new RAT; leader: RAN; WI code to be used: FS_NG_SReq

discussion: RAN chair: architecture & interworking aspects could be covered in this RAN SI as well

Samsung Exhibit 1025, Page 1042 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Deutsche Telekom: This was also our understanding
CMCC: expects another technology and a performance SID
AT&T: is also supporting this SI
Orange: requirements and deployments scenarios have to be mapped with SA use cases
RAN chair: yes, is clear from justifications (we also align with ITU-R)
Orange: is talking about alignment with SA
AT&T: considers this already included
SA chair: alignment with SA will be taken into account, we have another paper on this
ALU: Alcatel Shanghai Bell is also supporting
RAN chair: additional supporting companies please contact the SI rapporteur to be added
IAESI: use cases of RAN should be handled in RAN was decided by SA1 so they should be covered as well
RAN chair: you can bring your inputs, no problems
Telecom Italia: will we have an email discussion?
RAN chair: yes, I have another input also about coordination for this (also suggesting an ad hoc) that we will treat later

conclusion: revised in RP-152226, sentence about RAN-SA coordination to be added, also supporting companies to be added

RP-152226 New Study Item Proposal: Study on Scenarios and Requirements for Next Generation Access Technologies China Mobile Com. Corporation SID new RAN Rel-14-

revision of RP-152182; new SI for new RAT; leader: RAN; WI code to be used: FS_NG_SReq;

discussion: Orange: architectural thing should be clearer in objectives
RAN chair: architectural and interworking are part of the SI and we could it add it if we want
Orange: next generation technologies includes LTE evolution
RAN chair: yes
ALU: 2nd bullet remove "usage" and add Alcatel-Lucent Shanghai Bell
Vodafone: sentence does not make much sentence anymore, remove "for each usage scenario"
RAN chair: ok, that's better

conclusion: revised in RP-152257

RP-152257 New Study Item Proposal: Study on Scenarios and Requirements for Next Generation Access Technologies China Mobile Com. Corporation SID new RAN Rel-14-

new SI for new RAT; leader: RAN; WI code to be used: FS_NG_SReq;

conclusion: approved
NOTE: TR 38.913 was allocated for the SI TR.
email discussion on RAN reflector (starting next week until the meeting in January) :
- to have a stable TR skeleton and
- after this is done we will try to fill the TR
rapporteur of the email discussion: CMCC

RP-151761 Skeleton TR of the Study on Scenarios and Requirements for Next Generation Access Technologies China Mobile Com. Corporation draft TR 38.913RAN Rel-14-

TR proposal related to a new RAN SI; moved from AI 14.1.1 to AI 15.3;

conclusion: revised in RP-152183

RP-152183 Skeleton TR of the Study on Scenarios and Requirements for Next Generation Access Technologies China Mobile Com. Corporation draft TR 38.913RAN Rel-14-

revision of RP-151761; TR proposal related to a new RAN SI;

discussion: Vodafone: we had some comments on the RAN reflector, TR goes directly to deployment scenarios and performance metrics and there should be some higher level of requirements beforehand
Orange:understands Vodafone point and there are quantitative and qualitative requirements and we have to be open to cover both
KT: requirements for each deployment scenario is preferred
Sprint: TR is about a new air interface and interworking of different technologies is not covered at all
Panasonic: average spectrum efficiency is mentioned but median value (50% throughput) is missing

conclusion: postponed, will be looked at during the email discussion on the RAN reflector

RP-151863 Motivation for Study on Scenarios and Requirements for Next Generation Radio Access Technologies KT Corp. discussionmotiv Rel-14-

Samsung Exhibit 1025, Page 1043 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

This contribution provides motivation for new SI on 5G Scenarios and Requirements.
discussion: KT: is already covered in SID
conclusion: noted

RP-151823 Requirement for long distance coverage in next generation radio access technologies Telstra Corporation Limited discussion Rel-14-
Proposal to include requirements for long distance coverage in study item on scenarios and requirements for next generation access technologies; moved from AI 14.1 to AI 15.3
conclusion: revised in RP-152118
RP-152118 Requirement for long distance coverage in next generation radio access technologies Telstra Corporation Limited discussion Rel-14-
discussion: Telefonica: is also interested in this, esp. for the Southern hemisphere
RAN chair: suggests to bring this into the RAN discussion when we start the SI
conclusion: noted

Treatement of LSs of AI 15.1: RP-152129 and RP-151668

Technology Study:

RP-151922 New SID Proposal: Study on Next Generation New Radio Access Technology NTT DOCOMO, CMCC, Ericsson, Huawei, Intel, Nokia Networks, Qualcomm, Samsung SID new RAN1 Rel-14-
new SI for new RAT; leading WG: RAN1; WI code to be used: FS_NG_newRAT;
discussion: MCC: rapporteur missing
RAN chair: is just for information at this meeting
Telecom Italia: radio architecture should include the current radio interface as well
KT: section 4 support of frequency band should indicate up to 30GHz, we are also volunteering for being RAN4 rapporteur for this
LG: support of TDD and FDD should also include new duplex scheme, sidelink is missing, concerned about no TU allocation for this; number of rapporteurs is increasing (8 rapporteurs?)
RAN chair: agrees that there must be some budgeting but we need to have this independent from the LTE budget, we can discuss this later
NTT DOCOMO: open to discuss the rapporteurships
Sprint: section 4 includes already requirements to be addressed in the RAN SI
TeliaSonera: bullet 4 is too detailled
ZTE: real finalization of this SID can only happen after RAN SI is completed
Orange: details of 4 indicate the eMBB use case is targeted but this was not agreed so far
RAN4 chair (Samsung): only RF part so far included
conclusion: offline discussion on Wed afternoon
finally postponed

RP-152040 5G Study and Work item organization Interdigital Communications discussion Rel-14-
discussion: AT&T:3rd proposal in line with SA1?
Interdigital: is for discussion
conclusion: noted

RP-151762 Prioritization of higher-layer 5G technology studies IAESI, FAIRSPECTRUM discussion Rel-14-
conclusion: noted

Architecture considerations:

RP-151994 Study on 5G RAN Architecture TELECOM ITALIA S.p.A. discussion Rel-14-
conclusion: revised in RP-152211
RP-152211 Study on 5G RAN Architecture TELECOM ITALIA S.p.A. discussion Rel-14-
discussion: NEC: LTE evolution to be included as well?
Telecom Italia: yes, we would like to have a single study for this
KT: this would then impact LTE specs?
Telecom Italia: yes
IAESI: COHERENT project shows that virtualizing lower layers will have benefits
conclusion: noted

RP-151864 Motivation for Cloud RAN Architecture KT Corp. discussionmotiv Rel-14-

Samsung Exhibit 1025, Page 1044 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

This contribution suggests to include study on Cloud RAN Architecture in the proposed SI on new Radio Access Technology and new radio access technical study.
conclusion: noted

15.4 Other inputs

RP-151660 Further Planning on Next Generation Radio Access Technology RAN chairman (Qualcomm)
discussion Rel-14 -

- *RAN to confirm SA tentative planning, with following tentative release (stage-3) freeze dates:*
  Rel-14 stage-3 freeze in March 2017
  Rel-15 stage-3 freeze in June 2018
  Rel-16 stage-3 freeze in Dec 2019 => basis for the submission to ITU-R
- *RAN AH on requirements to be scheduled in mid Q1-16*
  To make sure that by RAN#71 we have an initial set of requirements for the technology work to start in the WGs without delay
- *ITU-R AH to prepare for RAN#71 a living document with a plan for the whole interaction with ITU-R on IMT 2020*
- *WG Chairs should start planning to accommodate after March a track for the work on the new radio, in addition to the existing WG capacity that will continue to be dedicated to the LTE evolution (and HSPA enhancements)*

discussion: Dish: There is a Future Radio workshop at ETSI on 27/28.01.2015 which would clash
Telecom Italia: parallel WG sessions after March?
RAN chair: yes, except RAN1 for 6GHz channel modelling
Telecom Italia: may be a problem with NB-IOT if NB-IOT is not completed in March
Telecom Italia: can we agree that LTE evolution will be part of the IMT-2020 submission?
RAN chair: is to be decided for RAN
Telecom Italia: REL schedule: SA1 is planning to freeze stage 1 in March which would not be useful
RAN chair: we will discuss SA-RAN coordination later
Mediatek: slide 10: WG chairs should plan to accomodate... does it mean a parallel track or working on week-ends?
RAN chair: working on week-ends is not intended, this was a real exception;
Mediatek: we would like to avoid another additional track
RAN chair: NB-IOT and 5G together should only be one track, ideally NB-IOT is going down and 5G work is starting
Oppo: supports to not have another track
Orange: some WGs are already in a critical situation regarding number of parallel sessions
RAN chair: we will approve less WIs for LTE tracks and we will request to be more honest in terms of time budget
Orange: normal today is already 2 parallel LTE sessions plus additional offline sessions and this has to reduce
RAN chair: agrees
RAN2 chair: thinks that it is not needed to go directly for parallel tracks
RAN chair: is ok, WG chairs will manage their WGs on their own
RAN1 chair: some contradictions already visible (not appreciated parallel sessions/huge WIs): please reduce scope of your WIs
Sprint: worried about interworking with SA, how to include SA1 output
RAN chair: for March I would like to have a plan from WG chairs how they plan to address the new SI for WGs in the next quarters, this will be presented to RAN #71
LG: would like to remove that LTE evolution interest will reduce
Ericsson: it has to be understood that if RAN agrees addtional work, then companies have to also increase their participation in WGs; we did this for NB-IOT and this needs to be understood
RAN1 chair: agrees and complaining companies are also raising bigger WIs and this should change as well
IAESI: RAN3 has capacity
RAN3 chair: confirmed, plans to have one session only
RAN chair: please bring your WG assessments to RAN #71
Orange: since we have 2 tracks for LTE in RAN1, you cannot say equal capacity for LTE and for 5G, as this would require 2 parallel tracks for 5G

Samsung Exhibit 1025, Page 1045 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN chair: this is not intended, RAN WGs will continue their LTE work (with less WIs and more reasonable time budgets) but we will need to address the 5G SI without limiting LTE work and vice versa
RAN1 chair: is planning channel modelling ad hoc in March 16
AT&T: better have a 3-4 day than ajust 2 day ad hoc if there is a need for an ad hoc
Vodafone: keeping RAN SI open after June 16 is to add new requirements later or just to refine existing ones
RAN chair: was intended for ITU-R but we could also keep it open e.g. for additional requirements from verticals (but this should be smaller changes, biggest part should be included by June)
Vodafone: would like to keep it open for new requirements after June
Orange: we agreed the status report of the 6GHz channel modelling to be completed by June 16 but 1h later we indicate that we need another ad hoc to complete this SI by June, this is not proper planning from RAN side
RAN1 chair: Based on some discussions in this week regarding handling of LTE and next generation items, it was not clear how to take care of the time units for the channel model SI and this is the reason why I indicated the plan for an ad hoc now
AT&T: we need to know the number of parallel tracks also for meeting hosts so this has to be included in the planning
Qualcomm: RAN ad hoc on RAN SI has the mandate to work on the TR
RAN chair: RAN 5G req. SI ad hoc will have decision power about this SI i.e. including the TR, we plan to send a stable TR to ITU-R in June 16
Telecom Italia: suggests to have the ad hoc in the second part of the week after the NGMN meeting
RAN chair: this is option 1, 2nd option is somewhere in Europe in same week, 3rd option will be in Asia the week afterwards

conclusion: revised in RP-152228
Two changes reflecting the outcome of the discussion:
- Removed the sentence "But it is already anticipated that the LTE evolution will gradually wind down in future releases (like was the case for HSPA)" from one of the subbulets from slide 10
- Added "…a track for the work on the new radio and architecture" in action of slide 10 and 11

RP-152228 Further Planning on Next Generation Radio Access Technology RAN chairman (Qualcomm) discussion Rel-14 -

proposals from last slide:
- *RAN to confirm SA tentative planning, with following tentative release (stage-3) freeze dates:*
  Rel-14 stage-3 freeze in March 2017
  Rel-15 stage-3 freeze in June 2018
  Rel-16 stage-3 freeze in Dec 2019 => basis for the submission to ITU-R
- *RAN AH on requirements to be scheduled in mid Q1-16:*
  To make sure that by RAN#71 we have an initial set of requirements for the technology work to start in the WGs without delay
- *ITU-R AH to prepare for RAN#71 a living document with a plan for the whole interaction with ITU-R on IMT 2020*
- *WG Chairs should start planning to accommodate after March a track for the work on the new radio and architecture, in addition to the existing WG capacity that will continue to be dedicated to the LTE evolution (and HSPA enhancements)*

conclusion: noted, proposals of last slide are endorsed
RAN WG chairs are requested to provide their timeplan for addressing the RAN WG SI to RAN #71 (including how many parallel tracks are considered in general);
REL dates are confirmed by RAN
See also ACTION_ITEM_1 and ACTION_ITEM_2 in Annex H.

Treatement of LS of AI 15.1: RP-152197

RP-152115 RAN-SA Work Coordination on the "Next Generation Architecture" RAN Chairman (Qualcomm), SA Chairman (Samsung) discussion Rel-14 -

Proposals
1. *SA and RAN WGs will jointly identify feasible objectives and approaches to achieve them.*
2. *SA and RAN will jointly identify a set of supported scenarios, goals and responsibilities for the Next Generation Architecture by December 2016 at the latest.*

Samsung Exhibit 1025, Page 1046 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

3. *Decide: (a) WGs meet (AUG [NOV?]) and advise RAN & SA who jointly decide (SEP [DEC?]). Or (b) a workshop near TSG#73 [TSG#74?] is added to the calendar.*

discussion: ZTE: 2nd proposal should be discussed in the requirements phase or are we implying we know the architecture already?
Vodafone: these seem to be some Pre-WI agreements?
RAN chair: at this time RAN WGs will still be deeply in the study phase
RAN2 chair: we need 2 quarters in RAN2 to discuss in RAN2 to have an own view and then we can discuss with SA
SA chair: stage 2 REL-14 freeze is Sep.16 so in order to have something proper in REL-15 from SA2 this will fit with their schedule
RAN3 chair: technical discussions need to take place in WGs and we then need to report to RAN/SA either for results or for decisions
RAN2 chair: SI in REL-14 in SA2 or a WI?
SA chair: SA2 has a SI in REL-14 and we need to know how to transfer this into a WI for REL-15 in coordination with RAN

conclusion: noted,
It is agreed that RAN and SA must coordinate at both the working group and TSG level in the second half of 2016. While different timing and form of such coordination has been discussed, it has not yet been agreed.
A plan will be presented to RAN and SA and leadership seeks endorsement for this plan at TSG #71.
Note: Regarding TSG level coordination: In contrast to former plans, no extra RAN-SA workshop is intended anymore, the coordination of next generation architecture activities could fit into a Wed afternoon joint SA-RAN session during a TSG meeting.

16 UE capabilities/FGIs

DL 256QAM in LTE for UE Categories 6-10:

RP-151789 Support of 256QAM for UE categories 6/7/9/10 Intel Corporation, AT&T, Bouygues Telecom, China Unicom, CMCC, DISH Network, Rogers, Sprint, Swisscom, Telstra, Verizon Wireless discussion Rel-12 TEI12, LTE_SC_enh_L1-Core
conclusion: revised in RP-152243

RP-152243 Support of 256QAM for UE categories 6/7/9/10 Intel Corporation, AT&T, Bouygues Telecom, China Unicom, CMCC, DISH Network, Rogers, Sprint, Swisscom, Telstra, Verizon Wireless discussion Rel-12 LTE_SC_enh_L1-Core
conclusion: noted

RP-151799 Discussion of 256QAM for UE Categories 6-10 Qualcomm Incorporated discussion Rel-10 LTE-Phys, TEI10
in reply to RP-151789
conclusion: noted

RP-151860 UE category in fragmented spectrum or with lower baseband processing power Samsung discussion Rel-13 -
in reply to RP-151789
conclusion: revised in RP-152185

RP-152185 UE category in fragmented spectrum or with lower baseband processing power Samsung discussion Rel-13 -
conclusion: noted

discussion of RP-152243, RP-151799 and RP-152185:
Sprint: supporting Intel, would like to get the 256QAM
Qualcomm: is reusing same peak data rate
CeWIT: supports Intel's input, would like to have 256QAM with lower categories
Qualcomm: is already supported with lower categories
Intel: does not agree with Qualcomm because soft buffer is not increased from cat.6 to cat.13;
cat.11 and cat.12 will also be introduced starting from REL-11, we increase max TBS
Huawei: Intel went back to WGs and proposal was not agreed by RAN1/RAN2 as we have it already, if we would adopt the Intel proposal the concept of one peak rate => one category which we have since REL-8 would be violated, so we support Qualcomm

Samsung Exhibit 1025, Page 1047 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Vodafone: supports Intel's proposal; high peak rate but lower buffer size is a problem; we need to clarify this in specs properly
Deutsche Telekom: supports Vodafone, remove all categories and introduce a new limited number of UE cat.; it makes no sense to have categories with 50Mbps difference, this is just for marketing and a wrong approach, these are anyway just maximum numbers
Qualcomm: it has a very large impact on UE architecture and we can not change this on the fly, we took decisions in the past and we should stick to the principles we
RAN chair: suggests that interested companies discuss this offline and come back with a way forward

RP-152283 Way Forward on 256QAM Support for UE Categories 6, 7, 9 and 10 Intel Corporation, Apple, AT&T, Bell Mobility, Bouygues Telecom, China Telecom, China Unicom, CMCC, Ericsson, Reliance – Jio, Rogers, Sprint, Swisscom, Telstra, T-Mobile USA, US Cellular, Verizon Wireless discussionRel-12 LTE_SC_enh_L1-Core
discussion: Qualcomm: has still the same concerns
Intel: Mediatek, Samsung would no longer object; same way forward with additional supporting companies (as Qualcomm had no alternative proposal)
Huawei: only one chip set supporting this, concern from Vodafone and DT regarding consistency was not addressed
Intel: LG chipset vendor also supporting
LG: we are not representing chipset business here but UE vendor, so if there is a chipset we could support it
DT: we still believe what we did with categories is wrong but it seems there is no interest in the group to change this
Qualcomm: DT proposal would need more time to change it and we can discuss this further but Intel's proposal is not acceptable for us
ALU: we could consider DT idea to have a new approach for new categories
Sprint: we are supporting Intel's proposal and we have not understood resistance to increase the number of UE categories
Nokia Networks: from network point of view the CR is nice because UE will take care of this, we can still discuss UE categories for REL-13 or later but we would not like to see a proposal where REL-12 UE categories will suddenly be changed on Thu afternoon
AT&T: Intel's proposal is optional i.e. chipset vendors do not need to implement it

Intel: no consensus achieved in offline discussion
Qualcomm: we offered to have this for 6 and 7 but not for 9 and 10 but this was rejected by Intel: cat.6/7/9/10 or just cat.9/10 would be logic but not cat.6/7
Samsung: we could live with Intel's proposal following the operators' support but we could also consider ALU proposal
Huawei: REL-13 would be the easiest approach (we actually would create 6+/7+/9+/10+)
RAN chair: one quarter email discussion on RAN reflector with Intel's proposal as starting point (incl. also the option of having new category scheme) and decide in March 16
Intel: we extended this already by 3 months, only 2 companies are objecting
Qualcomm: it was discussed over a year and it was decided not to do it and there was also no clarification why this needs to be done; also a change has big impact on companies who have implemented this already
Oppo: also requires more time to analyse the impacts of this proposal
conclusion: revised in RP-152291; email discussion on RAN reflector until March 16 in order to take a decision then

RP-152291 Way Forward on 256QAM Support for UE Categories 6, 7, 9 and 10 Intel Corporation, Apple, AT&T, Bell Mobility, Bouygues Telecom, China Telecom, China Unicom, CMCC, Ericsson, Reliance – Jio, Rogers, Sprint, Swisscom, Telstra, T-Mobile USA, US Cellular, Verizon Wireless discussionRel-12 LTE_SC_enh_L1-Core
conclusion: withdrawn (as not provided)

17 Inter WG/TSG-related discussions & decisions

GERAN:

RP-151788 TSG GERAN#68 status report TSG GERAN Chairman report
Presentation of TSG GERAN status report to prepare for merge of TSG RAN and GERAN.
conclusion: noted

Samsung Exhibit 1025, Page 1048 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151787 TSG GERAN#68 status report TSG GERAN Chairman report
conclusion: withdrawn (double allocation)

18 Outputs to other groups

No contributions.

19 Terms of Reference (ToR)

RAN:

RP-151781 DRAFT RAN Terms of Reference TSG GERAN Chairman (Ericsson) ToR
Draft RAN ToR adding TSG GERAN responsibilities to the TSG RAN ToR. Presented only for information and discussion at RAN#70.
discussion: Dish: do we need to mention FDD and TDD explicitly as we may want to add further duplex modes?
RAN chair: was simple an alignment
Deutsche Telekom: NB-IOT is and E-UTRA technology?
RAN chair: long-term NB-IOT will fall in the LTE evolution time budget bucket
Deutsche Telekom: do we want to add the 5G already?
RAN chair: we update this when we have a proper term for it
RAN3 chair: "and beyond" covers 5G at the moment
Telecom Italia: NB-IOT may be completed in March, will there will still be a dedicated NB-IOT session after March or will this be covered in the LTE sessions
RAN chair: let's see this in March
Panasonic: sidelink aspect is covered?
RAN chair: good point, should the D2D link be covered as well?
conclusion: postponed until RAN #71 in March 16, further refinement can happen until then

RAN5:

RP-151783 DRAFT RAN5 Terms of Reference TSG GERAN (Ericsson), GERAN3new (Sierra Wireless) & RAN5 Chairmen (Motorola Mobility) ToR
Draft RAN5 ToR taking GERAN3new responsibilities into consideration.
discussion: Rohde & Schwarz: GERAN does not use TTCN
conclusion: postponed until RAN #71 in March 16, further refinement can happen until then

RAN6:

RP-151784 Draft RAN6 Terms of Reference TSG GERAN Chairman (Ericsson) ToR
Draft new RAN6 ToR taking GERAN1 and GERAN2 responsibilities into consideration.
discussion: Spec Manager: to call RAN6 GERAN is a bit strange (close and open the same group) and it will also limit it for the future
AT&T: call it "GSM/EDGE radio access technologies"
conclusion: postponed, until RAN #71 in March 16, further refinement can happen until then

email discussion on the RAN reflector until RAN #71 about the 3 ToRs (rapporteur: GERAN chairman (Ericsson))

20 Project management

Work plan:

RP-151644 3GPP Work Plan review at Plenary #70 ETSI MCC Work Plan
conclusion: noted

Others:

RP-151645 3GPP Support Team Report ETSI MCC report
conclusion: noted
NOTE: From January 2016 onwards, hosts will not be obliged to print badges for 3GPP meetings.

Samsung Exhibit 1025, Page 1049 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Instead, delegates will be expected to print their own badges using the hyperlink in the registration confirmation email.

RP-152121 TDoc types and status values ETSI MCC draft CR 21.900 F Rel-13 TEI13
specification is under SA control
conclusion: endorsed

RP-152178 Proposal to add energy consumption and efficiency into the WID template Orange discussion
discussion: RAN chair: sees no issue with the proposal, can be discussed in SA
OPPO: how will this apply?
RAN chair: if applicable, you fill it out
Huawei: may have more impact if it is included in objectives section
RAN3 chair: which group is taking care of this if something is filled out?
Sprint: it is not clear when to fill it out
KT: ITU-R is also very much interested in this and should be included also in 5G SI
RAN chair: no problem to add this from my side
conclusion: noted

Samsung Exhibit 1025, Page 1050 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

21 Future meeting schedule

Meeting schedule 2010/2011/2012/2013/2014/2015/2016/2017:

MEETING	DATES	LOCATION	HOST
RAN #47	16 March – 19 March 2010	Vienna, Austria	EF3
RAN #48	1 June – 4 June 2010	Seoul, Korea	TTA
RAN #49	14 Sep. – 17 Sep. 2010	San Antonio, USA	NAF3
RAN #50	7 Dec. – 10 Dec. 2010	Istanbul, Turkey	EF3
RAN #51	15 March – 18 March 2011	Kansas City, USA	Sprint Nextel
RAN #52	31 May – 3 June 2011	Bratislava, Slovakia	EF3
RAN #53	13 Sep. – 16 Sep. 2011	Fukuoka, Japan	ARIB & TTC
RAN #54	6 Dec. – 9 Dec. 2011	Berlin, Germany	EF3
RAN #55	28 Feb. – 2 March 2012	Xiamen, China	ZTE, CMCC
REL-12 workshop ***	11 June - 12 June 2012	Ljubljana, Slovenia	EF3
RAN #56	13 June – 15 June 2012	Ljubljana, Slovenia	EF3
RAN #57	4 Sep. – 7 Sep. 2012	Chicago, USA	NAF3
RAN #58	4 Dec. – 7 Dec. 2012	Barcelona, Spain	EF3
RAN #59	26 Feb. – 1 March 2013	Vienna, Austria	EF3
RAN #60	11 June – 14 June 2013	Oranjestad, Aruba	NAF3
RAN #61	3 Sep. – 6 Sep. 2013	Porto, Portugal	EF3
RAN #62	3 Dec. – 6 Dec. 2013	Busan, Korea	TTA
RAN #63 **	3 March – 6 March 2014	Fukuoka, Japan	ARIB & TTC
RAN #64	10 June – 13 June 2014	Sophia Antipolis, France	ETSI
RAN workshop LTE-U	13 June 2014	Sophia Antipolis, France	ETSI
RAN #65	9 Sep. – 12 Sep. 2014	Edinburgh, Scotland	EF3
RAN #66 **	8 Dec. – 11 Dec. 2014	Maui, USA	NAF3
RAN #67 **	9 March – 12 March 2015	Shanghai, China	Huawei
RAN #68 **	15 June – 18 June 2015	Malmö, Sweden	EF3
workshop LAA	29 Aug. 2015	Beijing, China	Huawei
RAN #69 **	14 Sep. – 16 Sep. 2015	Phoenix, USA	NAF3
workshop 5G	17 Sep. – 18 Sep. 2015	Phoenix, USA	NAF3
**RAN #70 ** **	**7 Dec. – 10 Dec. 2015**	**Sitges, Spain**	**EF3**
Requirements ad hoc	28 Jan. - 29 Jan. 2016	Barcelona, Spain	EF3
RAN #71 **	7 March – 10 March 2016	Göteborg, Sweden	EF3
RAN #72 **	13 June – 16 June 2016	Busan, Korea	TTA
RAN #73 **	19 Sep. – 22 Sep. 2016	tbd, USA	NAF3
RAN #74 **	5 Dec. – 8 Dec. 2016	Vienna, Austria	EF3
RAN #75 **	6 March - 9 March 2017	Dubrovnik, Croatia	EF3
RAN #76 **	6 June - 8 June 2017	tbd, USA	NAF3
RAN #77 **	11 Sep. - 14 Sep. 2017	tbd, Japan	ARIB & TTC
RAN #78 **	18 Dec. - 21 Dec. 2017	Lisbon, Portugal	EF3

***: RAN Workshop on REL-12 and onwards

**: 1 week TSG i.e. in same week with CT and SA, therefore RAN starting on Monday

22 Any other business

RAN1 chair: 5G channel modelling ad hoc planned for mid of March 16 (probably in the US)
Telecom Italia: for the host you should check how many people plan to attend this ad hoc

RAN chair: will send out further information about 5G requirements ad hoc end of Jan.2015 soon after RAN #70

Samsung Exhibit 1025, Page 1051 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN4 chair: MIMO OTA ad hoc confirmed for Mon-Tue (18-19.01.2016) in the same hotel as NB-IOT ad hoc in Budapest.

RAN vice-chairman (Fujitsu): presented an overview about RAN4 statistics of the Tuomo's RAN4 area; he also thanked Kevin Holley who is leaving Telefonica

RAN chair and RAN as a whole: thanked Tuomo Säynäjäkangas (Nokia Networks) and Kevin Holley (Telefonica) for their great work in/for 3GPP RAN

23 Closing of the meeting

The TSG RAN chairman Dino Flore (Qualcomm) thanked the delegates for participating and contributing to RAN meeting #70, he thanked the host for organizing the meeting and he closed the meeting on Thursday Dec. 10th, 2015 at about 17:00.

Samsung Exhibit 1025, Page 1052 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex A:
List of participants

The list of participants of this RAN meeting #70 is attached to this report.

Total number of participants: 236 (registered before the meeting: 300)

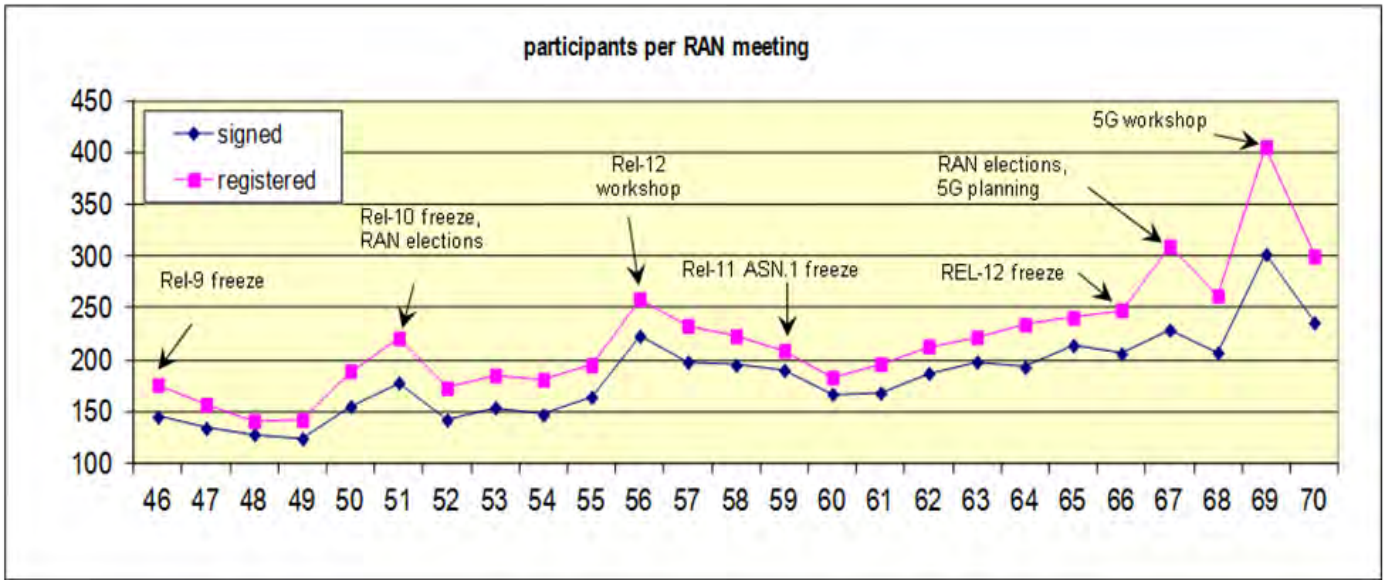


Fig. A-1: Participants per RAN meeting (registered beforehand and actual participants who signed)
(1 week TSG: #63, #66 and further meetings)

Samsung Exhibit 1025, Page 1053 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex B:
List of Tdocs

The list of Tdocs of this RAN meeting #70 is attached to this report.

Total number of Tdocs: 672 (RP-151629 - RP-152300) of which 647 Tdocs are available, i.e. 25 are not available and they are withdrawn.

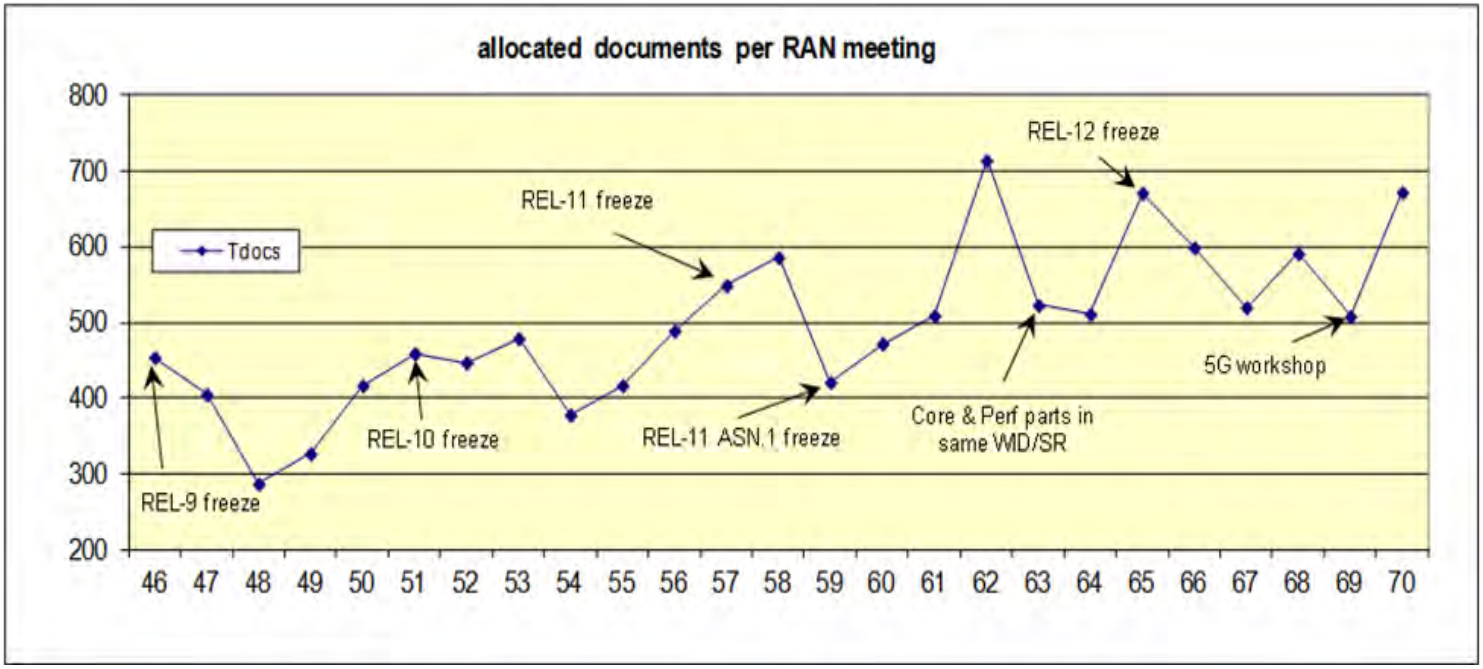


Fig. B-1: Number of allocated Tdocs per RAN meeting

Samsung Exhibit 1025, Page 1054 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex C:
Incoming liaison statements (LSin)

In total 27 LSs/LTIs were received for RAN #70 (0 of them received during the meeting). All 27 LSs/LTIs were treated.

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-151646	Reply LS to SP-150574 = RP-151649 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols (C1-153966; to: SA; cc: CT, RAN, SA2, SA4, RAN2, CT3, CT4; contact: Ericsson)	CT1	Rel-10	ECSRA_LAA	no	noted	no	
RP-151647	Reply LS to SP-150574 = RP-151649 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols (C3-154252; to: SA; cc: SA2, SA4, RAN2, CT1, CT3, CT4, CT, RAN; contact: Nokia Networks)	CT3	Rel-10	ECSRA_LAA	no	noted	no	
RP-151648	LS Response to R2-154793 on Indoor Positioning impacts to 29.171 (C4-151875; to: RAN2; cc: RAN; contact: NextNav)	CT4	Rel-13	UTRA_LTE_iPos_enh-Core	no	noted	no	R2-154793 was only sent to CT4 and not to/cc RAN
RP-151649	LS on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols (SP-150574; to: SA2, SA4, RAN2, CT1, CT3, CT4; cc: CT, RAN; contact: Samsung)	SA	Rel-10	ECSRA_LAA	no	noted	RP-152279	
RP-151650	LS regarding LAA Coexistence (WFA_LS_20151006; to: RAN4, RAN; cc: -; contact: CEO Wi-Fi Alliance)	Wi-Fi Alliance	Rel-13	LTE_LAA-Perf	no	noted	RP-152234	
RP-151651	LS regarding new WI proposal: Indoor Positioning Enhancements for UTRA and LTE (ATC_LS_20150923; to: RAN4; cc: RAN; contact: American Tower Corporation VP Compliance)	American Tower Corporation	Rel-13	UTRA_LTE_iPos_enh-Core	no	noted	no	
RP-151652	LS regarding new WI proposal: Indoor Positioning Enhancements for UTRA and LTE (CC_LS_20150925; to: RAN4; cc: RAN; contact: Crown Castle Sales Director)	Crown Castle	Rel-13	UTRA_LTE_iPos_enh-Core	no	noted	no	
RP-151653	LS regarding new WI proposal: Indoor Positioning Enhancements for UTRA and LTE (SBA_LS_20150929; to: RAN4; cc: RAN; contact: SBA Communications Corporation VP)	SBS Communications Corporation	Rel-13	UTRA_LTE_iPos_enh-Core	no	noted	no	
RP-151654	Response to LS Update S5-154456 on Study on OAM support for Licensed Shared Access (ETSI TC RRS(15)031016r4; to: SA; cc: RAN, SA5; contact: Intel)	ETSI TC RRS	Rel-13	FS_OAM_LSA	no	noted	no	S5-154456 was not sent to/cc RAN

Samsung Exhibit 1025, Page 1055 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-151655	LS on the standardization status of Intelligent Transport Systems (ITS) radio interface technologies (ITU-R WP5A/TEMP/310(Rev.1); to: RAN, SA, ARIB, AWG, CCSA, ETSI TC ERM, IEEE, TIA, and TTA; cc: -; contact: ITU-R WP5A Counsellor)	ITU-R WP5A	Rel-14	FS_LTE_V2X	yes	noted	postponed	RAN action requested for ITU-R WP5A meeting in May 2016; LS answer postponed to RAN #71
RP-151656	LS on Announcing the Publication of GSMA TS.24 V.3.0 – Operator Acceptance Values for Device Antenna Performance (GSMA_TSG_AP_147_LS; to: RAN, RAN4, RAN5, GCF - Steering Group, CAG, PAG, PTCRB, CTIA, EU-TCAM, EU Radio Spectrum Committee, ETSI MSG, ETSI ERM, Digital Europe, MMF, ANEC; cc: GSMA PSMC, GSMA Networks Group , GSMA Device Security Group, GSMA N2020; contact: Orange)	GSMA TSG AP	Rel-13	LTE_UTRA_TRP_TRS-Core, UTRA_LTE_MIMO_OTA-Core	yes	noted	no	
RP-151657	Reply LS to RP-151623 on IPsec tunnelling mechanism for LTE-WiFi aggregation (S3-152467; to: RAN, RAN2, SA2; cc: -; contact: NTT DOCOMO)	SA3	Rel-13	LTE_WLAN_radio_legacy-Core	not explicitly	noted	no	
RP-151658 ***	Draft Letter to ITU in answer to ITU-R WP5D/TEMP/619 = RP-151140 related to the revision of Recommendations for generic unwanted emission characteristics (R5-156165; to: RAN; cc: -; contact: Ericsson)	RAN5	Rel-12	-	yes	noted	no	RAN5 has drafted a reply to ITU-R WP5D LS received at RAN #69 in RP-151140; before sending it out the LS has to pass SA and PCG review; taken into account when drafting RP-152218
RP-151659	Reply LS to RP-151555 on work on time synchronization and future target requirements (ITU-T SG15/COM15–LS298–E; to: RAN; cc: -; contact: Ericsson)	ITU-T SG15	Rel-13	-	yes	noted	no	RAN #69 received ITU-T SG15/COM15-LS266-E = RP-151142 and answered in RP-151555; RAN action requested by 01.02.16
RP-151661	LS on study on PC5 transport for V2V services (R1-157903; to: RAN; cc: -; contact: LG)	RAN1	Rel-14	FS_LTE_V2X	not explicitly	noted	no	
RP-151662	Reply LS to SP-150574 = RP-151649 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols (R2-157038; to: SA; cc: CT, RAN, SA2, SA4, CT1, CT3, CT4; contact: Samsung)	RAN2	Rel-10	ECSRA_LAA	no	noted	no	ECSRA_LAA = Enabling Coder Selection and Rate Adaptation for UTRAN and E-UTRAN for Load Adaptive Applications
RP-151663 ***	Draft Letter to ITU in answer to ITU-R WP5D/TEMP/619 = RP- 151140 related to the revision of Recommendations for generic unwanted emission characteristics (R4-158243; to: RAN; cc: -; contact: Ericsson)	RAN4	Rel-12	-	yes	noted	no	RAN4 has drafted a reply to ITU-R WP5D LS received at RAN #69 in RP-151140; before sending it out the LS has to pass SA and PCG review; compare RP-151658; taken into accound when drafting RP-152218

Samsung Exhibit 1025, Page 1056 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-151664	LS on LAA co-existence testing (R4-158439; to: RAN; cc: -; contact: Ericsson)	RAN4	Rel-13	LTE_LAA	not explicitly	noted	no	
RP-151665	Reply LS to RP-151623 on New WI on LTE-WLAN RAN Level Integration supporting legacy WLAN (S2-154407; to: RAN, RAN2, RAN3, SA3; cc: -; contact: Alcatel-Lucent)	SA2	Rel-13	LTE_WLAN_radio_legacy-Core	not explicitly	noted	no	
RP-151666	LS on NB-IoT Evaluations (R1-157742; to: RAN; cc: RAN2, RAN3, RAN4, SA2; contact: Huawei)	RAN1	Rel-13	NB_IOT-Core	not explicitly	noted	no	
RP-151667	LS regarding the CTIA MIMO OTA Test Plan Roadmap (CTIA_LS_151110; to: RAN4, RAN5; cc: RAN; contact: CTIA MOSG Co-Chair (Verizon))	CTIA MIMO OTA Sub-Group	Rel-13	LTE_UTRA_TRP_TRS-Core, UTRA_LTE_MIMO_OTA-Core	no	noted	no	CTIA = Cellular Telecommunications & Internet Association
RP-151668	LS on 5G use cases from verticals (EC_LS_151201; to: RAN; cc: -; contact: EC)	European Commission (EC) DG CONNECT - Unit EI, Network Technologies	Rel-14	-	yes	noted	no	
RP-151669 ***	Draft Letter to ITU on final submission for IMT-2000 CDMA DS and IMT-2000 CDMA TDD toward Rev. 13 of Rec. ITU-R M.1457 (RT-150021; to: CT, RAN; cc: -; contact: Telecom Italia)	RAN ITU-R ad hoc	Rel-12	-	yes	noted	no	this LTI is also provided to CT and CT will reply back to RAN; RAN will finally provide their draft incl. CT comments for review to SA and from there to PCG for approval; ATIS will then provide to approved version to ITU-R WP5D on behalf of the OPs
RP-152127	LS on indoor positioning (FCC_LS151202; to: RAN; cc: -; contact: Chief Public Safety and Homeland Security Bureau)	FCC	Rel-13	UTRA_LTE_iPos_enh-Core	not explicitly	noted	no	

Samsung Exhibit 1025, Page 1057 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-152128	LS on recently established new Study Group 20 (SG20) (ITU-T SG20/COM 20-LS008-E; to: GERAN, RAN, CT, SA, ISO/TC 122; ISO/TC 204; ISO/IEC JTC 1/SC 6; ISO/IEC JTC 1/SC 31; ISO/IEC JTC 1/WG 7; ISO/IEC JTC 1/WG 10; ISO/IEC JTC 1/WG 11; GS1 EPCglobal; EC/IERC; ETSI; CEN; OMA; YRP; Ecma International; GISFI; TIA; GSC MSTF; OGC; oneM2M; ISO/IEC JTC 1/SC 29/WG11 for Augmented Reality (AR) standards; 3GPP; W3C; IETF; IEEE-SA; AHCIET; ANEC; ANSI; BSI; CCSA; CDP; CEDARE; CEN/CENELEC/ETSI SSCC CG; CIC; CITEL; City Protocol Society (CPS); The Climate Group; Digital Europe; DIN; DKE (DIN/VDE); ECLAC; ETNO; ETSI TC EE; ETSI TC Smart M2M; European Commission (DG Connect); GeSI; GSMA; ICLEI; IDB; IEC/SEG1; IEC/TC 100; IEC/TC 111; IEEE; ISO/TC 268/SC 1; MOHURD; SAC; StEP; UNCDF; UNDP; UNECE; UNEP; UNESCO; UNFCCC; UN-Habitat; UNIDO; WBCSD for GHG Protocol; WHO; WMO; cc: -; contact: ETRI)	ITU-T SG20	Rel-13	NB_IOT-Core	no	noted	no	
RP-152129	LS on NGMN Requirement metrics and deployment scenarios for 5G (NGMN_LS_151204; to: RAN; cc: - ; contact: Telefonica)	NGMN	Rel-14	-	not explicitly	noted	no	
RP-152197	LS on NGMN view of 5G as an end-to-end ecosystem - Alignment of 3GPP SA and RAN (NGMN_LS_20151204b; to: SA, RAN; cc: -; contact: Telefonica)	NGMN	Rel-14	-	yes	noted	no	

***: uses Letter to ITU template (LTI)

Samsung Exhibit 1025, Page 1058 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

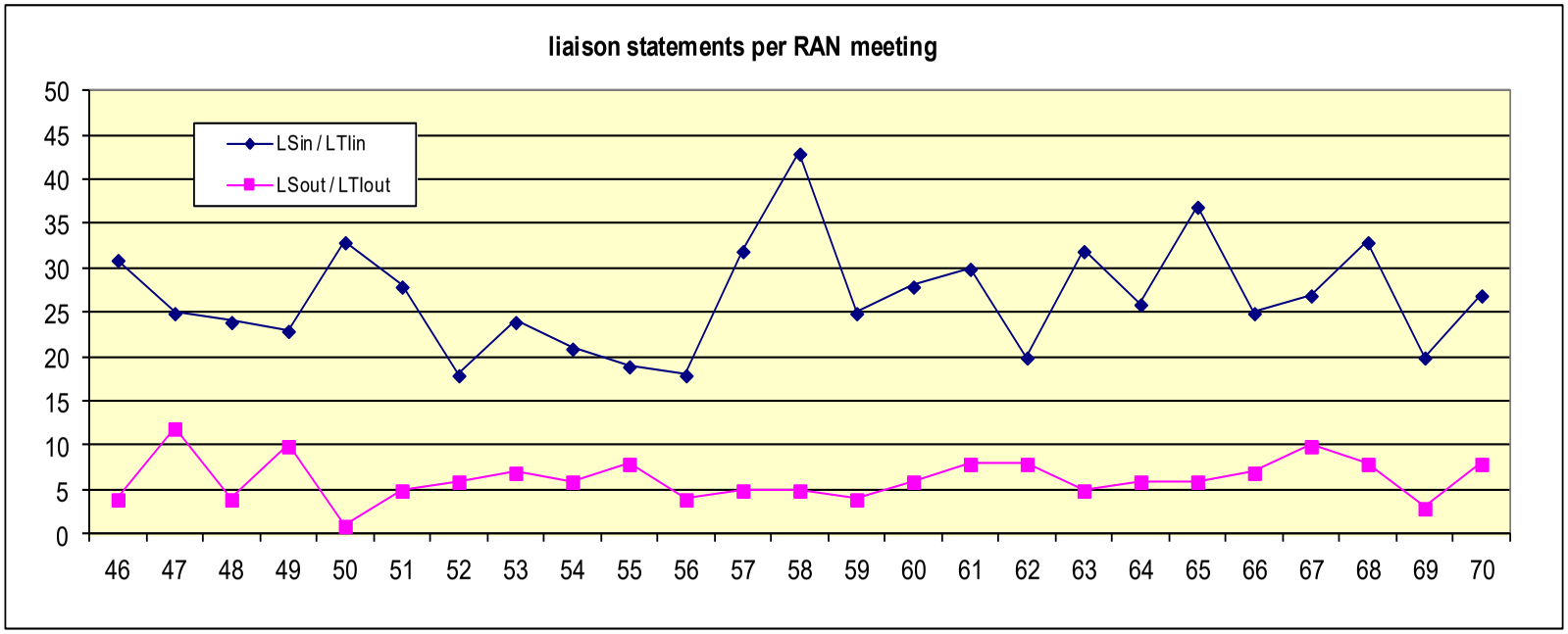


Fig. C-1: Number of incoming/outgoing Liason Statements (LS) and Letter to ITU (LTI) per RAN meeting

Samsung Exhibit 1025, Page 1059 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex D:
Outgoing liaison statements (LSout)

Only final outgoing LSs are listed here.
8 outgoing LSs/LTIs of RAN #70 (0 of them approved by email after the meeting):

final LS Tdoc	title	to	cc	contact	reply to	release	WI	comments
RP-152234	LAA coexistence tests	Wi-Fi Alliance	RAN4, IEEE 802 LMSC	RAN Chairman (Qualcomm), RAN4 Chairman (Samsung)	RP-151650	Rel-13	LTE_LAA	
RP-152244 ***	Draft Letter to ITU on final submission for IMT-2000 CDMA DS and IMT-2000 CDMA TDD toward Rev. 13 of Rec. ITU-R M.1457	SA	-	Telecom Italia	-	Rel-12	-	this is a draft version to be sent to SA; from there it will go to PCG for approval and then it is submitted by ATIS to ITU-R WP5D on behalf of the OPs; provided to SA on Wed noon
RP-152245 ***	Draft Letter to ITU on IMT-Advanced related to the revision of Recommendations for generic unwanted emission characteristics	SA	-	Telecom Italia	ITU-R WP5D/TEMP /619 = RP-151140	Rel-12	-	merging RAN4 reply RP-151663 and RAN5 reply RP-151658 into one reply that is provided to SA for review before it is going to PCG for approval and from there via ATIS to ITU-R WP5D; provided to SA on Wed noon
RP-152279	3GPP Work on Explicit Congestion Notification for Lower Layer Protocols	SA	RAN3	Huawei	SP-150574 = RP-151649	Rel-10	ECSRA_LAA	provided to SA on Thu afternoon
RP-152280	LAA	IEEE 802 LMSC, Wi-Fi Alliance	RAN1, RAN2, RAN4	RAN Chairman (Qualcomm), RAN1 Chairman (NTT DOCOMO)	-	Rel-13	LTE_LAA	
RP-152295	Introduction of new establishment cause for mobile-originating cause	RAN2, CT1, RAN3	SA2	Nokia Networks	-	Rel-12	TEI12	related to way forward RP-152225
RP-152296	S1 signalling solutions for non-NB-IoT UEs	SA2, SA3, SA, CT1, CT3, CT4, RAN2, RAN3	RAN1	Ericsson	-	Rel-13	NB_IOT-Core	provided to SA on Thu afternoon
RP-152299	NB-IOT	RAN1	RAN2	Huawei	-	Rel-13	NB_IOT-Core	

***: uses Letter to ITU template (LTI)

Samsung Exhibit 1025, Page 1060 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex E:
List of Change Requests (CRs)

This list of 1482 CRs includes all CRs submitted to RAN #70 with 1457 approved CRs.

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
25.101	1084	-	Rel-13	B	RP-152171	R4-156419	approved	Introduction of Band 65 to TS 25.101	13.0.0	13.1.0	R4	LTE_1980_2170_REG1-Core
25.101	1086	-	Rel-13	B	RP-152157	R4-156490	approved	Introduction of Band 67	13.0.0	13.1.0	R4	LTE_CA_700EU_B20-Core
25.101	1087	-	Rel-13	B	RP-152172	R4-157180	approved	Introduction of Band 66	13.0.0	13.1.0	R4	LTE_AWS_EXT-Core
25.101	1088	1	Rel-13	B	RP-152140	R4-158313	approved	25.101CR to introduce DB-DC-HSUPA	13.0.0	13.1.0	R4	HSUPA_DB_MC-Core, DC_HSUPA_CS-Core
25.101	1089	1	Rel-13	B	RP-152142	R4-158371	approved	Out-of-synchronization requirement for UTRA TPC algorithm 3	13.0.0	13.1.0	R4	UTRA_EDL_TPC-Perf
25.101	1090	-	Rel-13	B	RP-152175	R4-157357	approved	Introduction of Region 3 requirement in Band 65	13.0.0	13.1.0	R4	LTE_1980_2170_REG3-Core
25.101	1091	1	Rel-13	B	RP-152144	R4-158366	approved	Introduction of Dual Carrier HSUPA enhancements for UTRAN CS in TS 25.101	13.0.0	13.1.0	R4	DC_HSUPA_CS-Core
25.101	1092	-	Rel-13	B	RP-152173	R4-157605	approved	Introduction of 1447-1467MHz Band into 25.101	13.0.0	13.1.0	R4	LTE_TDD_1447MHz_China-Core
25.104	0712	1	Rel-13	B	RP-152141	R4-156707	approved	Introduction of DB-DC-HSUPA for TS25.104	13.0.0	13.1.0	R4	HSUPA_DB_MC-Core
25.104	0717	-	Rel-13	B	RP-152171	R4-156492	approved	Introduction of Band 65	13.0.0	13.1.0	R4	LTE_1980_2170_REG1-Core
25.104	0718	1	Rel-11	F	RP-152132	R4-156719	approved	Tx IM requirement correction	11.11.0	11.12.0	R4	TEI11
25.104	0719	-	Rel-12	A	RP-152132	R4-156553	approved	Tx IM requirement correction	12.6.0	12.7.0	R4	TEI11
25.104	0720	-	Rel-13	A	RP-152132	R4-156554	approved	Tx IM requirement correction	13.0.0	13.1.0	R4	TEI11
25.104	0721	-	Rel-13	B	RP-152157	R4-156561	approved	Introduction of E-UTRA Band 67 co-existence requirements	13.0.0	13.1.0	R4	LTE_CA_700EU_B20-Core
25.104	0722	-	Rel-13	B	RP-152172	R4-157181	approved	Introduction of Band 66	13.0.0	13.1.0	R4	LTE_AWS_EXT-Core
25.104	0723	-	Rel-13	B	RP-152173	R4-157606	approved	Introduction of 1447-1467MHz Band into 25.104	13.0.0	13.1.0	R4	LTE_TDD_1447MHz_China-Core
25.104	0724	1	Rel-11	F	RP-152132	R4-158359	approved	BS Spec improvements: TS 25.104 Corrections	11.11.0	11.12.0	R4	TEI11
25.104	0725	-	Rel-12	A	RP-152132	R4-157741	approved	BS Spec improvements: TS 25.104 Corrections	12.6.0	12.7.0	R4	TEI11
25.104	0726	-	Rel-13	A	RP-152132	R4-157742	approved	BS Spec improvements: TS 25.104 Corrections	13.0.0	13.1.0	R4	TEI11
25.104	0727	-	Rel-11	F	RP-152132	R4-157839	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	11.11.0	11.12.0	R4	LTE_CA_enh-Core
25.104	0728	-	Rel-12	A	RP-152132	R4-157840	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	12.6.0	12.7.0	R4	LTE_CA_enh-Core
25.104	0729	-	Rel-13	A	RP-152132	R4-157841	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	13.0.0	13.1.0	R4	LTE_CA_enh-Core
25.104	0733	1	Rel-11	F	RP-152132	R4-158224	approved	Correction of UEM requirement for multi-band base station	11.11.0	11.12.0	R4	MB_MSR_RF-Core

Samsung Exhibit 1025, Page 1061 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
25.104	0734	-	Rel-12	A	RP-152132	R4-157997	approved	Correction of UEM requirement for multi-band base station	12.6.0	12.7.0	R4	MB_MSR_RF-Core
25.104	0735	-	Rel-13	A	RP-152132	R4-157998	approved	Correction of UEM requirement for multi-band base station	13.0.0	13.1.0	R4	MB_MSR_RF-Core
25.105	0312	-	Rel-11	F	RP-152132	R4-157213	approved	TX intermodulation requirement correction	11.8.0	11.9.0	R4	TEI11
25.105	0313	-	Rel-12	A	RP-152132	R4-157214	approved	TX intermodulation requirement correction	12.1.0	12.2.0	R4	TEI11
25.123	0561	-	Rel-13	B	RP-152171	R4-157353	approved	Introduction of band 65	12.1.2	13.0.0	R4	LTE_1980_2170_REG1-Perf
25.123	0562	-	Rel-13	B	RP-152172	R4-157789	approved	AWS Extension	12.1.2	13.0.0	R4	LTE_AWS_EXT-Perf
25.133	1411	-	Rel-13	B	RP-152144	R4-156268	approved	Introduction of Dual Carrier HSUPA enhancements for UTRAN CS in TS 25.133	12.8.0	13.0.0	R4	DC_HSUPA_CS-Core
25.133	1414	1	Rel-13	B	RP-152141	R4-158372	approved	25.133CR to introduce DB-DC-HSUPA in Rel-13	12.8.0	13.0.0	R4	HSUPA_DB_MC-Core
25.133	1415	-	Rel-13	B	RP-152171	R4-157354	approved	Introduction of band 65	12.8.0	13.0.0	R4	LTE_1980_2170_REG1-Perf
25.133	1416	-	Rel-13	B	RP-152172	R4-157790	approved	AWS Extension	12.8.0	13.0.0	R4	LTE_AWS_EXT-Perf
25.133	1418	-	Rel-13	B	RP-152143	R4-158188	approved	CR for extended DRX in UTRA	12.9.0	13.0.0	R4	UTRA_SDATA_POWSAV-Core
25.141	0735	1	Rel-13	B	RP-152141	R4-156708	approved	Introduction of DB-DC-HSUPA for TS25.141	13.0.0	13.1.0	R4	HSUPA_DB_MC-Core
25.141	0739	1	Rel-11	F	RP-152132	R4-156720	approved	Tx IM requirement correction	11.11.0	11.12.0	R4	TEI11
25.141	0740	-	Rel-12	A	RP-152132	R4-156556	approved	Tx IM requirement correction	12.7.0	12.8.0	R4	TEI11
25.141	0741	-	Rel-13	A	RP-152132	R4-156557	approved	Tx IM requirement correction	13.0.0	13.1.0	R4	TEI11
25.141	0742	-	Rel-13	B	RP-152157	R4-156562	approved	Introduction of E-UTRA Band 67 co-existence requirements	13.0.0	13.1.0	R4	LTE_CA_700EU_B20-Core
25.141	0743	-	Rel-13	B	RP-152172	R4-157184	approved	Introduction of Band 66	13.0.0	13.1.0	R4	LTE_AWS_EXT-Perf
25.141	0744	-	Rel-13	B	RP-152171	R4-157188	approved	Introduction of Band 65	13.0.0	13.1.0	R4	LTE_1980_2170_REG1-Perf
25.141	0745	-	Rel-13	B	RP-152173	R4-157609	approved	Introduction of 1447-1467MHz Band into 25.141	13.0.0	13.1.0	R4	LTE_TDD_1447MHz_China-Core
25.141	0746	1	Rel-11	F	RP-152132	R4-158348	approved	BS Spec improvements: TS 25.141 Corrections	11.11.0	11.12.0	R4	TEI11
25.141	0747	-	Rel-12	A	RP-152132	R4-157744	approved	BS Spec improvements: TS 25.141 Corrections	12.7.0	12.8.0	R4	TEI11
25.141	0748	-	Rel-13	A	RP-152132	R4-157745	approved	BS Spec improvements: TS 25.141 Corrections	13.0.0	13.1.0	R4	TEI11
25.141	0749	-	Rel-11	F	RP-152132	R4-157842	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	11.11.0	11.12.0	R4	LTE_CA_enh-Core
25.141	0750	-	Rel-12	A	RP-152132	R4-157843	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	12.7.0	12.8.0	R4	LTE_CA_enh-Core
25.141	0751	-	Rel-13	A	RP-152132	R4-157844	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	13.0.0	13.1.0	R4	LTE_CA_enh-Core
25.141	0755	1	Rel-11	F	RP-152132	R4-158225	approved	Correction of UEM requirement for multi-band base station	11.11.0	11.12.0	R4	MB_MSR_RF-Perf
25.141	0756	-	Rel-12	A	RP-152132	R4-158000	approved	Correction of UEM requirement for multi-band base station	12.7.0	12.8.0	R4	MB_MSR_RF-Perf
25.141	0757	-	Rel-13	A	RP-152132	R4-158001	approved	Correction of UEM requirement for multi-band base station	13.0.0	13.1.0	R4	MB_MSR_RF-Perf
25.141	0758	-	Rel-11	F	RP-152132	R4-158345	approved	Clarification on the transmitter intermodulation requirement in TS 25.141	11.11.0	11.12.0	R4	TEI11
25.141	0759	1	Rel-12	A	RP-152132	R4-158429	approved	Clarification on the transmitter intermodulation requirement in TS 25.141	12.7.0	12.8.0	R4	TEI11
25.141	0760	-	Rel-13	A	RP-152132	R4-158347	approved	Clarification on the transmitter intermodulation requirement in TS 25.141	13.0.0	13.1.0	R4	TEI11

Samsung Exhibit 1025, Page 1062 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
25.142	0316	-	Rel-11	F	RP-152132	R4-157215	approved	TX intermodulation requirement correction	11.4.0	11.5.0	R4	TEI11
25.142	0317	-	Rel-12	A	RP-152132	R4-157216	approved	TX intermodulation requirement correction	12.1.0	12.2.0	R4	TEI11
25.211	0322	4	Rel-13	B	RP-152023	R1-157714	approved	Introduction of Dual Carrier HSUPA enhancements for UTRAN CS in TS 25.211	12.1.0	13.0.0	R1	DC_HSUPA_CS-Core
25.213	0119	4	Rel-13	B	RP-152023	R1-157713	approved	Introduction of Dual Carrier HSUPA enhancements for UTRAN CS in TS 25.213	12.0.0	13.0.0	R1	DC_HSUPA_CS-Core
25.213	0121	1	Rel-13	B	RP-152030	R1-157587	approved	Introduction of HSPA Dual-Band UL carrier aggregation	12.0.0	13.0.0	R1	HSUPA_DB_MC-Core
25.214	0741	1	Rel-13	F	RP-152029	R1-156150	approved	25.214 CR (Rel-13, F) Clarifications on definitions and CQI reporting in Multiflow 3F-4C configuration	13.0.0	13.1.0	R1	HSDPA_MFTX_enh-Core
25.214	0743	1	Rel-13	B	RP-152039	R1-157586	approved	Introduction of downlink TPC enhancements for UMTS	13.0.0	13.1.0	R1	UTRA_EDL_TPC-Core
25.300	0022	1	Rel-13	B	RP-152063	R2-157008	approved	Introduction of extended DRX in Idle mode	12.4.0	13.0.0	R2	UTRA_SDATA_POWSAV-Core
25.300	0025	1	Rel-13	B	RP-152061	R2-156985	approved	Introduction of retrievable configurations	12.4.0	13.0.0	R2	UTRA_EDL_L23-Core
25.300	0026	1	Rel-13	B	RP-152061	R2-156987	approved	Introduction of URA_PCH with seamless transition	12.4.0	13.0.0	R2	UTRA_EDL_L23-Core
25.300	0027	1	Rel-13	B	RP-152061	R2-156989	approved	Introduction of improved synchronized RRC procedures	12.4.0	13.0.0	R2	UTRA_EDL_L23-Core
25.300	0028	1	Rel-13	B	RP-152061	R2-157000	approved	Introduction of optimization from IDLE to CONNECTED state	12.4.0	13.0.0	R2	UTRA_EDL_L23-Core
25.300	0029	1	Rel-13	B	RP-152062	R2-156999	approved	Introduction of enhanced state transition	12.4.0	13.0.0	R2	UTRA_EDL_L23-Core
25.300	0030	1	Rel-13	B	RP-152061	R2-156992	approved	Introduction of blind HARQ retransmissions for HSDPA	12.4.0	13.0.0	R2	UTRA_EDL_L23-Core
25.300	0031	1	Rel-13	B	RP-152060	R2-156944	approved	CR to 25.300 on the introduction of Downlink TPC enhancements for UMTS	12.4.0	13.0.0	R2	UTRA_EDL_TPC-Core
25.300	0032	-	Rel-13	B	RP-152064	R2-156938	approved	Introduction of NAICS for UMTS	12.4.0	13.0.0	R2	UTRA_NAICS-Core
25.300	0033	1	Rel-13	B	RP-152066	R2-157077	approved	Introduction of Application specific Congestion control for Data Communication (ACDC) in UTRAN	12.4.0	13.0.0	R2	ACDC-RAN-Core
25.300	0034	-	Rel-13	B	RP-151825	-	withdrawn	Introduction of L2 and L3 Downlink enhancements for UMTS in TS 25.300	12.4.0		R2	UTRA_EDL_L23-Core
25.301	0111	1	Rel-13	B	RP-152061	R2-156997	approved	Introduction of URA_PCH with seamless transition	12.0.0	13.0.0	R2	UTRA_EDL_L23-Core
25.302	0238	1	Rel-10	F	RP-152047	R2-156836	approved	Clarification for physical channel combination of DC-HSUPA and MC-HSDPA	10.2.0	10.3.0	R2	RANimp-DC_HSUPA, 4C_HSDPA-Core, TEI10
25.302	0239	1	Rel-11	A	RP-152047	R2-156837	approved	Clarification for physical channel combination of DC-HSUPA and MC-HSDPA	11.5.0	11.6.0	R2	RANimp-DC_HSUPA, 4C_HSDPA-Core, TEI10, 8C_HSDPA-Core
25.302	0240	1	Rel-12	A	RP-152047	R2-156838	approved	Clarification for physical channel combination of DC-HSUPA and MC-HSDPA	12.1.0	12.2.0	R2	RANimp-DC_HSUPA, 4C_HSDPA-Core, TEI10, 8C_HSDPA-Core
25.302	0241	1	Rel-13	A	RP-152047	R2-156839	approved	Clarification for physical channel combination of DC-HSUPA and MC-HSDPA	13.0.0	13.1.0	R2	RANimp-DC_HSUPA, 4C_HSDPA-Core, TEI10, 8C_HSDPA-Core
25.302	0242	1	Rel-13	B	RP-152065	R2-156983	approved	Introduction of Dual Carrier HSUPA enhancements for UTRAN CS in TS 25.302	13.0.0	13.1.0	R2	DC_HSUPA_CS-Core
25.304	0388	-	Rel-12	F	RP-152052	R2-156064	approved	Corrections to WLAN/3GPP radio interworking	12.6.0	12.7.0	R2	UTRA_LTE_WLAN_interw-Core
25.304	0389	1	Rel-13	B	RP-152063	R2-157009	approved	Introduction of extended DRX in Idle mode	12.6.0	13.0.0	R2	UTRA_SDATA_POWSAV-Core

Samsung Exhibit 1025, Page 1063 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
25.304	0391	1	Rel-13	B	RP-152066	R2-156940	approved	Introduction of Application specific Congestion control for Data Communication (ACDC) in UTRAN	12.6.0	13.0.0	R2	ACDC-RAN-Core
25.304	0392	1	Rel-13	B	RP-152075	R2-157172	approved	Extension of Frequency Priorities	12.6.0	13.0.0	R2	LTE_MC_load-Core
25.305	0125	2	Rel-13	B	RP-152068	R2-156942	revised	RAT-Independent positioning enhancements	12.1.0		R2	UTRA_LTE_iPos_enh-Core
25.305	0125	3	Rel-13	B	RP-152109	-	approved	RAT-Independent positioning enhancements	12.1.0	13.0.0	R2	UTRA_LTE_iPos_enh-Core
25.306	0490	1	Rel-13	B	RP-152065	R2-156982	approved	Introduction of Dual Carrier HSUPA enhancements for UTRAN CS in TS 25.306	12.6.0	13.0.0	R2	DC_HSUPA_CS-Core
25.306	0495	1	Rel-13	B	RP-152060	R2-156945	approved	CR to 25.306 on the introduction of Downlink TPC enhancements for UMTS	12.6.0	13.0.0	R2	UTRA_EDL_TPC-Core
25.306	0496	1	Rel-13	B	RP-152058	R2-157074	approved	Introduction of DB-DC-HSUPA	12.6.0	13.0.0	R2	HSUPA_DB_MC-Core
25.306	0497	-	Rel-13	B	RP-152110	-	approved	RAT-Independent positioning enhancements	12.6.0	13.0.0	R2	UTRA_LTE_iPos_enh-Core
25.308	0173	1	Rel-13	B	RP-152061	R2-156994	approved	Introduction of blind HARQ retransmissions for HSDPA	13.0.0	13.1.0	R2	UTRA_EDL_L23-Core
25.319	0136	1	Rel-13	B	RP-152065	R2-156981	approved	Introduction of Dual Carrier HSUPA enhancements for UTRAN CS in TS 25.319	12.3.0	13.0.0	R2	DC_HSUPA_CS-Core
25.319	0137	1	Rel-13	B	RP-152061	R2-156988	approved	Introduction of URA_PCH with seamless transition	12.3.0	13.0.0	R2	UTRA_EDL_L23-Core
25.319	0138	2	Rel-13	B	RP-152058	R2-157075	approved	Introduction of DB-DC-HSUPA to 25.319	12.3.0	13.0.0	R2	HSUPA_DB_MC-Core
25.321	0814	1	Rel-13	B	RP-152061	R2-156990	approved	Introduction of improved synchronized RRC procedures	13.0.0	13.1.0	R2	UTRA_EDL_L23-Core
25.321	0815	1	Rel-13	B	RP-152061	R2-156993	approved	Introduction of blind HARQ retransmissions for HSDPA	13.0.0	13.1.0	R2	UTRA_EDL_L23-Core
25.331	5787	1	Rel-11	F	RP-152050	R2-156840	approved	Clarification for configuring HARQ A/N repetition with Multiflow	11.14.0	11.15.0	R2	HSDPA_MFTX-Core
25.331	5788	1	Rel-12	A	RP-152050	R2-156841	approved	Clarification for configuring HARQ A/N repetition with Multiflow	12.7.0	12.8.0	R2	HSDPA_MFTX-Core
25.331	5789	1	Rel-13	A	RP-152050	R2-156842	approved	Clarification for configuring HARQ A/N repetition with Multiflow	13.0.0	13.1.0	R2	HSDPA_MFTX-Core
25.331	5790	1	Rel-13	B	RP-152065	R2-156984	approved	Introduction of Dual Carrier HSUPA enhancements for UTRAN CS in TS 25.331	13.0.0	13.1.0	R2	DC_HSUPA_CS-Core
25.331	5791	-	Rel-12	F	RP-152052	R2-156065	approved	Corrections to WLAN/3GPP radio interworking	12.7.0	12.8.0	R2	UTRA_LTE_WLAN_interw-Core
25.331	5792	-	Rel-13	A	RP-152052	R2-156066	approved	Corrections to WLAN/3GPP radio interworking	13.0.0	13.1.0	R2	UTRA_LTE_WLAN_interw-Core
25.331	5793	1	Rel-13	B	RP-152063	R2-157010	approved	Introduction of extended DRX in Idle mode	13.0.0	13.1.0	R2	UTRA_SDATA_POWSAV-Core
25.331	5796	1	Rel-12	F	RP-152051	R2-157003	approved	Correction for Second Broadcast Channel (BCH2) message handling	12.7.0	12.8.0	R2	UTRA_SIBenh-Core
25.331	5797	1	Rel-13	A	RP-152051	R2-157004	approved	Correction for Second Broadcast Channel (BCH2) message handling	13.0.0	13.1.0	R2	UTRA_SIBenh-Core
25.331	5807	1	Rel-13	B	RP-152061	R2-156986	approved	Introduction of retrievable configurations	13.0.0	13.1.0	R2	UTRA_EDL_L23-Core
25.331	5808	1	Rel-13	B	RP-152061	R2-157071	approved	Introduction of URA_PCH with seamless transition	13.0.0	13.1.0	R2	UTRA_EDL_L23-Core
25.331	5809	1	Rel-13	B	RP-152061	R2-156991	approved	Introduction of improved synchronized RRC procedures	13.0.0	13.1.0	R2	UTRA_EDL_L23-Core
25.331	5812	1	Rel-13	B	RP-152062	R2-156998	approved	Introduction of enhanced state transition	13.0.0	13.1.0	R2	UTRA_EDL_L23-Core
25.331	5813	1	Rel-13	B	RP-152061	R2-156995	approved	Introduction of blind HARQ retransmissions for HSDPA	13.0.0	13.1.0	R2	UTRA_EDL_L23-Core
25.331	5814	1	Rel-12	F	RP-152051	R2-157001	approved	Correction for UE reading of System Information Block type 24 on timer expiration	12.7.0	12.8.0	R2	EDCH_enh-Core
25.331	5815	1	Rel-13	A	RP-152051	R2-157002	approved	Correction for UE reading of System Information Block type 24 on timer expiration	13.0.0	13.1.0	R2	EDCH_enh-Core

Samsung Exhibit 1025, Page 1064 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
25.331	5816	2	Rel-13	B	RP-152066	R2-157076	approved	Introduction of Application specific Congestion control for Data Communication (ACDC) in UTRAN	13.0.0	13.1.0	R2	ACDC-RAN-Core
25.331	5817	1	Rel-13	B	RP-152075	R2-157147	approved	Extension of Frequency Priorities	13.0.0	13.1.0	R2	LTE_MC_load-Core
25.331	5818	1	Rel-13	B	RP-152060	R2-156946	approved	CR to 25.331 on the introduction of Downlink TPC enhancements for UMTS	13.0.0	13.1.0	R2	UTRA_EDL_TPC-Core
25.331	5819	2	Rel-13	B	RP-152068	R2-156943	approved	RAT-Independent positioning enhancements	13.0.0	13.1.0	R2	UTRA_LTE_iPos_enh-Core
25.331	5820	3	Rel-13	B	RP-152058	R2-157073	approved	Introduction of DB-DC-HSUPA	13.0.0	13.1.0	R2	HSUPA_DB_MC-Core
25.331	5821	2	Rel-13	B	RP-151992	-	withdrawn	Introduction of Autonomous State Transmission	13.0.0		R2	UTRA_EDL_L23-Core
25.331	5823	2	Rel-13	F	RP-152084	R2-157070	approved	Access stratum Rel-13 indicator	13.0.0	13.1.0	R2	TEI13
25.331	5824	-	Rel-13	B	RP-152017	-	withdrawn	RAT-Independent positioning enhancements	13.0.0		R2	UTRA_LTE_iPos_enh-Core
25.331	5825	-	Rel-13	B	RP-151826	-	withdrawn	Introduction of L2 and L3 Downlink enhancements for UMTS in TS 25.331	13.0.0		R2	UTRA_EDL_L23-Core
25.401	0145	2	Rel-13	B	RP-152096	R3-152402	approved	Introduction of DECOR feature	12.0.0	13.0.0	R3	DECOR-UTRA_LTE-Core
25.401	0146	2	Rel-13	B	RP-152090	R3-152867	approved	Introduction of DL enhancements	12.0.0	13.0.0	R3	UTRA_EDL_L23-Core
25.401	0149	-	Rel-13	B	RP-152091	R3-152849	approved	Introduction of Traffic Volume measurement for RAN Sharing	12.0.0	13.0.0	R3	RSE_UTRA_GUSH-Core
25.410	0077	1	Rel-13	B	RP-152088	R3-152113	approved	Introduction of improvements to CS/PS coordination in UTRAN Shared Network	12.0.0	13.0.0	R3	CSPS_Coord-UTRA-Core
25.413	1294	7	Rel-13	B	RP-152088	R3-152277	approved	Introduction of improvements to CS/PS coordination in UTRAN Shared Network	12.4.0	13.0.0	R3	CSPS_Coord-UTRA-Core
25.413	1298	2	Rel-13	C	RP-152108	R3-152318	approved	Enhancement of the RESET RESOURCE procedure	12.4.0	13.0.0	R3	TEI13
25.413	1303	5	Rel-13	B	RP-152096	R3-152861	approved	Introduction of Dedicated Core Network (DCN) feature	12.4.0	13.0.0	R3	DECOR-UTRA_LTE-Core
25.413	1304	3	Rel-13	B	RP-152094	R3-152794	approved	Support WI Power Saving enhancements for UMTS	12.4.0	13.0.0	R3	UTRA_SDATA_POWSAV-Core
25.413	1307	3	Rel-13	B	RP-152097	R3-152856	revised	RAT-Independent positioning enhancements for RANAP	12.4.0		R3	UTRA_LTE_iPos_enh-Core
25.413	1307	4	Rel-13	B	RP-152016	-	approved	RAT-Independent positioning enhancements for RANAP	12.4.0	13.0.0	R3	UTRA_LTE_iPos_enh-Core
25.423	1873	3	Rel-13	B	RP-152091	R3-152382	approved	Enhancement to legacy load balancing mechanism	13.0.0	13.1.0	R3	RSE_UTRA_GUSH-Core
25.423	1874	3	Rel-13	B	RP-152090	R3-152793	approved	Introduction of blind HARQ retransmissions	13.0.0	13.1.0	R3	UTRA_EDL_L23-Core
25.423	1875	1	Rel-13	B	RP-152089	R3-152797	approved	Introduction of TPC enhancements	13.0.0	13.1.0	R3	UTRA_EDL_TPC-Core
25.423	1876	2	Rel-13	B	RP-152092	R3-152913	approved	Introduction of NAICS	13.0.0	13.1.0	R3	UTRA_NAICS-Core
25.423	1877	1	Rel-13	B	RP-152090	R3-152835	approved	Introduction of improved synchronized RRC procedures	13.0.0	13.1.0	R3	UTRA_EDL_L23-Core
25.423	1878	1	Rel-13	B	RP-152087	R3-152808	approved	Introduction of Dual-Band Dual-Cell HSUPA Carrier Aggregation	13.0.0	13.1.0	R3	HSUPA_DB_MC
25.423	1879	1	Rel-13	B	RP-152093	R3-152810	approved	Introduce Dual Carrier/Dual Band HSUPA operation with DPDCH channel feature	13.0.0	13.1.0	R3	DC_HSUPA_CS-Core
25.425	0187	2	Rel-13	B	RP-152090	R3-152391	approved	Introduction of IDLE to CONNECTED mode transition optimization	12.2.0	13.0.0	R3	UTRA_EDL_L23-Core
25.433	2069	3	Rel-13	B	RP-152090	R3-152792	approved	Introduction of blind HARQ retransmissions	13.0.0	13.1.0	R3	UTRA_EDL_L23-Core
25.433	2070	1	Rel-13	B	RP-152095	R3-152649	approved	System Information Update to support the new SIBs introduced in ACDC	13.0.0	13.1.0	R3	ACDC-RAN-Core
25.433	2071	1	Rel-13	B	RP-152089	R3-152796	approved	Introduction of TPC enhancements	13.0.0	13.1.0	R3	UTRA_EDL_TPC-Core

Samsung Exhibit 1025, Page 1065 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
25.433	2072	2	Rel-13	B	RP-152092	R3-152909	approved	Introduction of NAICS	13.0.0	13.1.0	R3	UTRA_NAICS-Core
25.433	2073	1	Rel-13	B	RP-152090	R3-152834	approved	Introduction of improved synchronized RRC procedures	13.0.0	13.1.0	R3	UTRA_EDL_L23-Core
25.433	2074	1	Rel-13	B	RP-152087	R3-152807	approved	Introduction of Dual-Band Dual-Cell HSUPA Carrier Aggregation	13.0.0	13.1.0	R3	HSUPA_DB_MC
25.433	2075	1	Rel-13	B	RP-152093	R3-152809	approved	Introduce Dual Carrier/Dual Band HSUPA operation with DPDCH channel feature	13.0.0	13.1.0	R3	DC_HSUPA_CS-Core
25.433	2077	1	Rel-13	B	RP-152090	R3-152918	approved	Introduction of URA_PCH with seamless transition	13.0.0	13.1.0	R3	UTRA_EDL_L23-Core
25.435	0315	2	Rel-13	B	RP-152090	R3-152390	approved	Introduction of IDLE to CONNECTED mode transition optimization	12.1.0	13.0.0	R3	UTRA_EDL_L23-Core
25.446	0021	2	Rel-13	B	RP-152101	R3-152384	approved	Clarification on muting behavior in SC-PTM	12.1.0	13.0.0	R3	LTE_SC_PTM-Core
25.453	0157	7	Rel-13	B	RP-152097	R3-152920	approved	RAT-Independent positioning enhancements for PCAP	12.2.0	13.0.0	R3	UTRA_LTE_iPos_enh-Core
25.453	0158	-	Rel-13	B	RP-152018	-	withdrawn	RAT-Independent positioning enhancements	12.2.0		R3	UTRA_LTE_iPos_enh-Core
25.461	0091	-	Rel-13	B	RP-152105	R3-152434	approved	Introduction of Band 65	12.1.0	13.0.0	R3	LTE_1980_2170_REG1-Core
25.461	0092	-	Rel-13	B	RP-152106	R3-152435	approved	Introduction of Band 66	12.1.0	13.0.0	R3	LTE_AWS_EXT-Core
25.461	0093	-	Rel-13	B	RP-152104	R3-152436	approved	Introduction of Band 67	12.1.0	13.0.0	R3	LTE_CA_700EU_B20-Core
25.461	0094	1	Rel-13	B	RP-152107	R3-152879	approved	Introduction of band 45 in 25.461	12.1.0	13.0.0	R3	LTE_TDD_1447MHz_China-Core
25.466	0056	2	Rel-13	B	RP-152107	R3-152880	approved	Introduction of band 45 in 25.466	12.2.0	13.0.0	R3	LTE_TDD_1447MHz_China-Core
25.466	0057	-	Rel-13	F	RP-152108	R3-152679	approved	Extension of operating bands field	12.2.0	13.0.0	R3	TEI13
25.466	0058	-	Rel-13	B	RP-152105	R3-152680	approved	Introduction of band 65	12.2.0	13.0.0	R3	LTE_1980_2170_REG1-Core
25.466	0059	-	Rel-13	B	RP-152106	R3-152681	approved	Introduction of band 66	12.2.0	13.0.0	R3	LTE_AWS_EXT-Core
25.466	0060	-	Rel-13	B	RP-152104	R3-152682	approved	Introduction of band 67	12.2.0	13.0.0	R3	LTE_CA_700EU_B20-Core
25.993	0119	1	Rel-13	B	RP-152059	R2-156937	approved	Introduction of EVS CS RABs	12.0.0	13.0.0	R2	EVSoCS_UTRAN-Core
34.108	0987	-	Rel-11	F	RP-151696	R5-155025	approved	Removal of technical content in 34.108 v11.14.0 and substitution with pointer to the next Release	11.14.0	11.15.0	R5	TEI11_Test
34.114	0061	-	Rel-11	F	RP-151696	R5-155026	approved	Removal of technical content in 34.114 v11.3.0 and substitution with pointer to the next Release	11.3.0	11.4.0	R5	TEI11_Test
34.121-1	1613	-	Rel-11	F	RP-151696	R5-155027	approved	Removal of technical content in 34.121-1 v11.7.0 and substitution with pointer to the next Release	11.7.0	11.8.0	R5	TEI11_Test
34.121-1	1614	1	Rel-12	F	RP-151688	R5-155891	approved	Update Test Tolerances and Test requirements for Test cases 8.3.4a and 8.3.4b	12.1.0	12.2.0	R5	TEI10_Test
34.121-1	1615	2	Rel-12	F	RP-151702	R5-156164	approved	Addition of power control test cases for Enhanced UTRA DCH	12.1.0	12.2.0	R5	UTRA_DCHenh-UEConTest
34.121-1	1616	-	Rel-12	F	RP-151702	R5-155582	approved	Addition of DCH demodulation test cases for enhanced DCH	12.1.0	12.2.0	R5	UTRA_DCHenh-UEConTest
34.121-2	0163	-	Rel-11	F	RP-151696	R5-155028	approved	Removal of technical content in 34.121-2 v11.5.0 and substitution with pointer to the next Release	11.5.0	11.6.0	R5	TEI11_Test
34.122	0437	-	Rel-11	F	RP-151688	R5-155677	approved	34.122 - Correction to In-band blocking test procedure.	11.11.0	11.12.0	R5	TEI10_Test
34.123-1	3799	-	Rel-11	F	RP-151696	R5-155029	approved	Removal of technical content in 34.123-1 v11.7.0 and substitution with pointer to the next Release	11.7.0	11.8.0	R5	TEI11_Test
34.123-1	3800	-	Rel-12	F	RP-151681	R5-155062	approved	Updates to UTRA UE Capabilities Audit test case 8.1.5.7	12.1.0	12.2.0	R5	TEI_Test

Samsung Exhibit 1025, Page 1066 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.123-1	3801	-	Rel-12	F	RP-151688	R5-155079	approved	Update to NIMTC test case 12.4.3.2a	12.1.0	12.2.0	R5	TEI10_Test
34.123-1	3803	-	Rel-12	F	RP-151702	R5-155128	approved	Void Test Cases 8.2.2.89 and 8.2.2.90	12.1.0	12.2.0	R5	UTRA_DCHenh-UEConTest
34.123-1	3804	1	Rel-12	F	RP-151702	R5-155768	approved	Introduction of Test Case 8.2.1.47	12.1.0	12.2.0	R5	UTRA_DCHenh-UEConTest
34.123-1	3805	1	Rel-12	F	RP-151702	R5-155769	approved	Introduction of Test Case 8.2.1.48	12.1.0	12.2.0	R5	UTRA_DCHenh-UEConTest
34.123-1	3806	-	Rel-12	F	RP-151684	R5-155286	approved	Correction to Rel-8 DC HSDPA testcase 8.3.4.16	12.1.0	12.2.0	R5	TEI8_Test
34.123-1	3807	-	Rel-12	F	RP-151683	R5-155288	approved	Correction to Rel-7 NISPC testcase 11.9.1	12.1.0	12.2.0	R5	TEI7_Test
34.123-1	3808	-	Rel-12	F	RP-151684	R5-155291	approved	Correction to Rel-8 SS testcase 15.10.5	12.1.0	12.2.0	R5	TEI8_Test
34.123-1	3809	-	Rel-12	F	RP-151687	R5-155294	approved	Correction to Rel-9 DC HSUPA testcase 7.1.9.5	12.1.0	12.2.0	R5	TEI9_Test
34.123-1	3810	1	Rel-12	F	RP-151687	R5-155974	approved	Correction to Rel-9 DC HSUPA testcase 7.1.9.1	12.1.0	12.2.0	R5	TEI9_Test
34.123-1	3811	-	Rel-12	F	RP-151687	R5-155317	approved	Correction to Rel-9 DC HSUPA testcase 7.1.9.2	12.1.0	12.2.0	R5	TEI9_Test
34.123-1	3812	-	Rel-12	F	RP-151684	R5-155320	approved	Correction to Rel-8 MAC-i/is testcase 7.2.2.15	12.1.0	12.2.0	R5	TEI8_Test
34.123-1	3814	-	Rel-12	F	RP-151683	R5-155322	approved	Correction to Rel-7 CPC testcase 7.1.6.2.11	12.1.0	12.2.0	R5	TEI7_Test
34.123-1	3815	-	Rel-12	F	RP-151688	R5-155328	approved	Correction to Rel-10 NIMTC testcase 9.4.3.7	12.1.0	12.2.0	R5	TEI10_Test
34.123-1	3816	-	Rel-12	F	RP-151701	R5-155348	approved	Correction of Beacon RSSI parameters in test case 8.2.10.3	12.1.0	12.2.0	R5	UTRA_LTE_WLAN_interw-UEConTest
34.123-1	3817	-	Rel-12	F	RP-151701	R5-155349	approved	Correction to test case 8.2.10.6	12.1.0	12.2.0	R5	UTRA_LTE_WLAN_interw-UEConTest
34.123-1	3818	1	Rel-12	F	RP-151701	R5-155960	approved	Addition of new generic procedures to check UE does not offload to UTRAN	12.1.0	12.2.0	R5	UTRA_LTE_WLAN_interw-UEConTest
34.123-1	3819	1	Rel-12	F	RP-151684	R5-155766	approved	Correction to Rel-8 MAC-i/is testcase 7.2.3.38	12.1.0	12.2.0	R5	TEI8_Test
34.123-1	3820	-	Rel-12	F	RP-151696	R5-155519	approved	Editorial Update of TC 8.3.1.1f	12.1.0	12.2.0	R5	TEI11_Test
34.123-1	3822	-	Rel-12	F	RP-151684	R5-155658	approved	Correction to SS test case 15.9.2	12.1.0	12.2.0	R5	TEI8_Test
34.123-1	3823	1	Rel-12	F	RP-151711	R5-155954	approved	New UEPCOP test case 12.2.1.1b PS attach / accepted / PSM	12.1.0	12.2.0	R5	MTCe-UEPCOP-UEConTest
34.123-1	3824	-	Rel-12	F	RP-151701	R5-155959	approved	Update of WLAN Offload procedures to and from UTRA	12.1.0	12.2.0	R5	UTRA_LTE_WLAN_interw-UEConTest
34.123-2	0749	-	Rel-11	F	RP-151696	R5-155030	approved	Removal of technical content in 34.123-2 v11.7.0 and substitution with pointer to the next Release	11.7.0	11.8.0	R5	TEI11_Test
34.123-2	0750	1	Rel-12	F	RP-151702	R5-155977	approved	Update Applicability for DCH Enhancement Test Cases	12.1.0	12.2.0	R5	UTRA_DCHenh-UEConTest
34.123-2	0752	-	Rel-12	F	RP-151681	R5-155627	approved	Correction to test condition for UTRAN/GERAN idle mode test cases	12.1.0	12.2.0	R5	TEI_Test
34.123-2	0754	1	Rel-12	F	RP-151711	R5-155957	approved	Addition of applicability statements for new UEPCOP test case	12.1.0	12.2.0	R5	MTCe-UEPCOP-UEConTest
34.123-2	0756	-	Rel-12	F	RP-151701	R5-155767	approved	Correction to the applicability conditions C919, C920 and C921	12.1.0	12.2.0	R5	UTRA_LTE_WLAN_interw-UEConTest
34.123-2	0757	-	Rel-12	F	RP-151681	R5-155976	approved	Change of applicability and change of number of test executions for test case 8.1.5.7	12.1.0	12.2.0	R5	TEI_Test
34.123-3	3436	-	Rel-11	F	RP-151696	R5-155031	approved	Removal of technical content in 34.123-3 v11.7.0 and substitution with pointer to the next Release	11.7.0	11.8.0	R5	TEI11_Test
34.123-3	3437	-	Rel-12	F	RP-151701	R5-155056	approved	3GPP / WLAN Radio Interworking: Introduction of Test Model	12.1.0	12.2.0	R5	UTRA_LTE_WLAN_interw-UEConTest

Samsung Exhibit 1025, Page 1067 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.123-3	3438	-	Rel-12	F	RP-151702	R5-155059	approved	DCH Enhancements: Introduction of Test Model	12.1.0	12.2.0	R5	UTRA_DCHenh-UEConTest
34.123-3	3439	-	Rel-12	F	RP-151682	R5-155501	approved	Routine maintenance for TS 34.123-3	12.1.0	12.2.0	R5	TEI5_Test
34.123-3	3440	-	Rel-12	B	RP-151691	R5s150611	approved	Addition of Rel-8 UTRA SS testcase 9.4.10 to SSNITZ testsuite	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3441	-	Rel-12	B	RP-151691	R5s150613	approved	Addition of Rel-8 UTRA SS testcase 12.2.1.13 to SSNITZ testsuite	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3442	-	Rel-12	B	RP-151691	R5s150615	approved	Addition of Rel-8 UTRA SS testcase 12.2.1.14 to SSNITZ testsuite	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3443	-	Rel-12	B	RP-151691	R5s150617	approved	Addition of Rel-8 UTRA SS test case 12.2.1.15 to SSNITZ testsuite	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3444	-	Rel-12	B	RP-151691	R5s150674	approved	Addidtion of Rel-10 NIMTC testcase 9.4.3.7 to UTRAN testsuite	12.1.0	12.2.0	R5	TEI10_Test
34.123-3	3445	-	Rel-12	B	RP-151691	R5s150682	approved	Addidtion of Rel-10 NIMTC testcase 12.4.3.2a to UTRAN testsuite	12.1.0	12.2.0	R5	TEI10_Test
34.123-3	3446	-	Rel-12	F	RP-151691	R5s150716	approved	Correction to Rel-8 testcase 8.3.4.16	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3447	-	Rel-12	F	RP-151691	R5s150795	approved	Correction to Rel-7 NISPC testcase 11.9.1	12.1.0	12.2.0	R5	TEI7_Test
34.123-3	3448	-	Rel-12	B	RP-151691	R5s150825	approved	Addition of GCF WI-161 DC-HSU test case 7.1.9.2 to HSPA9_ENH ATS	12.1.0	12.2.0	R5	TEI9_Test
34.123-3	3449	-	Rel-12	B	RP-151691	R5s150829	approved	Addidtion of Rel-10 NIMTC testcase 9.4.5.4.7 to UTRAN testsuite	12.1.0	12.2.0	R5	TEI10_Test
34.123-3	3450	-	Rel-12	B	RP-151691	R5s150830	approved	Addidtion of Rel-10 NIMTC testcase 12.2.2.3a to UTRAN testsuite	12.1.0	12.2.0	R5	TEI10_Test
34.123-3	3451	-	Rel-12	B	RP-151691	R5s150878	approved	Addidtion of Rel-8 MAC-i/is testcase 7.2.2.15 to HSPA8_ENH testsuite	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3452	-	Rel-12	B	RP-151691	R5s150880	approved	Addidtion of Rel-8 MAC-i/is testcase 7.2.3.38 to HSPA8_ENH testsuite	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3453	-	Rel-12	B	RP-151691	R5s150889	approved	Addition of Rel-8 UTRA SS testcase 15.4.4 to SSNITZ testsuite	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3454	-	Rel-12	B	RP-151691	R5s150891	approved	Addition of Rel-8 UTRA SS testcase 15.4.6 to SSNITZ testsuite	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3455	-	Rel-12	F	RP-151691	R5s150893	approved	Correction to Rel-8 SS testcase 15.8.5	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3456	-	Rel-12	F	RP-151691	R5s150894	approved	Correction to UTRA NIMTC testcase 9.4.5.5	12.1.0	12.2.0	R5	TEI10_Test
34.123-3	3457	-	Rel-12	F	RP-151691	R5s150895	approved	Correction to Rel-8 SS test cases 9.4.10, 12.2.1.13, 12.2.1.14, 12.2.1.15	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3458	-	Rel-12	F	RP-151691	R5s150896	approved	Correction to Rel-8 SS testcase 12.2.1.15	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3459	-	Rel-12	F	RP-151691	R5s150897	approved	Correction to Rel-8 SS testcase 15.7.25	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3460	-	Rel-12	F	RP-151691	R5s150898	approved	Correction to Rel-8 SS testcase 15.7.x and 15.10.x	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3461	-	Rel-12	F	RP-151691	R5s150949	approved	Correction to ETWS testcase 8.1.1.19	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3462	-	Rel-12	F	RP-151691	R5s150950	approved	Correction to Rel-10 NIMTC testcase 11.1.3.4	12.1.0	12.2.0	R5	TEI10_Test
34.123-3	3463	-	Rel-12	F	RP-151691	R5s150951	approved	Correction to Rel-10 NAS testcase 12.4.1.4f	12.1.0	12.2.0	R5	TEI10_Test

Samsung Exhibit 1025, Page 1068 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.123-3	3464	-	Rel-12	F	RP-151691	R5s150952	approved	Correction to CSG testcases	12.1.0	12.2.0	R5	TEI8_Test
34.123-3	3465	-	Rel-12	F	RP-151691	R5s150953	approved	Correction to Rel-9 CSG testcases 6.3.1.4	12.1.0	12.2.0	R5	TEI9_Test
34.123-3	3466	-	Rel-12	B	RP-151691	R5s150958	approved	Addition of GCF WI-161 DC-HSU test case 7.1.9.5 to HSPA9_ENH ATS	12.1.0	12.2.0	R5	TEI9_Test
34.123-3	3467	-	Rel-12	F	RP-151690	-	approved	CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A	12.1.0	12.2.0	R5	TEI8_Test
34.229-1	0744	-	Rel-12	F	RP-151684	R5-155068	approved	Correction for pub-gruu and temp-gruu in A.1.6 NOTIFY	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0745	-	Rel-12	F	RP-151684	R5-155069	approved	Correction for message body of NOTIFY at step 7 in C.19	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0746	1	Rel-12	F	RP-151703	R5-155918	approved	Editorial updates for EVS	12.7.0	12.8.0	R5	EVS_codec-UEConTest
34.229-1	0747	1	Rel-12	F	RP-151684	R5-155994	approved	Update of P-Access-Network-Info header field in A.2.7 ACK	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0748	1	Rel-12	F	RP-151684	R5-155913	approved	Corrections to the IMS Deregistration procedure	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0749	1	Rel-12	F	RP-151684	R5-155995	approved	Corrections to IMS test case 15.29	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0750	1	Rel-12	F	RP-151684	R5-155914	approved	Corrections to IMS emergency test case 19.3.1	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0751	-	Rel-12	F	RP-151684	R5-155172	approved	Correction to test case 19.5.10	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0752	1	Rel-12	F	RP-151684	R5-155997	approved	Clarification on usage of IR.92	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0753	-	Rel-12	F	RP-151684	R5-155174	approved	Correction to A.2.1 regarding lr parameter	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0754	-	Rel-12	F	RP-151684	R5-155175	approved	Corrections to IMS test cases 19.3.3 and 19.3.4	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0756	-	Rel-12	F	RP-151684	R5-155177	approved	Corrections to MMI command for Three Way Conferencing	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0757	-	Rel-12	F	RP-151684	R5-155179	approved	Correction to Record-Route header in C.10	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0758	1	Rel-12	F	RP-151684	R5-155915	approved	Referencing RFC 7315	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0759	-	Rel-12	F	RP-151684	R5-155182	approved	Removal of duplicated text in C.28	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0760	-	Rel-12	F	RP-151684	R5-155183	approved	Correction to uniqueness of branch parameters	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0761	-	Rel-12	F	RP-151684	R5-155363	approved	Update annex C.29.2 with BSF requirement	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0762	-	Rel-12	F	RP-151703	R5-155458	approved	Editorial update of test case 12.23	12.7.0	12.8.0	R5	EVS_codec-UEConTest
34.229-1	0763	1	Rel-12	F	RP-151703	R5-155919	approved	Editorial update of test case 12.25	12.7.0	12.8.0	R5	EVS_codec-UEConTest
34.229-1	0764	1	Rel-12	F	RP-151687	R5-155998	approved	Correction to IMS Emergency call test case 19.1.3	12.7.0	12.8.0	R5	TEI9_Test
34.229-1	0766	1	Rel-12	F	RP-151703	R5-155920	approved	Add new test case for MT MTSI speech call / EVS / AMR-WB IO mode	12.7.0	12.8.0	R5	EVS_codec-UEConTest
34.229-1	0773	1	Rel-12	F	RP-151684	R5-155916	approved	Corrections to the use of the PUBLISH method	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0774	2	Rel-12	F	RP-151684	R5-155943	approved	Correction to Annex A regarding additional information	12.7.0	12.8.0	R5	TEI8_Test
34.229-1	0776	-	Rel-12	F	RP-151713	R5-155694	approved	Correction to Annex C.40	12.7.0	12.8.0	R5	TEI12_Test
34.229-2	0155	-	Rel-10	F	RP-151688	R5-155032	approved	Removal of technical content in 34.229-2 v10.3.0 and substitution with pointer to the next Release	10.3.0	10.4.0	R5	TEI10_Test
34.229-2	0156	-	Rel-11	F	RP-151696	R5-155033	approved	Removal of technical content in 34.229-2 v11.0.0 and substitution with pointer to the next Release	11.0.0	11.1.0	R5	TEI11_Test
34.229-2	0158	-	Rel-12	F	RP-151703	R5-155468	approved	Add applicability for new MT EVS test case	12.6.0	12.7.0	R5	EVS_codec-UEConTest
34.229-2	0159	-	Rel-12	F	RP-151684	R5-155760	approved	Remove outdated reference	12.6.0	12.7.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1069 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.229-3	0332	-	Rel-10	F	RP-151688	R5-155034	approved	Removal of technical content in 34.229-3 v10.7.0 and substitution with pointer to the next Release	10.7.0	10.8.0	R5	TEI10_Test
34.229-3	0333	-	Rel-11	F	RP-151693	R5s150692	approved	Correction to IMS Emergency Call test case 19.3.1	11.1.0	11.2.0	R5	TEI9_Test
34.229-3	0334	-	Rel-11	F	RP-151693	R5s150721	approved	Correction to usage of GRUU in IMS registration	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0335	-	Rel-11	F	RP-151693	R5s150739	approved	Correction to GCF WI-154 IMS emergency Call testcase 19.3.1	11.1.0	11.2.0	R5	TEI9_Test
34.229-3	0336	-	Rel-11	B	RP-151693	R5s150755	approved	Addition of IMS video call test case 15.11a	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0337	-	Rel-11	F	RP-151693	R5s150786	approved	Correction to IMS test case 10.1	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0338	-	Rel-11	F	RP-151693	R5s150809	approved	Correction to IMS emergency test case 19.5.7	11.1.0	11.2.0	R5	TEI9_Test
34.229-3	0339	-	Rel-11	F	RP-151693	R5s150817	approved	Correction to initiation of Emergency Calls	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0340	-	Rel-11	F	RP-151693	R5s150818	approved	Correction to IMS Emergency Call Test Case 19.1.5	11.1.0	11.2.0	R5	TEI9_Test
34.229-3	0341	-	Rel-11	F	RP-151693	R5s150835	approved	Correction to IMS Registration	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0342	-	Rel-11	F	RP-151693	R5s150841	approved	Correction to MTSI MO speech call procedures in AnnexC21	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0343	-	Rel-11	F	RP-151693	R5s150843	approved	Correction to common IMS functions to handling IMS Dialogs	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0344	-	Rel-11	F	RP-151693	R5s150850	approved	Correction to usage of Max-Forwards	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0345	-	Rel-11	F	RP-151693	R5s150851	approved	Corrections to IMS emergency test case 19.3.1	11.1.0	11.2.0	R5	TEI9_Test
34.229-3	0346	-	Rel-11	F	RP-151693	R5s150854	approved	Correction to number of SIP dialogs	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0347	-	Rel-11	F	RP-151693	R5s150864	approved	Correction in IMS Emergency Call test case 19.5.7	11.1.0	11.2.0	R5	TEI9_Test
34.229-3	0348	-	Rel-11	F	RP-151693	R5s150865	approved	Corrections to RTP and RTCP handling	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0349	-	Rel-11	F	RP-151693	R5s150868	approved	Corrections to IMS Emergency call Testcase 19.1.3	11.1.0	11.2.0	R5	TEI9_Test
34.229-3	0350	-	Rel-11	F	RP-151693	R5s150873	approved	Corrections to IMS authentication test cases 9.1 and 9.2	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0351	-	Rel-11	F	RP-151693	R5s150886	approved	Correction to IMS registration expiry time	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0352	-	Rel-11	F	RP-151693	R5s150888	approved	Correction to IMS REGISTER message	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0353	-	Rel-11	F	RP-151693	R5s150900	approved	Correction to Emergency Call Normal Services in 34.229-1	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0354	-	Rel-11	F	RP-151693	R5s150908	approved	Corrections to usage of GRUU	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0355	-	Rel-11	F	RP-151693	R5s150909	approved	Corrections to IMS three-way session creation test cases	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0356	-	Rel-11	F	RP-151693	R5s150910	approved	Correction to GCF WI-103 15.21a Three way session testcase	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0357	-	Rel-11	F	RP-151693	R5s150919	approved	Correction to postamble for test cases 6.3 and 7.1	11.1.0	11.2.0	R5	TEI8_Test
34.229-3	0358	-	Rel-11	F	RP-151693	R5s150972	approved	Correction to IMS emergency test case 19.5.6	11.1.0	11.2.0	R5	TEI9_Test
34.229-3	0359	-	Rel-11	F	RP-151692	-	approved	CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (prose), Annex A	11.1.0	11.2.0	R5	TEI8_Test
34.902	0023	1	Rel-11	F	RP-151688	R5-155890	approved	Update Test Tolerance analyses for TS 34.121-1 Test cases 8.3.4a and 8.3.4b	11.0.0	11.1.0	R5	TEI10_Test
36.101	3168 a	-	Rel-10	F	RP-152131	R4-155447	approved	Corrections to applicability of CSI requirements for low UE categories (Rel-10)	10.20.0	10.21.0	R4	TEI10
36.101	3169 a	-	Rel-11	F	RP-152132	R4-155448	approved	Corrections to applicability of CSI requirements for low UE categories (Rel-11)	11.14.0	11.15.0	R4	TEI11
36.101	3172	1	Rel-13	B	RP-152158	R4-156793	approved	Introduction of UE RF requriements for CA_42E	13.1.0	13.2.0	R4	LTE_CA_C_B42_4DL-Core
36.101	3173	-	Rel-13	F	RP-152137	R4-155503	approved	Correction on UL 64QAM measurment channels	13.1.0	13.2.0	R4	LTE_UL64QAM-Core

Samsung Exhibit 1025, Page 1070 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	3175	-	Rel-13	A	RP-152131	R4-155529	approved	Release 13 CAT A CR to align NS_04 values to meet FCC OOBE requirements	12.9.0	13.0.0	R4	TEI12, LTE_TDD_2600_US-Core
36.101	3176	1	Rel-12	F	RP-152131	R4-156732	approved	Release 12 CR to align NS_04 values to meet FCC OOBE requirements	12.9.0	12.10.0	R4	TEI12, LTE_TDD_2600_US-Core
36.101	3178	-	Rel-13	D	RP-152136	R4-155532	approved	Maintenance of eIMTA PDSCH demodulation test	13.1.0	13.2.0	R4	TEI12
36.101	3179	1	Rel-12	D	RP-152136	R4-156661	approved	Editorial correction for eIMTA CQI tests	12.9.0	12.10.0	R4	TEI12
36.101	3180	1	Rel-13	F	RP-152136	R4-156662	approved	Correction for eIMTA CQI tests	13.1.0	13.2.0	R4	TEI12
36.101	3182	1	Rel-12	F	RP-152135	R4-156609	approved	CR to finalize demodulation performance requirements for D2D Communication	12.9.0	12.10.0	R4	LTE_D2D_Prox-Perf
36.101	3185	1	Rel-12	F	RP-152133	R4-156672	approved	Simplified CA fading Test method becomes optional	12.9.0	12.10.0	R4	LTE_CA_B39_B41_B41-Perf, LTE_CA_B1_B41_B41-Perf
36.101	3186	-	Rel-13	A	RP-152133	R4-155571	approved	Simplified CA fading Test method becomes optional	13.1.0	13.2.0	R4	LTE_CA_B39_B41_B41-Perf, LTE_CA_B1_B41_B41-Perf
36.101	3187	1	Rel-12	F	RP-152135	R4-156608	approved	CR on corrections for ProSe Direct Discovery demodulation requirements	12.9.0	12.10.0	R4	LTE_D2D_Prox-Perf
36.101	3190	-	Rel-12	F	RP-152133	R4-155639	approved	Correction of the applicable UE categories for 256QAM UE demodulation performance requirements (Rel-12)	12.9.0	12.10.0	R4	LTE_SC_enh_L1-Perf
36.101	3191	-	Rel-13	A	RP-152133	R4-155640	approved	Correction of the applicable UE categories for 256QAM UE demodulation performance requirements (Rel-13)	13.1.0	13.2.0	R4	LTE_SC_enh_L1-Perf
36.101	3192	1	Rel-12	F	RP-152133	R4-156685	approved	Correction of TDD-FDD CA performance requirements (Rel-12)	12.9.0	12.10.0	R4	LTE_CA_Mult-Perf
36.101	3193	1	Rel-13	F	RP-152133	R4-156686	approved	Correction of TDD-FDD CA performance requirements (Rel-13)	13.1.0	13.2.0	R4	LTE_CA_Mult-Perf
36.101	3194	-	Rel-12	F	RP-152133	R4-155643	approved	Correction on FDD CA and TDD TDD CA performance requirements (Rel-12)	12.9.0	12.10.0	R4	LTE_CA_Mult-Perf
36.101	3195	1	Rel-13	F	RP-152133	R4-156698	approved	Correction on FDD CA and TDD CA performance requirements (Rel-13)	13.1.0	13.2.0	R4	LTE_CA_Mult-Perf
36.101	3196	-	Rel-13	B	RP-152163	R4-155646	approved	CR on introduction of 5CC FDD/TDD CA demodulation performance requirements	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B7_B7_B28-Perf, LTE_CA_B3_B3_B7_B7_B28-Perf,
36.101	3197	-	Rel-13	B	RP-152163	R4-155648	approved	CR on introduction of 5CC TDD FDD CA demodulation performance requirements	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B19_B42_B42-Perf, LTE_CA_B1_B19_B21_B42_B42-Perf,
36.101	3198	2	Rel-9	F	RP-152130	R4-158169	approved	CR: Removal of 1.4MHz MBMS test (Rel-9)	9.22.0	9.23.0	R4	MBMS_LTE
36.101	3199	1	Rel-10	A	RP-152130	R4-158170	approved	CR: Removal of 1.4MHz MBMS test (Rel-10)	10.20.0	10.21.0	R4	MBMS_LTE
36.101	3200	1	Rel-11	A	RP-152130	R4-158171	approved	CR: Removal of 1.4MHz MBMS test (Rel-11)	11.14.0	11.15.0	R4	MBMS_LTE
36.101	3201	1	Rel-12	A	RP-152130	R4-158172	approved	CR: Removal of 1.4MHz MBMS test (Rel-12)	12.9.0	12.10.0	R4	MBMS_LTE
36.101	3203	-	Rel-11	F	RP-152132	R4-155694	approved	Correction of the AMPR table for NS_14 in TS 36.101 R11	11.14.0	11.15.0	R4	TEI11
36.101	3204	-	Rel-12	A	RP-152132	R4-155695	approved	Correction of the AMPR table for NS_14 in TS 36.101 R12	12.9.0	12.10.0	R4	TEI11

Samsung Exhibit 1025, Page 1071 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	3205	-	Rel-13	A	RP-152132	R4-155696	approved	Correction of the AMPR table for NS_14 in TS 36.101 R13	13.1.0	13.2.0	R4	TEI11
36.101	3206	-	Rel-13	F	RP-152134	R4-155698	approved	Correction of the 2UL CA co-existence table for CA_18A-28A	13.1.0	13.2.0	R4	TEI13
36.101	3209	-	Rel-13	B	RP-152152	R4-155730	approved	Introduction of 3DL/2UL DC	13.1.0	13.2.0	R4	LTE_dualC_enh-Core
36.101	3210	1	Rel-13	F	RP-152139	R4-156734	approved	Correction of uplink configuration for CA_42D	13.1.0	13.2.0	R4	LTE_CA_C_B42_3DL-Core
36.101	3212	-	Rel-13	B	RP-152133	R4-155825	approved	Introduction of dual uplink CA into 36.101	13.1.0	13.2.0	R4	LTE_CA_2UL-A4-Core
36.101	3213	-	Rel-12	F	RP-152133	R4-155875	approved	Corrections to the CSI minimum requirement for PUSCH 3-2 (Rel-12)	12.9.0	12.10.0	R4	LTE_eDL_MIMO_enh-Perf
36.101	3214	-	Rel-13	A	RP-152133	R4-155876	approved	Corrections to the CSI minimum requirement for PUSCH 3-2 (Rel-13)	13.1.0	13.2.0	R4	LTE_eDL_MIMO_enh-Perf
36.101	3215	1	Rel-12	F	RP-152133	R4-156642	approved	Corrections to MIMO Correlation Matrices using cross polarized antennas (Rel-12)	12.9.0	12.10.0	R4	LTE_eDL_MIMO_enh-Perf
36.101	3216	-	Rel-13	A	RP-152133	R4-155884	approved	Corrections to MIMO Correlation Matrices using cross polarized antennas (Rel-12)	13.1.0	13.2.0	R4	LTE_eDL_MIMO_enh-Perf
36.101	3221	1	Rel-13	B	RP-152157	R4-156796	approved	Introducing B20 + B67 CA into TS 36.101	13.1.0	13.2.0	R4	LTE_CA_700EU_B20-Core
36.101	3224	1	Rel-12	F	RP-152136	R4-156641	approved	CR for UE performance tests for intra-band contiguous CA with minimum channel spacing on Band 41	12.9.0	12.10.0	R4	TEI12
36.101	3225	-	Rel-13	A	RP-152136	R4-155914	approved	CR for UE performance tests for intra-band contiguous CA with minimum channel spacing on Band 41	13.1.0	13.2.0	R4	TEI12
36.101	3226	1	Rel-12	F	RP-152136	R4-156701	approved	Correction in SNR definition for CSI test	12.9.0	12.10.0	R4	TEI12
36.101	3227	1	Rel-13	A	RP-152136	R4-156702	approved	Correction in SNR definition for CSI test	13.1.0	13.2.0	R4	TEI12
36.101	3228	-	Rel-9	F	RP-152130	R4-155955	approved	Correction to reference channel for CQI requirements	9.22.0	9.23.0	R4	LTE-RF
36.101	3229	-	Rel-10	A	RP-152130	R4-155956	approved	Correction to reference channel for CQI requirements	10.20.0	10.21.0	R4	LTE-RF
36.101	3230	-	Rel-11	A	RP-152130	R4-155957	approved	Correction to reference channel for CQI requirements	11.14.0	11.15.0	R4	LTE-RF
36.101	3231	-	Rel-12	A	RP-152130	R4-155958	approved	Correction to reference channel for CQI requirements	12.9.0	12.10.0	R4	LTE-RF
36.101	3232	-	Rel-13	A	RP-152130	R4-155959	approved	Correction to reference channel for CQI requirements	13.1.0	13.2.0	R4	LTE-RF
36.101	3233	1	Rel-13	B	RP-152168	R4-156784	approved	CR 36.101 BW combination for CA_8B	13.1.0	13.2.0	R4	LTE_CA_C_B8-Core
36.101	3241	-	Rel-13	F	RP-152164	R4-156123	approved	Correction to mandatory 2UL support for 3DL interband CA	13.1.0	13.2.0	R4	LTE_CA_3DL_2UL-Core
36.101	3242	-	Rel-13	B	RP-152164	R4-156130	approved	Introduction of 2 UL and 3 DL interband cases with MSD	13.1.0	13.2.0	R4	LTE_CA_3DL_2UL-Core
36.101	3243	-	Rel-12	F	RP-152164	R4-156139	approved	Introduction of 2 UL and 3 DL interband cases with MSD	12.9.0	12.10.0	R4	LTE_CA_3DL_2UL-Core
36.101	3244	1	Rel-11	F	RP-152132	R4-156688	approved	CR on FRC for CDM-multiplexed DM RS	11.14.0	11.15.0	R4	TEI11
36.101	3245	-	Rel-12	A	RP-152132	R4-156143	approved	CR on FRC for CDM-multiplexed DM RS	12.9.0	12.10.0	R4	TEI11
36.101	3246	-	Rel-13	A	RP-152132	R4-156144	approved	CR on FRC for CDM-multiplexed DM RS	13.1.0	13.2.0	R4	TEI11
36.101	3247	-	Rel-11	F	RP-152132	R4-156183	approved	Correction to physical channel for CQI reporting in type A test case	11.14.0	11.15.0	R4	LTE_Interf_Rej-Perf
36.101	3248	-	Rel-12	A	RP-152132	R4-156184	approved	Correction to physical channel for CQI reporting in type A test case	12.9.0	12.10.0	R4	LTE_Interf_Rej-Perf
36.101	3249	-	Rel-13	A	RP-152132	R4-156203	approved	Correction to physical channel for CQI reporting in type A test case	13.1.0	13.2.0	R4	LTE_Interf_Rej-Perf
36.101	3255	-	Rel-13	A	RP-152133	R4-156370	approved	CR for Rel-12 NAICS - Demodulation Test	13.1.0	13.2.0	R4	LTE_NAICS-Perf

Samsung Exhibit 1025, Page 1072 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	3260	-	Rel-12	F	RP-152133	R4-156375	approved	CR for Rel-12 NAICS - Demodulation Test	12.9.0	12.10.0	R4	LTE_NAICS-Perf
36.101	3262	-	Rel-12	F	RP-152133	R4-156392	approved	Correction on CA_4A-4A-5A table reference	12.9.0	12.10.0	R4	LTE_CA_B4_B4_B5-Core
36.101	3263	-	Rel-13	A	RP-152133	R4-156393	approved	Correction on CA_4A-4A-5A table reference	13.1.0	13.2.0	R4	LTE_CA_B4_B4_B5-Core
36.101	3266	1	Rel-10	F	RP-152131	R4-156712	approved	Clarification of Pcell support in 36.101 Rel-11 in CA scenarios	10.20.0	10.21.0	R4	TEI10
36.101	3267	1	Rel-11	F	RP-152132	R4-156713	approved	Clarification of Pcell support in 36.101 Rel-11 in CA scenarios	11.14.0	11.15.0	R4	TEI11
36.101	3268	-	Rel-12	F	RP-152136	R4-156430	approved	Clarification of Pcell support in 36.101 in CA scenarios	12.9.0	12.10.0	R4	TEI12
36.101	3269	1	Rel-13	F	RP-152134	R4-156715	approved	Clarification of Pcell support in 36.101 in CA scenarios	13.1.0	13.2.0	R4	TEI13
36.101	3271	1	Rel-11	F	RP-152132	R4-156902	approved	A-MPR correction for CA_NS_06 CA-7C non-contiguous RB allocation	11.14.0	11.15.0	R4	LTE_CA_B7-Core
36.101	3272	-	Rel-12	A	RP-152132	R4-156437	approved	A-MPR correction for CA_NS_06 CA-7C non-contiguous RB allocation	12.9.0	12.10.0	R4	LTE_CA_B7-Core
36.101	3273	-	Rel-13	A	RP-152132	R4-156438	approved	A-MPR correction for CA_NS_06 CA-7C non-contiguous RB allocation	13.1.0	13.2.0	R4	LTE_CA_B7-Core
36.101	3275	1	Rel-12	F	RP-152136	R4-156733	approved	Clarification on relative power tolereance for CA	12.9.0	12.10.0	R4	TEI12
36.101	3276	-	Rel-13	A	RP-152136	R4-156477	approved	Clarification on relative power tolereance for CA	13.1.0	13.2.0	R4	TEI12
36.101	3278	-	Rel-13	A	RP-152133	R4-156510	approved	Correction of uplink configuration for CA_18-28	13.1.0	13.2.0	R4	LTE_CA_B18_B28-Core
36.101	3279	-	Rel-12	F	RP-152133	R4-156511	approved	Correction of uplink configuration for CA_18-28	12.9.0	12.10.0	R4	LTE_CA_B18_B28-Core
36.101	3280	-	Rel-13	F	RP-152135	R4-156610	approved	CR on corrections for ProSe Direct Discovery demodulation requirements	13.1.0	13.2.0	R4	LTE_D2D_Prox-Perf
36.101	3281	-	Rel-13	F	RP-152135	R4-156611	approved	CR to finalize demodulation performance requirements for D2D Communication	13.1.0	13.2.0	R4	LTE_D2D_Prox-Perf
36.101	3282	-	Rel-10	F	RP-152131	R4-156953	approved	Missing RB allocation and OCNG Pattern for Cat 1 UEs in Multiple PMI CSI Reference Symbol tests	10.20.0	10.21.0	R4	TEI10
36.101	3283	-	Rel-11	A	RP-152131	R4-156954	approved	Missing RB allocation and OCNG Pattern for Cat 1 UEs in Multiple PMI CSI Reference Symbol tests	11.14.0	11.15.0	R4	TEI10
36.101	3284	-	Rel-12	A	RP-152131	R4-156957	approved	Missing RB allocation and OCNG Pattern for Cat 1 UEs in Multiple PMI CSI Reference Symbol tests	12.9.0	12.10.0	R4	TEI10
36.101	3285	-	Rel-13	A	RP-152131	R4-156959	approved	Missing RB allocation and OCNG Pattern for Cat 1 UEs in Multiple PMI CSI Reference Symbol tests	13.1.0	13.2.0	R4	TEI10
36.101	3286	1	Rel-13	B	RP-152167	R4-158254	approved	Introduction of CA_5B to TS 36.101	13.1.0	13.2.0	R4	LTE_CA_C_B5-Core
36.101	3287	-	Rel-13	B	RP-152169	R4-156971	approved	Introduction of CA_5A-5A to TS 36.101	13.1.0	13.2.0	R4	LTE_CA_NC_B5-Core
36.101	3288	-	Rel-13	B	RP-152133	R4-157045	approved	Introduction of dual uplink CA into 36.101	13.1.0	13.2.0	R4	LTE_CA_2UL-A1-Core
36.101	3291	1	Rel-13	B	RP-152150	R4-158364	approved	CR on eD2D RF core requirements	13.1.0	13.2.0	R4	LTE_eD2D_Prox-Core
36.101	3292	3	Rel-13	B	RP-152171	R4-158423	approved	Introduction of B65 in Region 1	13.1.0	13.2.0	R4	LTE_1980_2170_REG1-Core
36.101	3293	1	Rel-12	F	RP-152131	R4-158228	approved	Correction of supported sub-block frequency arrangement for CA_41-41	12.9.0	12.10.0	R4	LTE_CA-Core
36.101	3294	-	Rel-13	A	RP-152131	R4-157140	approved	Correction of supported sub-block frequency arrangement for CA_41-41	13.1.0	13.2.0	R4	LTE_CA-Core
36.101	3295	-	Rel-12	F	RP-152131	R4-157141	approved	Correction of test configuration for combinations of inter-band and intra-band CA	12.9.0	12.10.0	R4	LTE_CA-Core

Samsung Exhibit 1025, Page 1073 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	3296	-	Rel-13	A	RP-152131	R4-157142	approved	Correction of test configuration for combinations of inter-band and intra-band CA	13.1.0	13.2.0	R4	LTE_CA-Core
36.101	3299	2	Rel-13	B	RP-152147	R4-158442	approved	RF receiver requirements for UE(s) supporting four antenna ports	13.1.0	13.2.0	R4	LTE_4Rx_AP_DL-Core
36.101	3300	2	Rel-13	B	RP-152148	R4-158443	approved	Introduction of RF requirements for LAA operation	13.1.0	13.2.0	R4	LTE_LAA-Core
36.101	3309	2	Rel-13	B	RP-152172	R4-158432	approved	Introduction of Band 66	13.1.0	13.2.0	R4	LTE_AWS_EXT-Core
36.101	3310	-	Rel-12	F	RP-152136	R4-157226	approved	Correction on CQI test 1A for TDD eIMTA	12.9.0	12.10.0	R4	TEI12
36.101	3311	-	Rel-13	A	RP-152136	R4-157227	approved	Correction on CQI test 1A for TDD eIMTA	13.1.0	13.2.0	R4	TEI12
36.101	3312	1	Rel-13	B	RP-152166	R4-158317	approved	Introduction of 3DL/3UL Inter-band CA of CA_39A-41C and CA_39C-41A	13.1.0	13.2.0	R4	LTE_CA_3DL3UL_B39_B41_B41-Core; LTE_CA_3DL3UL_B39_B39_B41-Core
36.101	3313	-	Rel-12	F	RP-152133	R4-157250	approved	Correction of the resource allocation in FRC for CAT0 UE demodulation tests	12.9.0	12.10.0	R4	LC_MTC_LTE-Perf
36.101	3314	-	Rel-13	A	RP-152133	R4-157251	approved	Correction of the resource allocation in FRC for CAT0 UE demodulation tests	13.1.0	13.2.0	R4	LC_MTC_LTE-Perf
36.101	3318	-	Rel-13	B	RP-152151	R4-157303	approved	Introduce TM4 performance requirements when CRS assistance information is provided	13.1.0	13.2.0	R4	LTE_CRSIM-Perf
36.101	3319	1	Rel-13	B	RP-152151	R4-158107	approved	Introduce TM10 performance requirements when CRS assistance information is provided for multiple-CSI-process capable UE	13.1.0	13.2.0	R4	LTE_CRSIM-Perf
36.101	3320	1	Rel-13	B	RP-152151	R4-158108	approved	Introduce TM10 performance requirements when CRS assistance information is provided for one-CSI-process capable UE	13.1.0	13.2.0	R4	LTE_CRSIM-Perf
36.101	3325	-	Rel-13	B	RP-152163	R4-157346	approved	Introduction of 5DL/1UL CA combinations into TS 36.101	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B19_B42_B42-Core, LTE_CA_B1_B19_B21_B42_B42-Core
36.101	3326	1	Rel-13	B	RP-152175	R4-158250	approved	Introduction of Region 3 requirement in Band 65	13.1.0	13.2.0	R4	LTE_1980_2170_REG3-Core
36.101	3327	-	Rel-13	F	RP-152138	R4-157361	approved	Correction of CA_8A-41C bandwidth combination set	13.1.0	13.2.0	R4	LTE_CA_B8_B41_B41
36.101	3328	1	Rel-12	F	RP-152133	R4-158235	approved	Removal of DC channel bandwidth combination set table	12.9.0	12.10.0	R4	LTE_SC_enh_dualC-Core
36.101	3329	-	Rel-13	A	RP-152133	R4-157363	approved	Removal of DC channel bandwidth combination set table	13.1.0	13.2.0	R4	LTE_SC_enh_dualC-Core
36.101	3330	-	Rel-12	F	RP-152136	R4-157386	approved	CR on demodulation requirements of Dual Connectivity	12.9.0	12.10.0	R4	TEI12
36.101	3331	-	Rel-13	A	RP-152136	R4-157388	approved	CR on demodulation requirements of Dual Connectivity	13.1.0	13.2.0	R4	TEI12
36.101	3332	1	Rel-13	F	RP-152131	R4-158414	approved	Modification and correction of CA_3A-3A BCS1 in Rel.13 36.101	13.1.0	13.2.0	R4	LTE_CA-Core
36.101	3333	-	Rel-12	F	RP-152133	R4-157407	approved	Correction of MSD levels for 2UL inter-band CA in TS 36.101 Rel-12	12.9.0	12.10.0	R4	LTE_CA_2UL-A4-Core
36.101	3334	-	Rel-13	F	RP-152133	R4-157408	approved	Correction of MSD levels for 2UL inter-band CA in TS 36.101 Rel-13	13.1.0	13.2.0	R4	LTE_CA_2UL-A4-Core

Samsung Exhibit 1025, Page 1074 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	3338	-	Rel-13	B	RP-152162	R4-157426	approved	Introduction of finished 4DL inter-band CAs to TS 36.101	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B7_B8-Core,LTE_CA_B2_B2_B4_B5-Core,LTE_CA_B2_B2_B5_B12-Core,LTE_CA_B2_B2_B12_B12-Core,LTE_CA_B2_B4_B4_B5-Core,LTE_CA_B2_B4_B5_B12-Core,LTE_CA_B2_B5_B12_B12-Core,LTE_CA_B3_B7_B7_B28-Core,LTE_CA_B3_B28_B40_B40-Core,LTE_CA_B4_B4_B5_B12-Core,LTE_
36.101	3339	-	Rel-13	B	RP-152170	R4-157432	approved	Introduction of CA_7A-7A BCS1 to TS 36.101	13.1.0	13.2.0	R4	LTE_CA_NC_B7_BWset-Core
36.101	3340	1	Rel-13	B	RP-152164	R4-158263	approved	Introduction of additional 2 UL and 3 DL interband cases with MSD	13.1.0	13.2.0	R4	LTE_CA_3DL_2UL-Core
36.101	3341	1	Rel-13	F	RP-152158	R4-158258	approved	Addition of Class E into CA BW Class table.	13.1.0	13.2.0	R4	LTE_CA_C_B42_4DL-Core
36.101	3343	-	Rel-13	F	RP-152131	R4-157475	approved	Table 6.2.4A-1 note 1 correction	13.1.0	13.2.0	R4	LTE_CA-Core
36.101	3344	-	Rel-12	F	RP-152164	R4-157486	approved	Removal of (NOTE 4) from Table 5.6A.1-2a	12.9.0	12.10.0	R4	LTE_CA_3DL_2UL-Core
36.101	3345	-	Rel-13	A	RP-152164	R4-157487	approved	Removal of (NOTE 4) from Table 5.6A.1-2a	13.1.0	13.2.0	R4	LTE_CA_3DL_2UL-Core
36.101	3347	-	Rel-13	B	RP-152160	R4-157589	approved	Introduction of 4DL NC CA in band42 in 36.101	13.1.0	13.2.0	R4	LTE_CA_NC_B42_4DL-Core
36.101	3348	-	Rel-13	B	RP-152173	R4-157591	approved	Introduction of 1447-1467MHz Band into 36.101	13.1.0	13.2.0	R4	LTE_TDD_1447MHz_China-Core
36.101	3351	-	Rel-12	F	RP-152136	R4-157709	approved	CR: PDSCH ETU600 performance requirements	12.9.0	12.10.0	R4	TEI12
36.101	3352	-	Rel-13	A	RP-152136	R4-157710	approved	CR: PDSCH ETU600 performance requirements	13.1.0	13.2.0	R4	TEI12
36.101	3357	-	Rel-13	B	RP-152156	R4-157768	approved	Introduction of additional band combinations for 2DL inter-band CA	13.1.0	13.2.0	R4	LTE_CA_B1_B40-Core, LTE_CA_B3_B41-Core, LTE_CA_B5_B38-Core, LTE_CA_B20_B40-Core
36.101	3358	1	Rel-13	B	RP-152176	R4-158446	revised	Introduction of additional band combinations for 3DL inter-band CA	13.1.0		R4	LTE_CA_B1_B3_B7-Core,LTE_CA_B1_B3_B40-Core,LTE_CA_B1_B8_B40-Core,LTE_CA_B1_B11_B18-Core,LTE_CA_B3_B7_B38-Core,LTE_CA_B3_B8_B40-Core,LTE_CA_B3_B41_B41-Core,LTE_CA_B3_B41_B42-Core,LTE_CA_B4_B4_B7_BWset-Core,LTE_CA_B4_B7_B12_BWset-Core,LTE_CA_B5_B40_B40-Core

Samsung Exhibit 1025, Page 1075 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	3358	2	Rel-13	B	RP-151972	-	approved	Revision of the RAN4 approved R4-158446 (big CR 3DL 36.101)	13.1.0	13.2.0	R4	LTE_CA_B1_B8_B40-Core,LTE_CA_B3_B8_B40-Core,LTE_CA_B28_B40_B40-Core,LTE_CA_B1_B3_B7-Core,LTE_CA_B4_B4_B7_BWset-Core,LTE_CA_B4_B7_B12_BWset-Core,LTE_CA_B7_B20_B38-Core,LTE_CA_B7_B42_B42-Core,LTE_CA_B3_B7_B38-Core,LTE_CA_B28_B41_B41-Core,LTE_CA_B28_B42
36.101	3359	1	Rel-13	B	RP-152147	R4-158099	approved	Introduction of the Medium Correlation A model	13.1.0	13.2.0	R4	LTE_4Rx_AP_DL-Perf
36.101	3360	1	Rel-13	B	RP-152147	R4-158100	approved	Requirements for ePDCCH with 4Rx	13.1.0	13.2.0	R4	LTE_4Rx_AP_DL-Perf
36.101	3361	1	Rel-13	B	RP-152147	R4-158101	approved	Requirements for PDCCH with 4Rx	13.1.0	13.2.0	R4	LTE_4Rx_AP_DL-Perf
36.101	3362	1	Rel-13	B	RP-152147	R4-158102	approved	Requirements for PDSCH with 4Rx	13.1.0	13.2.0	R4	LTE_4Rx_AP_DL-Perf
36.101	3363	1	Rel-13	B	RP-152147	R4-158103	approved	Requirements for PHICH with 4Rx	13.1.0	13.2.0	R4	LTE_4Rx_AP_DL-Perf
36.101	3367	1	Rel-13	B	RP-152159	R4-158261	approved	Introduction of intra-band non-contiguous CA in Band 41 for 4DL	13.1.0	13.2.0	R4	LTE_CA_NC_B41_4DL-Core
36.101	3368	-	Rel-13	B	RP-152165	R4-157873	approved	Addition of 2 UL and 3 DL mixed intra/inter band carrier aggregation combinations without MSD.	13.1.0	13.2.0	R4	LTE_CA_3DL_2UL_inter_intra-Core
36.101	3372	1	Rel-13	F	RP-152133	R4-158223	approved	Revision to CR 3256	13.1.0	13.2.0	R4	LTE_CA_NC_B41_3DL
36.101	3374	1	Rel-12	F	RP-152133	R4-158233	approved	Correction to Pcmax for CA to include delta_T_ProSe	12.9.0	12.10.0	R4	LTE_D2D_Prox-Core
36.101	3375	-	Rel-13	A	RP-152133	R4-158055	approved	Correction to Pcmax for CA to include delta_T_ProSe	13.1.0	13.2.0	R4	LTE_D2D_Prox-Core
36.101	3376	-	Rel-13	F	RP-152162	R4-158083	approved	Delta TIB,c and Delta RIB,c for 1UL/4DL	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B19_B42-Core, LTE_CA_B1_B19_B21_B42-Core, LTE_CA_B2_B4_B5_B29-Core, LTE_CA_B2_B4_B5_B30-Core, LTE_CA_B2_B4_B12_B30-Core, LTE_CA_B2_B4_B29_B30-Core
36.101	3377	-	Rel-12	F	RP-152136	R4-158304	approved	NS_05 modification for PHS protection in Japan	12.9.0	12.10.0	R4	TEI12
36.101	3378	-	Rel-13	A	RP-152136	R4-158368	approved	NS_05 modification for PHS protection in Japan	13.1.0	13.2.0	R4	TEI12
36.104	0686	-	Rel-13	B	RP-152168	R4-155981	approved	Introduction of intra-band CA_8B to TS 36.104	13.1.0	13.2.0	R4	LTE_CA_C_B8-Core
36.104	0700	-	Rel-13	B	RP-152171	R4-156416	approved	Introduction of E-UTRA band 65 to TS36.104	13.1.0	13.2.0	R4	LTE_1980_2170_REG1-Core
36.104	0701	1	Rel-11	F	RP-152132	R4-156723	approved	Clarification on the transmitter intermodulation requirement in TS36.104	11.13.0	11.14.0	R4	TEI11
36.104	0702	-	Rel-12	A	RP-152132	R4-156547	approved	Clarification on the transmitter intermodulation requirement in TS36.104	12.9.0	12.10.0	R4	TEI11
36.104	0703	-	Rel-13	A	RP-152132	R4-156548	approved	Clarification on the transmitter intermodulation requirement in TS36.104	13.1.0	13.2.0	R4	TEI11
36.104	0705	1	Rel-13	B	RP-152157	R4-156890	approved	Introduction of Band 67 and CA_20-67 to 36.104	13.1.0	13.2.0	R4	LTE_CA_700EU_B20-Core

Samsung Exhibit 1025, Page 1076 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.104	0708	-	Rel-13	B	RP-152167	R4-156968	approved	Introduction of CA_5B to TS 36.104	13.1.0	13.2.0	R4	LTE_CA_C_B5-Core
36.104	0709	-	Rel-13	B	RP-152169	R4-156972	approved	Introduction of intra-band NC CA_5A-5A to TS 36.104	13.1.0	13.2.0	R4	LTE_CA_NC_B5-Core
36.104	0711	-	Rel-13	B	RP-152173	R4-157592	approved	Introduction of 1447-1467MHz Band into 36.104	13.1.0	13.2.0	R4	LTE_TDD_1447MHz_China-Core
36.104	0712	1	Rel-11	F	RP-152132	R4-158229	approved	Correction on UEM requirement for MB-MSR	11.13.0	11.14.0	R4	MB_MSR_RF
36.104	0713	-	Rel-12	A	RP-152132	R4-157622	approved	Correction on UEM requirement for MB-MSR	12.9.0	12.10.0	R4	MB_MSR_RF
36.104	0714	-	Rel-13	A	RP-152132	R4-157623	approved	Correction on UEM requirement for MB-MSR	13.1.0	13.2.0	R4	MB_MSR_RF
36.104	0715	2	Rel-13	B	RP-152148	R4-158444	approved	Introduction of LAA in TS 36.104	13.1.0	13.2.0	R4	LTE_LAA-Core
36.104	0716	1	Rel-11	F	RP-152132	R4-158315	approved	BS Spec improvements: TS 36.104 Corrections	11.13.0	11.14.0	R4	TEI11
36.104	0717	-	Rel-12	A	RP-152132	R4-157747	approved	BS Spec improvements: TS 36.104 Corrections	12.9.0	12.10.0	R4	TEI11
36.104	0718	-	Rel-13	A	RP-152132	R4-157748	approved	BS Spec improvements: TS 36.104 Corrections	13.1.0	13.2.0	R4	TEI11
36.104	0719	-	Rel-11	F	RP-152132	R4-157845	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	11.13.0	11.14.0	R4	LTE_CA_enh-Core
36.104	0720	-	Rel-12	A	RP-152132	R4-157846	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	12.9.0	12.10.0	R4	LTE_CA_enh-Core
36.104	0721	-	Rel-13	A	RP-152132	R4-157847	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	13.1.0	13.2.0	R4	LTE_CA_enh-Core
36.104	0729	-	Rel-13	B	RP-152172	R4-158002	approved	Introduction of Band 66 to 36.104	13.1.0	13.2.0	R4	LTE_AWS_EXT-Core
36.104	0731	-	Rel-13	B	RP-152156	R4-158004	approved	Introduction of 2DL CA combinations	13.1.0	13.2.0	R4	LTE_CA_B3_B41-Core, LTE_CA_B20_B40-Core, LTE_CA_B5_B38-Core
36.104	0732	-	Rel-13	B	RP-152161	R4-158006	approved	Introduction of 3DL CA combinations	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B7-Core,LTE_CA_B1_B11_B18-Core,LTE_CA_B28_B40_B40-Core,LTE_CA_B7_B42_B42-Core,LTE_CA_B28_B41_B41-Core,LTE_CA_B28_B42_B42-Core,LTE_CA_B3_B41_B42-Core,LTE_CA_B1_B3_B40-Core,LTE_CA_B1_B8_B40-Core,LTE_CA_B3_B7_B38-Core,LTE_CA_B7_B20_B38-Core
36.104	0733	-	Rel-13	B	RP-152162	R4-158008	approved	Introduction of 4DL CA combinations	13.1.0	13.2.0	R4	LTE_CA_B2_B2_B4_B5-Core, LTE_CA_B2_B2_B5_B12-Core, LTE_CA_B2_B4_B5_B12-Core, LTE_CA_B4_B4_B5_B12-Core, LTE_CA_B2_B4_B4_B5-Core, LTE_CA_B1_B3_B7_B8-Core, LTE_CA_B3_B28_B40_B40-Core, LTE_CA_B1_B3_B8_B40-Core, LTE_CA_B1_B3_B5_B40-Core

Samsung Exhibit 1025, Page 1077 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.113	0051	-	Rel-13	B	RP-152172	R4-156091	approved	Introduction of Band 66	12.3.0	13.0.0	R4	LTE_AWS_EXT-Core
36.113	0052	-	Rel-13	B	RP-152157	R4-156099	approved	Introduction of Band 67	12.3.0	13.0.0	R4	LTE_CA_700EU_B20-Core
36.113	0053	-	Rel-13	B	RP-152171	R4-156417	approved	Introduction of Band 65 to TS 36.113	12.3.0	13.0.0	R4	LTE_1980_2170_REG1-Core
36.113	0054	-	Rel-13	B	RP-152173	R4-157593	approved	Introduction of 1447-1467MHz Band into 36.113	12.3.0	13.0.0	R4	LTE_TDD_1447MHz_China-Core
36.116	0018	-	Rel-11	F	RP-152132	R4-155944	approved	Removal of square brackets in TS36.116	11.6.0	11.7.0	R4	LTE_Relay2-Core
36.116	0019	-	Rel-12	A	RP-152132	R4-155945	approved	Removal of square brackets in TS36.116	12.3.0	12.4.0	R4	LTE_Relay2-Core
36.117	0016	-	Rel-11	F	RP-152132	R4-157869	approved	Some corrections for TS36.117	11.3.0	11.4.0	R4	LTE_Relay2-Perf
36.117	0017	-	Rel-12	A	RP-152132	R4-157870	approved	Some corrections for TS36.117	12.2.0	12.3.0	R4	LTE_Relay2-Perf
36.124	0028	-	Rel-13	B	RP-152172	R4-156092	approved	Introduction of Band 66	12.1.0	13.0.0	R4	LTE_AWS_EXT-Core
36.124	0029	-	Rel-13	B	RP-152157	R4-156100	approved	Introduction of Band 67	12.1.0	13.0.0	R4	LTE_CA_700EU_B20-Core
36.124	0030	-	Rel-13	B	RP-152171	R4-157352	approved	Introduction of Band 65 in TS 36.124	12.1.0	13.0.0	R4	LTE_1980_2170_REG1-Perf
36.124	0031	-	Rel-13	B	RP-152173	R4-157594	approved	Introduction of 1447-1467MHz Band into 36.124	12.1.0	13.0.0	R4	LTE_TDD_1447MHz_China-Core
36.133	3082	-	Rel-12	F	RP-152135	R4-155545	approved	CR on editorial cleanup for D2D RRM requirements	12.9.0	12.10.0	R4	LTE_D2D_Prox-Perf
36.133	3083	-	Rel-10	F	RP-152131	R4-155565	approved	Correction of RSRQ value in RRM Serving Cell Test cases A.9.9.1, A.9.9.2	10.20.0	10.21.0	R4	LTE-RF
36.133	3084	-	Rel-11	A	RP-152131	R4-155566	approved	Correction of RSRQ value in RRM Serving Cell Test cases A.9.9.1, A.9.9.2	11.14.0	11.15.0	R4	LTE-RF
36.133	3085	-	Rel-12	A	RP-152131	R4-155567	approved	Correction of RSRQ value in RRM Serving Cell Test cases A.9.9.1, A.9.9.2	12.9.0	12.10.0	R4	LTE-RF
36.133	3086	-	Rel-13	A	RP-152131	R4-155568	approved	Correction of RSRQ value in RRM Serving Cell Test cases A.9.9.1, A.9.9.2	13.1.0	13.2.0	R4	LTE-RF
36.133	3087	-	Rel-12	F	RP-152136	R4-155776	approved	Remove brackets in RSTD measurement accuracy R12	12.9.0	12.10.0	R4	TEI12
36.133	3088	-	Rel-13	A	RP-152136	R4-155777	approved	Remove brackets in RSTD measurement accuracy R13	13.1.0	13.2.0	R4	TEI12
36.133	3089	-	Rel-12	F	RP-152133	R4-155779	approved	Remove bracket for CSI-RSRP measurement R12	12.9.0	12.10.0	R4	LTE_SC_enh_L1-Perf
36.133	3090	-	Rel-13	A	RP-152133	R4-155780	approved	Remove bracket for CSI-RSRP measurement R13	13.1.0	13.2.0	R4	LTE_SC_enh_L1-Perf
36.133	3093	1	Rel-12	F	RP-152133	R4-156675	approved	Correction to E-UTRAN TDD-FDD CA Event Triggered Reporting Under Deactivated SCell in Non-DRX with PCell in FDD R12	12.9.0	12.10.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3094	-	Rel-13	A	RP-152133	R4-155802	approved	Correction to E-UTRAN TDD-FDD CA Event Triggered Reporting Under Deactivated SCell in Non-DRX with PCell in FDD R13	13.1.0	13.2.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3095	1	Rel-12	F	RP-152133	R4-156676	approved	Correction to E-UTRAN TDD-FDD CA Event Triggered Reporting Under Deactivated SCell in Non-DRX with PCell in TDD R12	12.9.0	12.10.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3096	-	Rel-13	A	RP-152133	R4-155804	approved	Correction to E-UTRAN TDD-FDD CA Event Triggered Reporting Under Deactivated SCell in Non-DRX with PCell in TDD R13	13.1.0	13.2.0	R4	LTE_CA_TDD_FDD-Perf

Samsung Exhibit 1025, Page 1078 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	3097	1	Rel-12	F	RP-152133	R4-156677	approved	Correction to E-UTRAN TDD-FDD CA Event triggered reporting on deactivated SCell with PCell interruption in non-DRX with PCell in FDD R12	12.9.0	12.10.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3098	-	Rel-13	A	RP-152133	R4-155806	approved	Correction to E-UTRAN TDD-FDD CA Event triggered reporting on deactivated SCell with PCell interruption in non-DRX with PCell in FDD R13	13.1.0	13.2.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3099	1	Rel-12	F	RP-152133	R4-156678	approved	Correction to E-UTRAN TDD-FDD CA Event triggered reporting on deactivated SCell with PCell interruption in non-DRX with PCell in TDD R12	12.9.0	12.10.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3100	-	Rel-13	A	RP-152133	R4-155808	approved	Correction to E-UTRAN TDD-FDD CA Event triggered reporting on deactivated SCell with PCell interruption in non-DRX with PCell in TDD R13	13.1.0	13.2.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3101	1	Rel-12	F	RP-152133	R4-156679	approved	Correction to RSRP for E-UTRAN TDD-FDD Carrier Aggregation with PCell in FDD R12	12.9.0	12.10.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3102	-	Rel-13	A	RP-152133	R4-155810	approved	Correction to RSRP for E-UTRAN TDD-FDD Carrier Aggregation with PCell in FDD R13	13.1.0	13.2.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3103	1	Rel-12	F	RP-152133	R4-156680	approved	Correction to RSRP for E-UTRAN TDD-FDD Carrier Aggregation with PCell in TDD R12	12.9.0	12.10.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3104	-	Rel-13	A	RP-152133	R4-155812	approved	Correction to RSRP for E-UTRAN TDD-FDD Carrier Aggregation with PCell in TDD R13	13.1.0	13.2.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3105	1	Rel-12	F	RP-152133	R4-156681	approved	Correction to RSRQ for E-UTRAN TDD-FDD Carrier Aggregation with PCell in FDD R12	12.9.0	12.10.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3106	-	Rel-13	A	RP-152133	R4-155814	approved	Correction to RSRQ for E-UTRAN TDD-FDD Carrier Aggregation with PCell in FDD R13	13.1.0	13.2.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3107	1	Rel-12	F	RP-152133	R4-156682	approved	Correction to RSRQ for E-UTRAN TDD-FDD Carrier Aggregation with PCell in TDD R12	12.9.0	12.10.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3108	-	Rel-13	A	RP-152133	R4-155816	approved	Correction to RSRQ for E-UTRAN TDD-FDD Carrier Aggregation with PCell in TDD R13	13.1.0	13.2.0	R4	LTE_CA_TDD_FDD-Perf
36.133	3113	-	Rel-12	F	RP-152136	R4-155845	approved	Alignment of UE reporting criteria requirements	12.9.0	12.10.0	R4	TEI12
36.133	3114	-	Rel-13	A	RP-152136	R4-155846	approved	Alignment of UE reporting criteria requirements	13.1.0	13.2.0	R4	TEI12
36.133	3115	-	Rel-12	F	RP-152131	R4-155925	approved	Removal of square brackets for some CA requirements	12.9.0	12.10.0	R4	LTE_CA
36.133	3116	-	Rel-13	F	RP-152131	R4-155926	approved	Removal of square brackets for some CA requirements	13.1.0	13.2.0	R4	LTE_CA
36.133	3117	-	Rel-12	F	RP-152133	R4-155960	approved	Cleanup of 3DL CA RRM Test cases	12.9.0	12.10.0	R4	LTE_CA_B1_B3_B5-Perf
36.133	3118	-	Rel-13	A	RP-152133	R4-155961	approved	Cleanup of 3DL CA RRM Test cases	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B5-Perf
36.133	3119	1	Rel-11	A	RP-152131	R4-156878	approved	Correction of definition of antenna connection in some RSTD tests	11.14.0	11.15.0	R4	TEI10
36.133	3120	-	Rel-12	A	RP-152131	R4-156030	approved	Correction of definition of antenna connection in some RSTD tests	12.9.0	12.10.0	R4	TEI10
36.133	3121	-	Rel-13	F	RP-152134	R4-156031	approved	Correction of definition of antenna connection in some RSTD tests	13.1.0	13.2.0	R4	TEI13
36.133	3128	1	Rel-12	F	RP-152133	R4-156697	approved	Different TDD configurations for OTDOA in CA in release 12	12.9.0	12.10.0	R4	LTE_CA-Core, LTE_CA_B39_B41-Core

Samsung Exhibit 1025, Page 1079 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	3129	-	Rel-13	A	RP-152133	R4-156041	approved	Different TDD configurations for OTDOA in CA in release 12	13.1.0	13.2.0	R4	LTE_CA-Core, LTE_CA_B39_B41-Core
36.133	3131	-	Rel-13	B	RP-152157	R4-156101	approved	Introduction of Band 67	13.1.0	13.2.0	R4	LTE_CA_700EU_B20-Core
36.133	3134	-	Rel-12	F	RP-152133	R4-156156	approved	Correction of definition of pTAG and psTAG	12.9.0	12.10.0	R4	LTE_SC_enh_dualC-Perf
36.133	3136	-	Rel-13	A	RP-152133	R4-156158	approved	Correction of definition of pTAG and psTAG	13.1.0	13.2.0	R4	LTE_SC_enh_dualC-Perf
36.133	3145	-	Rel-13	A	RP-152133	R4-156208	approved	Title of new section A.7.4 in TS36.133 for Rel-13	13.1.0	13.2.0	R4	LTE_SC_enh_dualC-Perf
36.133	3146	-	Rel-13	A	RP-152133	R4-156209	approved	SNR levels and Reference channels for DC RLM test cases for Rel-13	13.1.0	13.2.0	R4	LTE_SC_enh_dualC-Perf, TEI12
36.133	3147	-	Rel-10	F	RP-152131	R4-156210	approved	Correction on measurement category for reporting criteria	10.20.0	10.21.0	R4	LTE-RF, TEI10
36.133	3148	-	Rel-11	A	RP-152131	R4-156211	approved	Correction on measurement category for reporting criteria	11.14.0	11.15.0	R4	LTE-RF, TEI10
36.133	3149	-	Rel-12	A	RP-152131	R4-156212	approved	Correction on measurement category for reporting criteria	12.9.0	12.10.0	R4	LTE-RF, TEI10
36.133	3150	-	Rel-13	A	RP-152131	R4-156213	approved	Correction on measurement category for reporting criteria	13.1.0	13.2.0	R4	LTE-RF, TEI10
36.133	3156	-	Rel-10	F	RP-152133	R4-156220	approved	Alignment of dB values for 2DL CA activation and deactivation Test cases	10.20.0	10.21.0	R4	LTE_CA_B1_B3-Perf
36.133	3161	-	Rel-11	A	RP-152133	R4-156225	approved	Alignment of dB values for 2DL CA activation and deactivation Test cases	11.14.0	11.15.0	R4	LTE_CA_B1_B3-Perf
36.133	3164	-	Rel-12	A	RP-152133	R4-156228	approved	Alignment of dB values for 2DL CA activation and deactivation Test cases	12.9.0	12.10.0	R4	LTE_CA_B1_B3-Perf
36.133	3167	-	Rel-13	A	RP-152133	R4-156231	approved	Alignment of dB values for 2DL CA activation and deactivation Test cases	13.1.0	13.2.0	R4	LTE_CA_B1_B3-Perf
36.133	3173	-	Rel-13	F	RP-152135	R4-156607	approved	CR on editorial cleanup for D2D RRM requirements	13.1.0	13.2.0	R4	LTE_D2D_Prox-Perf
36.133	3174	-	Rel-10	F	RP-152131	R4-156879	approved	Correction of definition of antenna connection in some RSTD tests	10.20.0	10.21.0	R4	TEI10
36.133	3176	-	Rel-10	D	RP-152131	R4-156934	approved	Missing implementation from CR 2642 to Table A.8.12.2.1-1	10.20.0	10.21.0	R4	TEI10
36.133	3177	-	Rel-12	F	RP-152136	R4-156935	approved	Correction to Trstd values in 3DL RSTD Measurement Accuracy test cases	12.9.0	12.10.0	R4	TEI12
36.133	3178	-	Rel-13	A	RP-152136	R4-156936	approved	Correction to Trstd values in 3DL RSTD Measurement Accuracy test cases	13.1.0	13.2.0	R4	TEI12
36.133	3179	1	Rel-10	F	RP-152133	R4-158393	approved	Update of 2DL CA activation and deactivation of unknown SCell Test cases A.8.16.19+A.8.16.20	10.20.0	10.21.0	R4	LTE_CA_B1_B3-Perf
36.133	3180	-	Rel-11	A	RP-152133	R4-156940	approved	Update of 2DL CA activation and deactivation of unknown SCell Test cases A.8.16.19+A.8.16.20	11.14.1	11.15.0	R4	LTE_CA_B1_B3-Perf
36.133	3181	-	Rel-12	A	RP-152133	R4-156941	approved	Update of 2DL CA activation and deactivation of unknown SCell Test cases A.8.16.19+A.8.16.20	12.9.0	12.10.0	R4	LTE_CA_B1_B3-Perf
36.133	3183	-	Rel-13	A	RP-152133	R4-156943	approved	Update of 2DL CA activation and deactivation of unknown SCell Test cases A.8.16.19+A.8.16.20	13.1.0	13.2.0	R4	LTE_CA_B1_B3-Perf
36.133	3184	1	Rel-12	F	RP-152133	R4-158399	approved	Update of 3DL CA activation and deactivation of unknown SCell Test cases A.8.16.41+A.8.16.42	12.9.0	12.10.0	R4	LTE_CA_B1_B3_B5-Perf
36.133	3185	-	Rel-13	A	RP-152133	R4-156945	approved	Update of 3DL CA activation and deactivation of unknown SCell Test cases A.8.16.41+A.8.16.42	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B5-Perf

Samsung Exhibit 1025, Page 1080 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	3186	1	Rel-12	F	RP-152133	R4-158400	approved	Update to RRM test case for E-UTRAN TDD-FDD 3DL CA activation and deactivation of unknown SCell in non-DRX with PCell in FDD	12.9.0	12.10.0	R4	LTE_CA_B1_B41_B41-Perf,LTE_CA_B3_B42_B42-Perf,LTE_CA_B8_B41_B41-Perf,LTE_CA_B1_B8_B40-Perf,LTE_CA_B1_B3_B40-Perf,LTE_CA_B3_B40_B40-Perf,LTE_CA_B7_B40_B40-Perf,LTE_CA_B8_B42_B42-Perf,LTE_CA_B1_B42_B42-Perf,LTE_CA_B21_B42_B42-Perf,LTE_CA_B28_B40_B40-Perf,LT
36.133	3187	-	Rel-13	A	RP-152133	R4-157031	approved	Update to RRM test case for E-UTRAN TDD-FDD 3DL CA activation and deactivation of unknown SCell in non-DRX with PCell in FDD	13.1.0	13.2.0	R4	LTE_CA_B1_B41_B41-Perf,LTE_CA_B3_B42_B42-Perf,LTE_CA_B8_B41_B41-Perf,LTE_CA_B1_B8_B40-Perf,LTE_CA_B1_B3_B40-Perf,LTE_CA_B3_B40_B40-Perf,LTE_CA_B7_B40_B40-Perf,LTE_CA_B8_B42_B42-Perf,LTE_CA_B1_B42_B42-Perf,LTE_CA_B21_B42_B42-Perf,LTE_CA_B28_B40_B40-Perf,LT
36.133	3188	1	Rel-12	F	RP-152133	R4-158401	approved	Update to RRM test case for E-UTRAN TDD-FDD 3DL CA activation and deactivation of unknown SCell in non-DRX with PCell in TDD	12.9.0	12.10.0	R4	LTE_CA_B1_B41_B41-Perf,LTE_CA_B3_B42_B42-Perf,LTE_CA_B8_B41_B41-Perf,LTE_CA_B1_B8_B40-Perf,LTE_CA_B1_B3_B40-Perf,LTE_CA_B3_B40_B40-Perf,LTE_CA_B7_B40_B40-Perf,LTE_CA_B8_B42_B42-Perf,LTE_CA_B1_B42_B42-Perf,LTE_CA_B21_B42_B42-Perf,LTE_CA_B28_B40_B40-Perf,LT

Samsung Exhibit 1025, Page 1081 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	3189	-	Rel-13	A	RP-152133	R4-157033	approved	Update to RRM test case for E-UTRAN TDD-FDD 3DL CA activation and deactivation of unknown SCell in non-DRX with PCell in TDD	13.1.0	13.2.0	R4	LTE_CA_B1_B41_B41-Perf,LTE_CA_B3_B42_B42-Perf,LTE_CA_B8_B41_B41-Perf,LTE_CA_B1_B8_B40-Perf,LTE_CA_B1_B3_B40-Perf,LTE_CA_B3_B40_B40-Perf,LTE_CA_B7_B40_B40-Perf,LTE_CA_B8_B42_B42-Perf,LTE_CA_B1_B42_B42-Perf,LTE_CA_B21_B42_B42-Perf,LTE_CA_B28_B40_B40-Perf,LT
36.133	3190	-	Rel-12	F	RP-152136	R4-157057	approved	Correction to Cells in OTDOA assistance data in 3DL RSTD Measurement Reporting Delay test cases	12.9.0	12.10.0	R4	TEI12
36.133	3191	-	Rel-13	A	RP-152136	R4-157058	approved	Correction to Cells in OTDOA assistance data in 3DL RSTD Measurement Reporting Delay test cases	13.1.0	13.2.0	R4	TEI12
36.133	3192	2	Rel-13	B	RP-152153	R4-158402	approved	CR on RS-SINR accuracy in 36.133	13.1.0	13.2.0	R4	LTE_MC_load-Core
36.133	3194	1	Rel-12	F	RP-152136	R4-158382	approved	Correction on RSRQ measurement report mapping R12	12.9.0	12.10.0	R4	TEI12
36.133	3195	1	Rel-13	A	RP-152136	R4-158386	approved	Correction on RSRQ measurement report mapping R13	13.1.0	13.2.0	R4	TEI12
36.133	3196	-	Rel-13	B	RP-152173	R4-157099	approved	Introduction of Band 45 into TS36.133	13.1.0	13.2.0	R4	LTE_TDD_1447MHz_China-Core
36.133	3209	-	Rel-10	F	RP-152131	R4-157195	approved	Further Correction of Cell Time offset in RSTD CA test cases (Rel-10)	10.20.0	10.21.0	R4	LTE_CA
36.133	3210	-	Rel-12	F	RP-152131	R4-157196	approved	Further Correction of Cell Time offset in RSTD CA test cases (Rel-12)	12.9.0	12.10.0	R4	LTE_CA
36.133	3211	-	Rel-13	A	RP-152131	R4-157197	approved	Further Correction of Cell Time offset in RSTD CA test cases (Rel-13)	13.1.0	13.2.0	R4	LTE_CA
36.133	3212	-	Rel-11	F	RP-152131	R4-157205	approved	Further Correction of Cell Time offset in RSTD CA test cases (Rel-11)	11.14.1	11.15.0	R4	LTE_CA
36.133	3213	1	Rel-13	B	RP-152155	R4-158373	approved	CR for clearification of band combination in 36133	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B19_B42_B42, LTE_CA_B1_B19_B21_B42_B42,LTE_CA_B1_B3_B7_B7_B28, LTE_CA_B3_B3_B7_B7_B28,LTE_CA_3DL3UL_B39_B41_B41,LTE_CA_3DL3UL_B39_B39_B41, LTE_CA_C_B42_4DL,LTE_CA_NC_B41_4DL,LTE_CA_B2_B2_B5_B30-Core,LTE_CA_B2_B2_B12_B30-Core,LTE_CA_B2_B2_B29_B30
36.133	3214	1	Rel-13	B	RP-152166	R4-158374	approved	CR for RRM requirement up to 3UL CA in 36133	13.1.0	13.2.0	R4	LTE_CA_3DL3UL_B39_B41_B41, LTE_CA_3DL3UL_B39_B39_B41

Samsung Exhibit 1025, Page 1082 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	3216	1	Rel-13	B	RP-152152	R4-158153	approved	CR on measurement performance requirements for UE reporting SSTD between MeNB and SeNB for dual connectivity enhancements	13.1.0	13.2.0	R4	LTE_dualC_enh-Core
36.133	3222	-	Rel-12	F	RP-152133	R4-157438	approved	Adding the title of A.8.22 in TS 36.133 R12	12.9.0	12.10.0	R4	LTE_SC_enh_L1-Perf
36.133	3223	-	Rel-13	A	RP-152133	R4-157439	approved	Adding the title of A.8.22 in TS 36.133 R13	13.1.0	13.2.0	R4	LTE_SC_enh_L1-Perf
36.133	3226	1	Rel-12	F	RP-152133	R4-158392	approved	Correction on A.8.16.17 E-UTRAN FDD activation and deactivation of known SCell in non-DRX	12.9.0	12.10.0	R4	LTE_CA_B1_B3-Perf
36.133	3227	-	Rel-13	A	RP-152133	R4-157470	approved	Correction on A.8.16.17 E-UTRAN FDD activation and deactivation of known SCell in non-DRX	13.1.0	13.2.0	R4	LTE_CA_B1_B3-Perf
36.133	3228	1	Rel-12	F	RP-152133	R4-158394	approved	Correction on A.8.16.18 E-UTRAN TDD activation and deactivation of known SCell in non-DRX	12.9.0	12.10.0	R4	LTE_CA_B1_B3-Perf
36.133	3229	-	Rel-13	A	RP-152133	R4-157473	approved	Correction on A.8.16.18 E-UTRAN TDD activation and deactivation of known SCell in non-DRX	13.1.0	13.2.0	R4	LTE_CA_B1_B3-Perf
36.133	3230	1	Rel-12	F	RP-152133	R4-158395	approved	Correction on A.8.16.35 3 DL PCell in FDD CA Activation and Deactivation of Known SCell in Non-DRX	12.9.0	12.10.0	R4	LTE_CA_B1_B41_B41-Perf,LTE_CA_B3_B42_B42-Perf,LTE_CA_B8_B41_B41-Perf,LTE_CA_B1_B8_B40-Perf,LTE_CA_B1_B3_B40-Perf,LTE_CA_B3_B40_B40-Perf,LTE_CA_B7_B40_B40-Perf,LTE_CA_B8_B42_B42-Perf,LTE_CA_B1_B42_B42-Perf,LTE_CA_B21_B42_B42-Perf,LTE_CA_B28_B40_B40-Perf,LT
36.133	3231	-	Rel-13	A	RP-152133	R4-157476	approved	Correction on A.8.16.35 3 DL PCell in FDD CA Activation and Deactivation of Known SCell in Non-DRX	13.1.0	13.2.0	R4	LTE_CA_B1_B41_B41-Perf,LTE_CA_B3_B42_B42-Perf,LTE_CA_B8_B41_B41-Perf,LTE_CA_B1_B8_B40-Perf,LTE_CA_B1_B3_B40-Perf,LTE_CA_B3_B40_B40-Perf,LTE_CA_B7_B40_B40-Perf,LTE_CA_B8_B42_B42-Perf,LTE_CA_B1_B42_B42-Perf,LTE_CA_B21_B42_B42-Perf,LTE_CA_B28_B40_B40-Perf,LT

Samsung Exhibit 1025, Page 1083 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	3232	1	Rel-12	F	RP-152133	R4-158396	approved	Correction on A.8.16.36 3 DL PCell in TDD CA Activation and Deactivation of Known SCell in Non-DRX	12.9.0	12.10.0	R4	LTE_CA_B1_B41_B41-Perf,LTE_CA_B3_B42_B42-Perf,LTE_CA_B8_B41_B41-Perf,LTE_CA_B1_B8_B40-Perf,LTE_CA_B1_B3_B40-Perf,LTE_CA_B3_B40_B40-Perf,LTE_CA_B7_B40_B40-Perf,LTE_CA_B8_B42_B42-Perf,LTE_CA_B1_B42_B42-Perf,LTE_CA_B21_B42_B42-Perf,LTE_CA_B28_B40_B40-Perf,LT
36.133	3233	-	Rel-13	A	RP-152133	R4-157479	approved	Correction on A.8.16.36 3 DL PCell in TDD CA Activation and Deactivation of Known SCell in Non-DRX	13.1.0	13.2.0	R4	LTE_CA_B1_B41_B41-Perf,LTE_CA_B3_B42_B42-Perf,LTE_CA_B8_B41_B41-Perf,LTE_CA_B1_B8_B40-Perf,LTE_CA_B1_B3_B40-Perf,LTE_CA_B3_B40_B40-Perf,LTE_CA_B7_B40_B40-Perf,LTE_CA_B8_B42_B42-Perf,LTE_CA_B1_B42_B42-Perf,LTE_CA_B21_B42_B42-Perf,LTE_CA_B28_B40_B40-Perf,LT
36.133	3234	1	Rel-12	F	RP-152133	R4-158397	approved	Correction on A.8.16.37 3DL FDD CA activation and deactivation of known SCell in non-DRX	12.9.0	12.10.0	R4	LTE_CA_B1_B3_B5-Perf,LTE_CA_B1_B3_B8-Perf,LTE_CA_B1_B3_B19-Perf,LTE_CA_B1_B3_B20-Perf,LTE_CA_B1_B3_B26-Perf,LTE_CA_B1_B5_B7-Perf,LTE_CA_B1_B7_B20-Perf,LTE_CA_B1_B18_B28-Perf,LTE_CA_B1_B19_B21-Perf,LTE_CA_B2_B2_B5-Perf,LTE_CA_B2_B2_B13-Perf,LTE_CA_B2_B4_B4

Samsung Exhibit 1025, Page 1084 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	3235	-	Rel-13	A	RP-152133	R4-157482	approved	Correction on A.8.16.37 3DL FDD CA activation and deactivation of known SCell in non-DRX	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B5-Perf,LTE_CA_B1_B3_B8-Perf,LTE_CA_B1_B3_B19-Perf,LTE_CA_B1_B3_B20-Perf,LTE_CA_B1_B3_B26-Perf,LTE_CA_B1_B5_B7-Perf,LTE_CA_B1_B7_B20-Perf,LTE_CA_B1_B18_B28-Perf,LTE_CA_B1_B19_B21-Perf,LTE_CA_B2_B2_B5-Perf,LTE_CA_B2_B2_B13-Perf,LTE_CA_B2_B4_B4
36.133	3236	1	Rel-12	F	RP-152133	R4-158398	approved	Correction on A.8.16.38 3DL TDD CA activation and deactivation of known SCell in non-DRX	12.9.0	12.10.0	R4	LTE_CA_B39_B41_B41-Perf, LTE_CA_B39_B39_B41-Perf, LTE_CA_B28_B40_B40_B40-Perf, LTE_CA_B39_B41_B41_B41-Perf
36.133	3237	-	Rel-13	A	RP-152133	R4-157485	approved	Correction on A.8.16.38 3DL TDD CA activation and deactivation of known SCell in non-DRX	13.1.0	13.2.0	R4	LTE_CA_B39_B41_B41-Perf, LTE_CA_B39_B39_B41-Perf, LTE_CA_B28_B40_B40_B40-Perf, LTE_CA_B39_B41_B41_B41-Perf
36.133	3238	1	Rel-13	B	RP-152152	R4-158152	approved	CR on RRM requirements for SSTD reporting for Dual Connectivity	13.1.0	13.2.0	R4	LTE_dualC_enh-Core
36.133	3239	1	Rel-13	B	RP-152152	R4-158155	approved	CR on maximum uplink timing difference for Dual Connectivity	13.1.0	13.2.0	R4	LTE_dualC_enh-Core
36.133	3240	1	Rel-13	B	RP-152152	R4-158156	approved	CR on RRM requirements for 3 DL CC Dual connectivity	13.1.0	13.2.0	R4	LTE_dualC_enh-Core
36.133	3241	1	Rel-13	B	RP-152152	R4-158157	approved	CR on requirements of interruption for 3 DL CC Dual connectivity	13.1.0	13.2.0	R4	LTE_dualC_enh-Core
36.133	3243	1	Rel-13	B	RP-152163	R4-158375	approved	CR on RRM requirements for 5DL CC CA	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B19_B42_B42, LTE_CA_B1_B19_B21_B42_B42, LTE_CA_B1_B3_B7_B7_B28, LTE_CA_B3_B3_B7_B7_B28
36.133	3249	-	Rel-12	F	RP-152133	R4-157735	approved	CR on editorial and some minor changes for clarification for Rel-12 category 0 MTC requirements	12.9.0	12.10.0	R4	LC_MTC_LTE-Core, LTE_CA-Core
36.133	3250	-	Rel-13	B	RP-152171	R4-157788	approved	Introduction of Band 65	13.1.0	13.2.0	R4	LTE_1980_2170_REG1-Core
36.133	3251	-	Rel-13	B	RP-152172	R4-157791	approved	Introduction of Band 66	13.1.0	13.2.0	R4	LTE_AWS_EXT-Core
36.133	3253	2	Rel-13	B	RP-152149	R4-158380	approved	SCell activation/deactivation delay for PUCCH SCell	13.1.0	13.2.0	R4	LTE_CA_enh_b5C-Core
36.133	3256	1	Rel-13	B	RP-152146	R4-158123	approved	Beacon RSSI Reporting Requirements	13.1.0	13.2.0	R4	LTE_WLAN_radio-Perf
36.133	3260	1	Rel-13	B	RP-152148	R4-158127	approved	Core RRM requirements for LAA	13.1.0	13.2.0	R4	LTE_LAA-Core
36.133	3262	1	Rel-13	B	RP-152148	R4-158388	approved	LAA measurement requirements	13.1.0	13.2.0	R4	LTE_LAA-Core
36.133	3263	1	Rel-13	B	RP-152148	R4-158128	approved	LAA measurement accuracy requirements and measurement report mapping	13.1.0	13.2.0	R4	LTE_LAA-Core

Samsung Exhibit 1025, Page 1085 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	3265	-	Rel-13	B	RP-152153	R4-158032	approved	RS-SINR measurement requirements	13.1.0	13.2.0	R4	LTE_MC_load-Core
36.133	3267	1	Rel-13	B	RP-152153	R4-158151	approved	RS-SINR measurement accuracy requirements	13.1.0	13.2.0	R4	LTE_MC_load-Core
36.133	3268	1	Rel-13	B	RP-152153	R4-158150	approved	RS-SINR measurement report mapping	13.1.0	13.2.0	R4	LTE_MC_load-Core
36.133	3269	1	Rel-13	B	RP-152154	R4-158387	approved	Extended DRX requirements in RRC_CONNECTED state	13.1.0	13.2.0	R4	LTE_extDRX-Core
36.133	3274	1	Rel-12	F	RP-152135	R4-158114	approved	CR on ProSe UE transmission timing in Any Cell Selection State	12.9.0	12.10.0	R4	LTE_D2D_Prox-Perf
36.133	3275	-	Rel-13	A	RP-152135	R4-158082	approved	CR on ProSe UE transmission timing in Any Cell Selection State	13.1.0	13.2.0	R4	LTE_D2D_Prox-Perf
36.133	3276	-	Rel-10	F	RP-152133	R4-158190	approved	Alignment of time when UE starts CSI reporting for activated SCell	10.20.0	10.21.0	R4	LTE_CA_B1_B3-Perf
36.133	3277	-	Rel-11	A	RP-152133	R4-158191	approved	Alignment of time when UE starts CSI reporting for activated SCell	11.14.1	11.15.0	R4	LTE_CA_B1_B3-Perf
36.133	3278	-	Rel-12	A	RP-152133	R4-158192	approved	Alignment of time when UE starts CSI reporting for activated SCell	12.9.0	12.10.0	R4	LTE_CA_B1_B3-Perf
36.133	3279	-	Rel-13	A	RP-152133	R4-158193	approved	Alignment of time when UE starts CSI reporting for activated SCell	13.1.0	13.2.0	R4	LTE_CA_B1_B3-Perf
36.141	0772	-	Rel-13	B	RP-152168	R4-155982	approved	Introduction of intra-band CA_8B to TS 36.141	13.1.0	13.2.0	R4	LTE_CA_C_B8-Perf
36.141	0782	-	Rel-13	B	RP-152171	R4-156418	approved	Introduction of Band 65 to TS 36.141	13.1.0	13.2.0	R4	LTE_1980_2170_REG1-Perf
36.141	0783	1	Rel-13	B	RP-152157	R4-156892	approved	Introduction of Band 67 and CA_20-67 to 36.141	13.1.0	13.2.0	R4	LTE_CA_700EU_B20-Perf
36.141	0789	-	Rel-13	B	RP-152167	R4-156969	approved	Introduction of intra-band CA_5B to TS 36.141	13.1.0	13.2.0	R4	LTE_CA_C_B5-Perf
36.141	0790	-	Rel-13	B	RP-152169	R4-156973	approved	Introduction of intra-band NC CA_5A-5A to TS 36.141	13.1.0	13.2.0	R4	LTE_CA_NC_B5-Perf
36.141	0792	-	Rel-13	B	RP-152173	R4-157607	approved	Introduction of 1447-1467MHz Band into 36.141	13.1.0	13.2.0	R4	LTE_TDD_1447MHz_China-Core
36.141	0793	1	Rel-11	F	RP-152132	R4-158230	approved	Correction on UEM requirement for MB-MSR	11.13.0	11.14.0	R4	MB_MSR_RF-Perf
36.141	0794	-	Rel-12	A	RP-152132	R4-157625	approved	Correction on UEM requirement for MB-MSR	12.9.0	12.10.0	R4	MB_MSR_RF-Perf
36.141	0795	-	Rel-13	A	RP-152132	R4-157626	approved	Correction on UEM requirement for Multi-band base station	13.1.0	13.2.0	R4	MB_MSR_RF-Perf
36.141	0796	1	Rel-11	F	RP-152132	R4-158316	approved	BS Spec improvements: TS 36.141 Corrections	11.13.0	11.14.0	R4	TEI11
36.141	0797	-	Rel-12	A	RP-152132	R4-157750	approved	BS Spec improvements: TS 36.141 Corrections	12.9.0	12.10.0	R4	TEI11
36.141	0798	-	Rel-13	A	RP-152132	R4-157751	approved	BS Spec improvements: TS 36.141 Corrections	13.1.0	13.2.0	R4	TEI11
36.141	0804	-	Rel-11	F	RP-152132	R4-157848	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	11.13.0	11.14.0	R4	LTE_CA_Enh-Perf
36.141	0805	-	Rel-12	A	RP-152132	R4-157849	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	12.9.0	12.10.0	R4	LTE_CA_Enh-Perf
36.141	0806	-	Rel-13	A	RP-152132	R4-157850	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	13.1.0	13.2.0	R4	LTE_CA_Enh-Perf
36.141	0811	-	Rel-13	B	RP-152156	R4-158005	approved	Introduction of 2DL CA combinations	13.1.0	13.2.0	R4	LTE_CA_B3_B41-Perf, LTE_CA_B20_B40-Perf, LTE_CA_B5_B38-Perf

Samsung Exhibit 1025, Page 1086 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.141	0812	-	Rel-13	B	RP-152161	R4-158007	approved	Introduction of 3DL CA combinations	13.1.0	13.2.0	R4	LTE_CA_B1_B3_B7-Perf,LTE_CA_B1_B11_B18-Perf,LTE_CA_B28_B40_B40-Perf,LTE_CA_B7_B42_B42-Perf,LTE_CA_B28_B41_B41-Perf,LTE_CA_B28_B42_B42-Perf,LTE_CA_B3_B41_B42-Perf,LTE_CA_B1_B3_B40-Perf,LTE_CA_B1_B8_B40-Perf,LTE_CA_B3_B7_B38-Perf,LTE_CA_B7_B20_B38-Perf
36.141	0813	-	Rel-13	B	RP-152162	R4-158009	approved	Introduction of 4DL CA combinations	13.1.0	13.2.0	R4	LTE_CA_B2_B2_B4_B5-Perf, LTE_CA_B2_B2_B5_B12-Perf, LTE_CA_B2_B4_B5_B12-Perf, LTE_CA_B4_B4_B5_B12-Perf, LTE_CA_B2_B4_B4_B5-Perf, LTE_CA_B1_B3_B7_B8-Perf, LTE_CA_B3_B28_B40_B40-Perf, LTE_CA_B1_B3_B8_B40-Perf, LTE_CA_B1_B3_B5_B40-Perf
36.141	0814	1	Rel-11	F	RP-152132	R4-158285	approved	Clarification on the transmitter intermodulation requirement in TS36.141	11.13.0	11.14.0	R4	TEI11
36.141	0815	-	Rel-12	A	RP-152132	R4-158022	approved	Clarification on the transmitter intermodulation requirement in TS36.141	12.9.0	12.10.0	R4	TEI11
36.141	0816	-	Rel-13	A	RP-152132	R4-158023	approved	Clarification on the transmitter intermodulation requirement in TS36.141	13.1.0	13.2.0	R4	TEI11
36.141	0818	-	Rel-13	B	RP-152172	R4-158080	approved	Introduction of Band 66 to 36.141	13.1.0	13.2.0	R4	LTE_AWS_EXT-Perf
36.201	0010	3	Rel-13	B	RP-152026	R1-157899	approved	Introduction of LAA	12.2.0	13.0.0	R1	LTE_LAA-Core
36.201	0011	-	Rel-13	B	RP-152024	R1-157518	postponed	Introduction of LC/EC MTC	12.2.0		R1	LTE_MTCe2_L1-Core
36.201	0012	-	Rel-13	B	RP-152027	R1-157519	approved	Introduction of Rel-13 eCA	12.2.0	13.0.0	R1	LTE_CA_enh_b5C-Core
36.201	0013	-	Rel-13	B	RP-152025	R1-157520	approved	Introduction of EB/FD-MIMO	12.2.0	13.0.0	R1	LTE_EBF_FDMIMO-Core
36.211	0204	2	Rel-13	B	RP-152125	R1-156352	approved	eD2D CR for 36.211	12.7.0	13.0.0	R1	LTE_eD2D_Prox-Core
36.211	0204	2	Rel-13	B	RP-152033	R1-156352	reissued	eD2D CR for 36.211	12.7.0		R1	LTE_eD2D_Prox-Core
36.211	0205	3	Rel-13	B	RP-152026	R1-157914	revised	Introduction of LAA	12.7.0		R1	LTE_LAA-Core
36.211	0205	4	Rel-13	B	RP-152258	-	approved	Introduction of LAA	12.7.0	13.0.0	R1	LTE_LAA-Core
36.211	0206	2	Rel-13	B	RP-152025	R1-157908	approved	Introduction of EB/FD-MIMO	12.7.0	13.0.0	R1	LTE_EBF_FDMIMO-Core
36.211	0207	5	Rel-13	B	RP-152024	R1-157918	postponed	Introduction of LC/EC MTC	12.7.0		R1	LTE_MTCe2_L1-Core
36.211	0208	1	Rel-13	B	RP-152027	R1-157912	approved	Introduction of Rel-13 eCA	12.7.0	13.0.0	R1	LTE_CA_enh_b5C-Core
36.211	0209	1	Rel-12	F	RP-152036	R1-157843	approved	36.211 CR on Modify max TA for dual connectivity	12.7.0	12.8.0	R1	LTE_SC_enh_dualC-Core
36.212	0177	-	Rel-12	F	RP-152038	R1-156487	approved	36.212 CR0177(Rel-12,F) Correction on rank indication bit widths	12.6.0	12.7.0	R1	TEI12

Samsung Exhibit 1025, Page 1087 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.212	0178	1	Rel-13	B	RP-152027	R1-157915	approved	Introduction of Rel 13 feature of eCA	12.6.0	13.0.0	R1	LTE_CA_enh_b5C-Core
36.212	0179	1	Rel-13	B	RP-152025	R1-157917	approved	Introduction of Rel 13 feature of EB/FD-MIMO	12.6.0	13.0.0	R1	LTE_EBF_FDMIMO-Core
36.212	0180	2	Rel-13	B	RP-152026	R1-157898	approved	Introduction of Rel 13 feature of LAA	12.6.0	13.0.0	R1	LTE_LAA-Core
36.212	0181	1	Rel-13	B	RP-152024	R1-157916	postponed	Introduction of Rel 13 feature of eMTC	12.6.0		R1	LTE_MTCe2_L1-Core
36.212	0182	-	Rel-13	B	RP-152031	R1-157324	approved	Introduction of Rel 13 feature for SC-PTM	12.6.0	13.0.0	R1	LTE_SC_PTM-Core
36.213	0530	1	Rel-12	F	RP-152034	R1-156104	approved	Clarification of PUCCH resource allocation related to EPDCCH Scells	12.7.0	12.8.0	R1	LTE_enh_dl_ctrl-Core
36.213	0531	-	Rel-12	F	RP-152037	R1-155551	approved	Clarification on the parameter notations for eIMTA	12.7.0	12.8.0	R1	LTE_TDD_eIMTA-Core
36.213	0533	3	Rel-13	B	RP-152125	R1-156385	approved	eD2D CR for 36.213	12.7.0	13.0.0	R1	LTE_eD2D_Prox-Core
36.213	0533	3	Rel-13	B	RP-152033	R1-156385	reissued	eD2D CR for 36.213	12.7.0		R1	LTE_eD2D_Prox-Core
36.213	0534	-	Rel-12	F	RP-152037	R1-156723	approved	Correction on aperiodic CSI transmission without UL-SCH according to table 7.2.1-1C	12.7.0	12.8.0	R1	LTE_TDD_eIMTA-Core
36.213	0535	1	Rel-12	F	RP-152038	R1-157527	approved	36.213 CR0535r1 (Rel-12,F) Introduction of new maximum TBS for TM9-10	12.7.0	12.8.0	R1	TEI12
36.213	0536	-	Rel-13	B	RP-152031	R1-157325	approved	Introduction of Rel 13 feature for SC-PTM	12.7.0	13.0.0	R1	LTE_SC_PTM-Core
36.213	0537	2	Rel-13	B	RP-152026	R1-157923	approved	Introduction of LAA (PHY layer aspects)	12.7.0	13.0.0	R1	LTE_LAA-Core
36.213	0538	5	Rel-13	B	RP-152026	R1-157922	approved	Introduction of LAA (eNB Channel Access Procedures)	12.7.0	13.0.0	R1	LTE_LAA-Core
36.213	0539	1	Rel-13	B	RP-152027	R1-157919	approved	Introduction of eCA	12.7.0	13.0.0	R1	LTE_CA_enh_b5C-Core
36.213	0540	3	Rel-13	B	RP-152126	-	postponed	Introduction of further LTE Physical Layer Enhancements for MTC	12.7.0		R1	LTE_MTCe2_L1-Core
36.213	0541	1	Rel-13	B	RP-152025	R1-157921	approved	Introduction of EB/FD-MIMO	12.7.0	13.0.0	R1	LTE_EBF_FDMIMO-Core
36.213	0542	-	Rel-12	F	RP-152034	R1-157542	approved	Clarification of PHICH resource assignement related to EPDCCH scheduled PUSCH	12.7.0	12.8.0	R1	LTE_enh_dl_ctrl-Core
36.213	0543	1	Rel-12	F	RP-152036	R1-157844	approved	36.213 CR on Modify max TA for dual connectivity	12.7.0	12.8.0	R1	LTE_SC_enh_dualC-Core
36.214	0027	1	Rel-13	B	RP-152125	R1-156353	approved	eD2D CR for 36.214	12.2.0	13.0.0	R1	LTE_eD2D_Prox-Core
36.214	0027	1	Rel-13	B	RP-152033	R1-156353	reissued	eD2D CR for 36.214	12.2.0		R1	LTE_eD2D_Prox-Core
36.214	0028	2	Rel-13	B	RP-152035	R1-157805	approved	Introduction of RS-SINR measurement for Multicarrier Load Distribution	12.2.0	13.0.0	R1	LTE_MC_load-Core
36.214	0029	1	Rel-13	B	RP-152026	R1-157842	approved	Introduction of LAA	12.2.0	13.0.0	R1	LTE_LAA-Core
36.214	0030	-	Rel-13	B	RP-152032	R1-157809	approved	Introduction of SSTD for dual connectivity enhancement	12.2.0	13.0.0	R1	LTE_dualC_enh-Core
36.300	0728	11	Rel-13	B	RP-152070	R2-157163	approved	Monitoring traffic volume per QoS group per PLMN	13.1.0	13.2.0	R2	RSE-RAN_LTE-Core
36.300	0772	6	Rel-13	B	RP-152081	R2-157164	approved	Introduction of handover enhancement for Dual Connectivity	13.1.0	13.2.0	R2	LTE_dualC_ext-Core
36.300	0779	5	Rel-13	B	RP-152067	R2-157165	approved	Introduction of Dedicated Core Network (DECOR) feature	13.1.0	13.2.0	R2	DECOR-UTRA_LTE-Core
36.300	0793	1	Rel-12	A	RP-152050	R2-157175	approved	IDC Overview Correction	12.7.0	12.8.0	R2	SPIA_IDC_LTE-Core
36.300	0794	1	Rel-13	A	RP-152050	R2-157176	approved	IDC Overview Correction	13.1.0	13.2.0	R2	SPIA_IDC_LTE-Core
36.300	0796	-	Rel-13	B	RP-152074	R2-156163	approved	Introduction of DC enhancement	13.1.0	13.2.0	R2	LTE_dualC_enh-Core
36.300	0797	1	Rel-13	B	RP-152081	R2-157063	approved	Removing SCG change restrictions regarding upon handover	13.1.0	13.2.0	R2	LTE_dualC_ext-Core
36.300	0798	2	Rel-13	B	RP-152078	R2-157173	approved	Introduction of Licensed-Assisted Access using LTE	13.1.0	13.2.0	R2	LTE_LAA-Core

Samsung Exhibit 1025, Page 1088 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.300	0799	1	Rel-13	B	RP-152080	R2-156964	approved	Introduction of SC-PTM	13.1.0	13.2.0	R2	LTE_SC_PTM-Core
36.300	0800	3	Rel-13	B	RP-152083	R2-157185	approved	Introduction of Stage 2 text for LTE-WiFi integration for legacy WLAN	13.1.0	13.2.0	R2	LTE_WLAN_radio_legacy-Core
36.300	0801	-	Rel-13	B	RP-152075	R2-156522	approved	Introduction of RS-SINR measurements	13.1.0	13.2.0	R2	LTE_MC_load-Core
36.300	0802	-	Rel-12	F	RP-152053	R2-156537	approved	Corrections on sidelink related description in TS 36.300	12.7.0	12.8.0	R2	LTE_D2D_Prox-Core
36.300	0803	-	Rel-13	A	RP-152053	R2-156538	approved	Corrections on sidelink related description in TS 36.300	13.1.0	13.2.0	R2	LTE_D2D_Prox-Core
36.300	0806	2	Rel-13	B	RP-152075	R2-157118	approved	Introduction of MCLD	13.1.0	13.2.0	R2	LTE_MC_load-Core
36.300	0809	1	Rel-13	B	RP-152077	R2-156902	approved	Introduction of LTE-WLAN Radio Level Integration and Interworking Enhancement stage-2	13.1.0	13.2.0	R2	LTE_WLAN_radio-Core
36.300	0810	2	Rel-13	B	RP-152069	R2-157137	approved	Introduction of low complexity UE and enhanced coverage features	13.1.0	13.2.0	R2	LTE_MTCe2_L1-Core
36.300	0811	1	Rel-11	F	RP-152050	R2-156847	approved	IDC Overview Correction	11.13.0	11.14.0	R2	SPIA_IDC_LTE-Core
36.300	0813	-	Rel-13	B	RP-152080	R2-157156	approved	Introduction of SC-PTM	13.1.0	13.2.0	R2	LTE_SC_PTM-Core
36.300	0814	-	Rel-13	B	RP-152084	R2-157157	approved	Introduction of PWS Failure Indication message	13.1.0	13.2.0	R2	WSR_EPS, TEI13
36.300	0815	-	Rel-13	B	RP-152084	R2-157158	approved	Addition of the information on the notification for planned reconfiguration	13.1.0	13.2.0	R2	TEI13
36.300	0816	-	Rel-13	B	RP-152070	R2-157159	approved	Enhanced overload procedure in RAN sharing	13.1.0	13.2.0	R2	RSE-RAN_LTE-Core
36.300	0817	-	Rel-13	B	RP-152081	R2-157160	approved	Tunnel Information of BBAI in Dual Connectivity	13.1.0	13.2.0	R2	LTE_dualC_ext-Core
36.300	0818	-	Rel-13	B	RP-152081	R2-157161	approved	Adding CSG support to DC	13.1.0	13.2.0	R2	LTE_dualC_ext-Core
36.300	0819	-	Rel-13	B	RP-152081	R2-157162	approved	Support of SIPTO@LN and LIPA for DC	13.1.0	13.2.0	R2	LTE_dualC_ext-Core
36.300	0820	-	Rel-13	B	RP-152072	R2-157152	approved	Introduction of eD2D	13.1.0	13.2.0	R2	LTE_eD2D_Prox-Core
36.300	0821	-	Rel-13	B	RP-152076	R2-157169	approved	Introducing extended DRX	13.1.0	13.2.0	R2	LTE_extDRX-Core
36.300	0822	-	Rel-13	B	RP-151957	-	approved	36.300 CR for capturing B5C and PUCCH on SCell	13.1.0	13.2.0	R2	LTE_CA_enh_b5C-Core
36.302	0062	-	Rel-12	F	RP-152053	R2-156062	approved	Corrections to Sidelink in TS 36.302	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.302	0063	-	Rel-13	B	RP-152071	R2-156166	approved	Introduction of PUCCH on SCell in CA	12.5.0	13.0.0	R2	LTE_CA_enh_b5C-Core
36.302	0064	1	Rel-13	B	RP-152080	R2-156974	approved	Introduction of SC-PTM	12.5.0	13.0.0	R2	LTE_SC_PTM-Core
36.304	0275	2	Rel-10	C	RP-152048	R2-157027	approved	Enabling multiple NS and P-Max operation per cell	10.8.0	10.9.0	R2	TEI10
36.304	0276	2	Rel-11	A	RP-152048	R2-157028	approved	Enabling multiple NS and P-Max operation per cell	11.6.0	11.7.0	R2	TEI10
36.304	0277	2	Rel-12	A	RP-152048	R2-157029	approved	Enabling multiple NS and P-Max per cell	12.6.0	12.7.0	R2	TEI10
36.304	0278	2	Rel-13	B	RP-152080	R2-157130	approved	Introduction of SC-PTM	12.6.0	13.0.0	R2	LTE_SC_PTM-Core
36.304	0280	1	Rel-13	B	RP-152075	R2-156958	approved	Extension of Frequency Priorities	12.6.0	13.0.0	R2	LTE_MC_load-Core
36.304	0281	3	Rel-13	B	RP-152075	R2-157144	approved	Introduction of load redistribution in RRC_IDLE	12.6.0	13.0.0	R2	LTE_MC_load-Core
36.304	0285	1	Rel-13	B	RP-152082	R2-156955	approved	Introduction of IDC Impact to Logged Measurements	12.6.0	13.0.0	R2	LTE_eMDT2-Core
36.304	0286	-	Rel-13	B	RP-152066	R2-157022	approved	Introduction of ACDC in TS 36.304	12.6.0	13.0.0	R2	ACDC-RAN-Core
36.304	0287	-	Rel-13	B	RP-152072	R2-157149	approved	Introducing eSL	12.6.0	13.0.0	R2	LTE_eD2D_Prox-Core
36.304	0288	-	Rel-13	B	RP-152076	R2-157168	approved	Introducing extended DRX	12.6.0	13.0.0	R2	LTE_extDRX-Core
36.305	0061	2	Rel-13	B	RP-152068	R2-157059	approved	RAT-Independent positioning enhancements	12.2.0	13.0.0	R2	UTRA_LTE_iPos_enh-Core

Samsung Exhibit 1025, Page 1089 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.306	0299	2	Rel-12	C	RP-152049	R2-157045	approved	Alternative new maximum transport block sizes for DL 64QAM and 256QAM in TM9/10	12.6.0	12.7.0	R2	LTE_eDL_MIMO-Core, COMP_LTE_DL-Core, TEI12
36.306	0301	1	Rel-13	B	RP-152074	R2-156905	approved	Introduction of DC enhancement	12.6.0	13.0.0	R2	LTE_dualC_enh-Core
36.306	0302	2	Rel-12	F	RP-152054	R2-157116	revised	Support of 256QAM for UE categories 6,7,9 and 10	12.6.0		R2	TEI12, LTE_SC_enh_L1-Core
36.306	0302	3	Rel-12	C	RP-151830	-	not pursued	Support of 256QAM for UE categories 6,7,9 and 10	12.6.0		R2	TEI12, LTE_SC_enh_L1-Core
36.306	0303	1	Rel-12	F	RP-152048	R2-156848	approved	Clarification on support of extened wait time	12.6.0	12.7.0	R2	NIMTC-RAN_overload, TEI12
36.306	0304	1	Rel-13	B	RP-152080	R2-156973	approved	Introduction of SC-PTM	12.6.0	13.0.0	R2	LTE_SC_PTM-Core
36.306	0305	2	Rel-13	B	RP-152071	R2-157136	approved	Introduction of CA enhancement	12.6.0	13.0.0	R2	LTE_CA_enh_b5C-Core
36.306	0308	1	Rel-13	B	RP-152075	R2-156963	approved	Introduction of RS-SINR measurements	12.6.0	13.0.0	R2	LTE_MC_load-Core
36.306	0309	-	Rel-12	F	RP-152053	R2-156539	approved	Definitions of sidelink terminologies in TS 36.306	12.6.0	12.7.0	R2	LTE_D2D_Prox-Core
36.306	0310	-	Rel-12	F	RP-152055	R2-156733	approved	Correction on categories in supportedBandCombination	12.6.0	12.7.0	R2	TEI12
36.306	0311	1	Rel-13	C	RP-152084	R2-157067	approved	White-list of cells for EUTRA measurement reporting	12.6.0	13.0.0	R2	TEI13
36.306	0312	1	Rel-12	F	RP-152053	R2-157043	approved	Clarification on tdd-FDD-CA-PCellDuplex	12.6.0	12.7.0	R2	LTE_CA_TDD_FDD-Core, LTE_SC_enh_dualC-Core
36.306	0313	1	Rel-12	F	RP-152053	R2-157178	approved	Clarification on Pcell support	12.6.0	12.7.0	R2	LTE_CA-Core, LTE_CA_TDD_FDD-Core, TEI12
36.306	0314	-	Rel-13	B	RP-152066	R2-157021	approved	Introduction of Application specific Congestion control for Data Communication in LTE	12.6.0	13.0.0	R2	ACDC-RAN-Core
36.306	0315	1	Rel-12	F	RP-152055	R2-157105	approved	Correction on capability rsrq-OnAllSymbols	12.6.0	12.7.0	R2	TEI12
36.306	0316	-	Rel-10	C	RP-152048	R2-157055	approved	Enabling multiple NS and P-Max operation per cell	10.14.0	10.15.0	R2	TEI10
36.306	0317	-	Rel-11	A	RP-152048	R2-157056	approved	Enabling multiple NS and P-Max operation per cell	11.12.0	11.13.0	R2	TEI10
36.306	0318	-	Rel-12	A	RP-152048	R2-157057	approved	Enabling multiple NS and P-Max operation per cell	12.6.0	12.7.0	R2	TEI10
36.306	0319	-	Rel-13	B	RP-152078	R2-156918	approved	Introduction of Licensed-Assisted Access using LTE	12.6.0	13.0.0	R2	LTE_LAA-Core
36.306	0322	-	Rel-13	B	RP-152076	R2-157170	approved	Introducing extended DRX	12.6.0	13.0.0	R2	LTE_extDRX-Core
36.307	0549	-	Rel-13	B	RP-152160	R4-155512	approved	Introduction of 4DL NC CA in band42 in 36.307	13.1.0	13.2.0	R4	LTE_CA_NC_B42_4DL-Perf
36.307	0556	-	Rel-12	B	RP-152133	R4-155828	approved	[Rel-12] Introduction of dual uplink CA into 36.307	12.9.0	12.10.0	R4	LTE_CA_2UL-A4-Core
36.307	0558	1	Rel-10	B	RP-152157	R4-156848	approved	Introducing B20 + B67 CA into TS 36.307	10.16.0	10.17.0	R4	LTE_CA_700EU_B20-Core
36.307	0559	-	Rel-11	A	RP-152157	R4-155894	approved	Introducing B20 + B67 CA into TS 36.307	11.13.0	11.14.0	R4	LTE_CA_700EU_B20-Core
36.307	0560	-	Rel-12	A	RP-152157	R4-155895	approved	Introducing B20 + B67 CA into TS 36.307	12.9.0	12.10.0	R4	LTE_CA_700EU_B20-Core
36.307	0561	-	Rel-13	A	RP-152157	R4-155896	approved	Introducing B20 + B67 CA into TS 36.307	13.1.0	13.2.0	R4	LTE_CA_700EU_B20-Core
36.307	0562	-	Rel-13	B	RP-152168	R4-155983	approved	Introduction of intra-band CA_8B to TS 36.307	13.1.0	13.2.0	R4	LTE_CA_C_B8-Perf
36.307	0563	-	Rel-12	B	RP-152168	R4-155984	approved	Introduction of intra-band CA_8B to TS 36.307	12.9.0	12.10.0	R4	LTE_CA_C_B8-Perf
36.307	0564	-	Rel-11	B	RP-152168	R4-155985	approved	Introduction of intra-band CA_8B to TS 36.307	11.13.0	11.14.0	R4	LTE_CA_C_B8-Perf
36.307	0565	-	Rel-10	B	RP-152168	R4-155986	approved	Introduction of intra-band CA_8B to TS 36.307	10.16.0	10.17.0	R4	LTE_CA_C_B8-Perf
36.307	0566	-	Rel-11	B	RP-152133	R4-156028	approved	[Rel-11] Introduction of dual uplink CA into 36.307	11.13.0	11.14.0	R4	LTE_CA_2UL-A4-Core
36.307	0567	-	Rel-11	B	RP-152164	R4-156061	approved	Introduction of 3DL/2UL inter-band CA combinations with self-interference issues	11.13.0	11.14.0	R4	LTE_CA_3DL_2UL-Perf

Samsung Exhibit 1025, Page 1090 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.307	0568	-	Rel-12	B	RP-152164	R4-156063	approved	Introduction of 3DL/2UL inter-band CA combinations with self-interference issues	12.9.0	12.10.0	R4	LTE_CA_3DL_2UL-Perf
36.307	0577	-	Rel-10	B	RP-152171	R4-156086	approved	Introduction of Band 65	10.16.0	10.17.0	R4	LTE_1980_2170_REG1-Perf
36.307	0578	-	Rel-11	B	RP-152171	R4-156087	approved	Introduction of Band 65	11.13.0	11.14.0	R4	LTE_1980_2170_REG1-Perf
36.307	0579	-	Rel-12	B	RP-152171	R4-156088	approved	Introduction of Band 65	12.9.0	12.10.0	R4	LTE_1980_2170_REG1-Perf
36.307	0580	-	Rel-13	B	RP-152171	R4-156089	approved	Introduction of Band 65	13.1.0	13.2.0	R4	LTE_1980_2170_REG1-Perf
36.307	0586	1	Rel-9	B	RP-152171	R4-157787	approved	Introduction of Band 65	9.14.0	9.15.0	R4	LTE_1980_2170_REG1-Perf
36.307	0589	-	Rel-13	B	RP-152167	R4-156970	approved	Introduction of intra-band CA_5B to TS 36.307	13.1.1	13.2.0	R4	LTE_CA_C_B5-Perf
36.307	0590	-	Rel-13	B	RP-152169	R4-156974	approved	Introduction of intra-band NC CA_5A-5A to TS 36.307	13.1.1	13.2.0	R4	LTE_CA_NC_B5-Perf
36.307	0591	-	Rel-11	B	RP-152133	R4-157046	approved	[Rel-11] Introduction of dual uplink CA into 36.307	11.13.0	11.14.0	R4	LTE_CA_2UL-A1-Core
36.307	0592	-	Rel-12	B	RP-152133	R4-157047	approved	[Rel-12] Introduction of dual uplink CA into 36.307	12.9.0	12.10.0	R4	LTE_CA_2UL-A1-Core
36.307	0593	-	Rel-11	B	RP-152164	R4-157231	approved	Introduction of 3DL/2UL Inter-band CA for CA_39A-41C and CA_39C-41A	11.13.0	11.14.0	R4	LTE_CA_B39_B41_B41-Perf, LTE_CA_B39_B39_B41-Perf
36.307	0594	-	Rel-12	B	RP-152164	R4-157232	approved	Introduction of 3DL/2UL Inter-band CA for CA_39A-41C and CA_39C-41A	12.9.0	12.10.0	R4	LTE_CA_B39_B41_B41-Perf, LTE_CA_B39_B39_B41-Perf
36.307	0595	-	Rel-12	B	RP-152166	R4-157235	approved	Introduction of 3DL/3UL Inter-band CA for CA_39A-41C and CA_39C-41A	12.9.0	12.10.0	R4	LTE_CA_3DL3UL_B39_B41_B41-Perf; LTE_CA_3DL3UL_B39_B39_B41-Perf
36.307	0596	-	Rel-13	B	RP-152166	R4-157236	approved	Introduction of 3DL/3UL Inter-band CA in TS36.307	13.1.1	13.2.0	R4	LTE_CA_3DL3UL_B39_B41_B41-Perf; LTE_CA_3DL3UL_B39_B39_B41-Perf
36.307	0597	-	Rel-12	B	RP-152163	R4-157348	approved	Introduction of 5DL/1UL CA combinations into TS 36.307 (Rel-12)	12.9.0	12.10.0	R4	LTE_CA_B1_B3_B19_B42_B42-Perf, LTE_CA_B1_B19_B21_B42_B42-Perf
36.307	0598	-	Rel-13	B	RP-152163	R4-157349	approved	Introduction of 5DL/1UL CA combinations into TS 36.307 (Rel-13)	13.1.1	13.2.0	R4	LTE_CA_B1_B3_B19_B42_B42-Perf, LTE_CA_B1_B19_B21_B42_B42-Perf
36.307	0599	-	Rel-11	B	RP-152164	R4-157405	approved	Introduction of 3DL/2UL inter-band CA_3A-7A-28A in TS36.307 Rel-11	11.13.0	11.14.0	R4	LTE_CA_3DL_2UL-Perf
36.307	0600	-	Rel-12	B	RP-152164	R4-157406	approved	Introduction of 3DL/2UL inter-band CA_3A-7A-28A in TS36.307 Rel-12	12.9.0	12.10.0	R4	LTE_CA_3DL_2UL-Perf
36.307	0601	-	Rel-10	B	RP-152162	R4-157427	approved	Introduction of the finished 4DL inter-band CAs fall back mode to TS 36.307	10.16.0	10.17.0	R4	LTE_CA_B2_B4_B5_B29-Perf, LTE_CA_B2_B5_B12_B12-Perf, LTE_CA_B41_B41_B42_B42-Perf, LTE_CA_B1_B3_B7_B8-Perf

Samsung Exhibit 1025, Page 1091 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.307	0602	-	Rel-11	B	RP-152162	R4-157428	approved	Introduction of finished 4DL inter-band CAs to TS 36.307	11.13.0	11.14.0	R4	LTE_CA_B1_B3_B7_B8-Perf,LTE_CA_B2_B2_B4_B5-Perf,LTE_CA_B2_B2_B5_B12-Perf,LTE_CA_B2_B2_B12_B12-Perf,LTE_CA_B2_B4_B4_B5-Perf,LTE_CA_B2_B4_B5_B12-Perf,LTE_CA_B2_B5_B12_B12-Perf,LTE_CA_B3_B7_B7_B28-Perf,LTE_CA_B4_B4_B5_B12-Perf,LTE_CA_B39_B39_B41_B41-Perf,LTE
36.307	0603	-	Rel-12	B	RP-152162	R4-157429	approved	Introduction of finished 4DL inter-band CAs to TS 36.307	12.9.0	12.10.0	R4	LTE_CA_B1_B3_B7_B8-Perf,LTE_CA_B2_B2_B4_B5-Perf,LTE_CA_B2_B2_B5_B12-Perf,LTE_CA_B2_B2_B12_B12-Perf,LTE_CA_B2_B4_B4_B5-Perf,LTE_CA_B2_B4_B5_B12-Perf,LTE_CA_B2_B5_B12_B12-Perf,LTE_CA_B3_B7_B7_B28-Perf,LTE_CA_B3_B28_B40_B40-Perf,LTE_CA_B4_B4_B5_B12-Perf,LTE_
36.307	0604	-	Rel-13	B	RP-152162	R4-157430	approved	Introduction of finished 4DL inter-band CAs to TS 36.307	13.1.1	13.2.0	R4	LTE_CA_B1_B3_B7_B8-Perf,LTE_CA_B2_B2_B4_B5-Perf,LTE_CA_B2_B2_B5_B12-Perf,LTE_CA_B2_B2_B12_B12-Perf,LTE_CA_B2_B4_B4_B5-Perf,LTE_CA_B2_B4_B5_B12-Perf,LTE_CA_B2_B5_B12_B12-Perf,LTE_CA_B3_B7_B7_B28-Perf,LTE_CA_B3_B28_B40_B40-Perf,LTE_CA_B4_B4_B5_B12-Perf,LTE_
36.307	0605	-	Rel-11	B	RP-152170	R4-157433	approved	Introduction of CA_7A-7A BCS1 to TS 36.307	11.13.0	11.14.0	R4	LTE_CA_NC_B7_BWset-Perf
36.307	0606	-	Rel-12	B	RP-152170	R4-157434	approved	Introduction of CA_7A-7A BCS1 to TS 36.307	12.9.0	12.10.0	R4	LTE_CA_NC_B7_BWset-Perf
36.307	0607	-	Rel-8	B	RP-152173	R4-157597	approved	Introduction of 1447-1467MHz Band into TS36.307	8.13.0	8.14.0	R4	LTE_TDD_1447MHz_China-Core
36.307	0608	-	Rel-9	B	RP-152173	R4-157598	approved	Introduction of 1447-1467MHz Band into 36.307	9.14.0	9.15.0	R4	LTE_TDD_1447MHz_China-Core
36.307	0609	-	Rel-10	B	RP-152173	R4-157599	approved	Introduction of 1447-1467MHz Band into 36.307	10.16.0	10.17.0	R4	LTE_TDD_1447MHz_China-Core
36.307	0610	-	Rel-11	B	RP-152173	R4-157600	approved	Introduction of 1447-1467MHz Band into 36.307	11.13.0	11.14.0	R4	LTE_TDD_1447MHz_China-Core
36.307	0611	-	Rel-12	B	RP-152173	R4-157601	approved	Introduction of 1447-1467MHz Band into 36.307	12.9.0	12.10.0	R4	LTE_TDD_1447MHz_China-Core

Samsung Exhibit 1025, Page 1092 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.307	0612	-	Rel-13	B	RP-152173	R4-157602	approved	Introduction of 1447-1467MHz Band into 36.307	13.1.1	13.2.0	R4	LTE_TDD_1447MHz_China-Core
36.307	0615	-	Rel-12	B	RP-152156	R4-157771	approved	Rel-13 2DL combinations	12.9.0	12.10.0	R4	LTE_CA_B3_B41-Perf, LTE_CA_B5_B38-Perf, LTE_CA_B20_B40-Perf
36.307	0616	-	Rel-13	B	RP-152156	R4-157772	approved	Rel-13 2DL combinations	13.1.1	13.2.0	R4	LTE_CA_B3_B41-Perf, LTE_CA_B5_B38-Perf, LTE_CA_B20_B40-Perf
36.307	0617	-	Rel-10	B	RP-152161	R4-157774	approved	Rel-13 3DL combinations	10.16.0	10.17.0	R4	LTE_CA_B1_B3_B7-Perf, LTE_CA_B1_B11_B18-Perf, LTE_CA_B4_B4_B7_BWset-Perf, LTE_CA_B4_B7_B12_BWset-Perf
36.307	0618	-	Rel-11	B	RP-152161	R4-157775	approved	Rel-13 3DL combinations	11.13.0	11.14.0	R4	LTE_CA_B1_B3_B7-Perf, LTE_CA_B1_B11_B18-Perf, LTE_CA_B4_B4_B7_BWset-Perf, LTE_CA_B4_B7_B12_BWset-Perf
36.307	0619	-	Rel-12	B	RP-152161	R4-157776	approved	Rel-13 3DL combinations	12.9.0	12.10.0	R4	LTE_CA_B1_B3_B7-Perf,LTE_CA_B1_B3_B40-Core,LTE_CA_B1_B8_B40-Core,LTE_CA_B1_B11_B18-Perf,LTE_CA_B3_B7_B38-Perf,LTE_CA_B3_B41_B41-Perf,LTE_CA_B3_B41_B42-Core,LTE_CA_B4_B4_B7_BWset-Perf,LTE_CA_B4_B7_B12_BWset-Perf,LTE_CA_B5_B40_B40-Perf,LTE_CA_B7_B20_B38-Per
36.307	0620	-	Rel-13	B	RP-152161	R4-157777	approved	Rel-13 3DL combinations	13.1.1	13.2.0	R4	LTE_CA_B1_B3_B7-Perf,LTE_CA_B1_B3_B40-Perf,LTE_CA_B1_B8_B40-Perf,LTE_CA_B1_B11_B18-Perf,LTE_CA_B3_B7_B38-Perf,LTE_CA_B3_B8_B40-Perf,LTE_CA_B3_B41_B41-Perf,LTE_CA_B3_B41_B42-Perf,LTE_CA_B4_B4_B7_BWset-Perf,LTE_CA_B4_B7_B12_BWset-Perf,LTE_CA_B5_B40_B40-Perf
36.307	0624	-	Rel-9	B	RP-152172	R4-157793	approved	Introduction of Band 66	9.14.0	9.15.0	R4	LTE_AWS_EXT-Perf

Samsung Exhibit 1025, Page 1093 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.307	0625	-	Rel-10	B	RP-152172	R4-157794	approved	Introduction of Band 66	10.16.0	10.17.0	R4	LTE_AWS_EXT-Perf
36.307	0626	-	Rel-11	B	RP-152172	R4-157795	approved	Introduction of Band 66	11.13.0	11.14.0	R4	LTE_AWS_EXT-Perf
36.307	0627	-	Rel-12	B	RP-152172	R4-157796	approved	Introduction of Band 66	12.9.0	12.10.0	R4	LTE_AWS_EXT-Perf
36.307	0628	-	Rel-13	B	RP-152172	R4-157797	approved	Introduction of Band 66	13.1.1	13.2.0	R4	LTE_AWS_EXT-Perf
36.307	0629	-	Rel-11	B	RP-152165	R4-157837	approved	Introduction of 2 UL and 3 DL mixed inter/intra cases without MSD into 36.307 Rel-11	11.13.0	11.14.0	R4	LTE_CA_3DL_2UL_inter_intra-Perf
36.307	0630	-	Rel-11	B	RP-152159	R4-157860	approved	Introduction of intra-band non-contiguous CA in Band 41 for 4DL	11.13.0	11.14.0	R4	LTE_CA_NC_B41_4DL-Perf
36.307	0631	-	Rel-12	A	RP-152159	R4-157861	approved	Introduction of intra-band non-contiguous CA in Band 41 for 4DL	12.9.0	12.10.0	R4	LTE_CA_NC_B41_4DL-Perf
36.307	0632	-	Rel-13	A	RP-152159	R4-157862	approved	Introduction of intra-band non-contiguous CA in Band 41 for 4DL	13.1.1	13.2.0	R4	LTE_CA_NC_B41_4DL-Perf
36.307	0633	-	Rel-12	B	RP-152165	R4-157868	approved	Introduction of 2 UL and 3 DL mixed inter/intra cases without MSD into 36.307 Rel-12	12.9.0	12.10.0	R4	LTE_CA_3DL_2UL_inter_intra-Perf
36.307	0634	-	Rel-13	B	RP-152165	R4-157871	approved	Introduction of 2 UL and 3 DL mixed inter/intra cases without MSD into 36.307 Rel-13	13.1.1	13.2.0	R4	LTE_CA_3DL_2UL_inter_intra-Perf
36.307	0635	-	Rel-10	B	RP-152167	R4-158255	approved	Introduction of intra-band CA_5B to TS 36.307	10.16.0	10.17.0	R4	LTE_CA_C_B5-Perf
36.307	0636	-	Rel-11	B	RP-152167	R4-158256	approved	Introduction of intra-band CA_5B to TS 36.307	11.13.0	11.14.0	R4	LTE_CA_C_B5-Perf
36.307	0637	-	Rel-12	B	RP-152167	R4-158257	approved	Introduction of intra-band CA_5B to TS 36.307	12.9.0	12.10.0	R4	LTE_CA_C_B5-Perf
36.307	0638	-	Rel-11	B	RP-152169	R4-158259	approved	Introduction of intra-band non-contiguous CA in Band 5	11.13.0	11.14.0	R4	LTE_CA_NC_B5-Perf
36.307	0639	-	Rel-12	B	RP-152169	R4-158260	approved	Introduction of intra-band non-contiguous CA in Band 5	12.9.0	12.10.0	R4	LTE_CA_NC_B5-Perf
36.307	0543 a	-	Rel-13	B	RP-152158	R4-155480	approved	Release independent requirements for CA_42E (Rel-13)	13.1.0	13.2.0	R4	LTE_CA_C_B42_4DL-Perf
36.307	0544 a	2	Rel-12	B	RP-152158	R4-157218	approved	Release independent requirements for CA_42E (Rel-12)	12.9.0	12.10.0	R4	LTE_CA_C_B42_4DL-Perf
36.307	0545 a	1	Rel-11	B	RP-152158	R4-156844	approved	Release independent requirements for CA_42E (Rel-11)	11.13.0	11.14.0	R4	LTE_CA_C_B42_4DL-Perf
36.307	0547 a	-	Rel-11	B	RP-152160	R4-155510	approved	Introduction of 4DL NC CA in band42 in 36.307	11.13.0	11.14.0	R4	LTE_CA_NC_B42_4DL-Perf
36.307	0548 a	-	Rel-12	B	RP-152160	R4-155511	approved	Introduction of 4DL NC CA in band42 in 36.307	12.9.0	12.10.0	R4	LTE_CA_NC_B42_4DL-Perf
36.314	0034	1	Rel-13	B	RP-152082	R2-157109	approved	New MDT measurement introduced by feMDT	12.0.0	13.0.0	R2	LTE_eMDT2-Core
36.314	0035	-	Rel-13	B	RP-151955	-	approved	Introduction of data volume measurements in shared E-UTRAN	12.0.0	13.0.0	R2	RSE-RAN_LTE-Core
36.321	0801	-	Rel-12	F	RP-152055	R2-156076	approved	Correction on transparent MAC PDU	12.7.0	12.8.0	R2	TEI12
36.321	0802	-	Rel-12	F	RP-152053	R2-156396	approved	Correction on MAC header for SL-SCH	12.7.0	12.8.0	R2	LTE_D2D_Prox-Core
36.321	0805	-	Rel-12	F	RP-152053	R2-156540	approved	Corrections for sidelink in TS 36.321	12.7.0	12.8.0	R2	LTE_D2D_Prox-Core
36.321	0806	2	Rel-13	B	RP-152072	R2-157150	approved	Introduction of eD2D	12.7.0	13.0.0	R2	LTE_eD2D_Prox-Core
36.321	0811	2	Rel-13	B	RP-152071	R2-157108	approved	Introduction of Carrier Aggregation enhancements beyond 5 CCs	12.7.0	13.0.0	R2	LTE_CA_enh_b5C-Core

Samsung Exhibit 1025, Page 1094 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.321	0815	2	Rel-13	B	RP-152080	R2-157180	approved	Introduction of SC-PTM in MAC	12.7.0	13.0.0	R2	LTE_SC_PTM-Core
36.321	0821	2	Rel-13	B	RP-152078	R2-157174	approved	Introduction of LAA in MAC	12.7.0	13.0.0	R2	LTE_LAA-Core
36.322	0114	-	Rel-13	B	RP-152071	R2-156371	approved	Introduction of extended RLC protocol formats for CA enhancement	12.3.0	13.0.0	R2	LTE_CA_enh_b5C-Core
36.322	0115	-	Rel-13	B	RP-152080	R2-156966	approved	Introduction of SC-PTM in RLC	12.3.0	13.0.0	R2	LTE_SC_PTM-Core
36.323	0144	1	Rel-12	F	RP-152053	R2-156891	approved	Update to Services expected from Lower Layers in DC	12.4.0	12.5.0	R2	LTE_SC_enh_dualC-Core
36.323	0145	-	Rel-12	F	RP-152053	R2-156323	approved	Corrections to Sidelink	12.4.0	12.5.0	R2	LTE_D2D_Prox-Core
36.323	0146	-	Rel-13	B	RP-152074	R2-156330	approved	Introduction of UL split bearer in PDCP	12.4.0	13.0.0	R2	LTE_dualC_enh-Core
36.323	0148	1	Rel-13	B	RP-152071	R2-156894	approved	Introduction of enhanced CA in PDCP	12.4.0	13.0.0	R2	LTE_CA_enh_b5C-Core
36.323	0149	2	Rel-13	B	RP-152072	R2-157151	approved	Introducing enhanced ProSe	12.4.0	13.0.0	R2	LTE_eD2D_Prox-Core
36.331	1872	6	Rel-13	B	RP-152071	R2-157135	approved	36331 CR for capturing B5C and SCell on PUCCH	12.7.0	13.0.0	R2	LTE_CA_enh_b5C-Core
36.331	1916	-	Rel-12	F	RP-152053	R2-156073	approved	Correction on SCG release	12.7.0	12.8.0	R2	LTE_SC_enh_dualC-Core
36.331	1917	-	Rel-13	B	RP-152084	R2-156074	approved	MCCH acquisition for 1.4MHz MBSFN	12.7.0	13.0.0	R2	TEI13
36.331	1919	2	Rel-12	C	RP-152049	R2-157044	approved	Alternative new maximum transport block sizes for DL 64QAM and 256QAM in TM9/10	12.7.0	12.8.0	R2	LTE_eDL_MIMO-Core, COMP_LTE_DL-Core, TEI12
36.331	1920	1	Rel-13	B	RP-152074	R2-156904	approved	Intdroduction of Dual Connectivity enhancements in Rel-13	12.7.0	13.0.0	R2	LTE_dualC_enh-Core
36.331	1921	3	Rel-10	C	RP-152048	R2-157103	approved	Enabling multiple NS and P-Max operation per cell	10.18.0	10.19.0	R2	TEI10
36.331	1922	3	Rel-11	A	RP-152048	R2-157101	revised	Enabling multiple NS and P-Max operation per cell	11.13.0		R2	TEI10
36.331	1922	4	Rel-11	A	RP-152112	-	approved	Enabling multiple NS and P-Max operation per cell	11.13.0	11.14.0	R2	TEI10
36.331	1923	3	Rel-12	A	RP-152048	R2-157102	revised	Enabling multiple NS and P-Max operation per cell	12.7.0		R2	TEI10
36.331	1923	4	Rel-12	A	RP-152113	-	approved	Enabling multiple NS and P-Max operation per cell	12.7.0	12.8.0	R2	TEI10
36.331	1925	1	Rel-10	F	RP-152048	R2-156844	approved	CR to correct UE messages to be sent only after security activation	10.18.0	10.19.0	R2	TEI10
36.331	1926	1	Rel-11	A	RP-152048	R2-156845	approved	CR to correct UE messages to be sent only after security activation	11.13.0	11.14.0	R2	TEI10
36.331	1927	2	Rel-12	A	RP-152048	R2-157177	approved	CR to correct UE messages to be sent only after security activation	12.7.0	12.8.0	R2	TEI10
36.331	1928	1	Rel-12	F	RP-152053	R2-156833	approved	highPriorityAccess for MMTEL voice, MMTEL video and SMS	12.7.0	12.8.0	R2	SCM_LTE-Core
36.331	1931	2	Rel-12	C	RP-152056	R2-157133	approved	Addition of establishment cause for mobile-originating VoLTE calls and network indication in SIB2	12.7.0	12.8.0	R2	TEI12
36.331	1932	-	Rel-12	F	RP-152053	R2-156185	approved	Clarification to SCG RLF timers and constants reconfiguration	12.7.0	12.8.0	R2	LTE_SC_enh_dualC-Core
36.331	1933	-	Rel-12	F	RP-152053	R2-156187	approved	Correction to triggerQuantityCSI-RS	12.7.0	12.8.0	R2	LTE_SC_enh_L1-Core
36.331	1934	1	Rel-12	F	RP-152050	R2-157048	approved	Some general RRC issues	12.7.0	12.8.0	R2	SPIA_IDC_LTE-Core, TEI12
36.331	1935	1	Rel-13	B	RP-152081	R2-157064	approved	Removing SCG change restrictions regarding upon handover	12.7.0	13.0.0	R2	LTE_dualC_ext-Core
36.331	1936	2	Rel-13	B	RP-152072	R2-157186	approved	Introducing eSL	12.7.0	13.0.0	R2	LTE_eD2D_Prox-Core
36.331	1937	-	Rel-13	B	RP-152084	R2-156237	approved	Paging optimization	12.7.0	13.0.0	R2	TEI13
36.331	1939	3	Rel-13	B	RP-152080	R2-157145	approved	Introduction of SC-PTM	12.7.0	13.0.0	R2	LTE_SC_PTM-Core
36.331	1940	1	Rel-13	B	RP-151868	-	revised	CR to 36.331 for introduction of LTE-WLAN RAN Level Integration supporting legacy WLAN	12.7.0		R2	LTE_WLAN_radio_legacy-Core

Samsung Exhibit 1025, Page 1095 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.331	1940	2	Rel-13	B	RP-152231	-	not pursued	Introduction of Stage 3 text for LTE-WiFi integration for legacy WLAN	12.7.0		R2	LTE_WLAN_radio_legacy-Core
36.331	1941	2	Rel-13	B	RP-152082	R2-157146	approved	Introduction of Rel-13 MDT enhancements	12.7.0	13.0.0	R2	LTE_eMDT2-Core
36.331	1946	-	Rel-12	F	RP-152053	R2-156435	approved	Correction to NAICS field descriptions	12.7.0	12.8.0	R2	LTE_NAICS-Core
36.331	1947	-	Rel-12	F	RP-152055	R2-156441	approved	Correction of need code definition terminology	12.7.0	12.8.0	R2	TEI12
36.331	1949	1	Rel-13	B	RP-152075	R2-156962	approved	Introduction of RS-SINR measurements using non critical extension	12.7.0	13.0.0	R2	LTE_MC_load-Core
36.331	1952	1	Rel-13	B	RP-152075	R2-156957	approved	Extension of Frequency Priorities	12.7.0	13.0.0	R2	LTE_MC_load-Core
36.331	1953	2	Rel-13	B	RP-152073	R2-157143	approved	Introducing CRS interference mitigation on SCell	12.7.0	13.0.0	R2	LTE_CRSIM-Perf
36.331	1955	3	Rel-13	B	RP-152075	R2-157154	approved	Introduction of load redistribution in RRC_IDLE	12.7.0	13.0.0	R2	LTE_MC_load-Core
36.331	1957	3	Rel-13	F	RP-152084	R2-157179	approved	Clarification on FGI bits setting for MCPTT	12.7.0	13.0.0	R2	TEI13
36.331	1961	2	Rel-13	B	RP-152079	R2-157062	approved	Introducing EBF FD MIMO parameters	12.7.0	13.0.0	R2	LTE_EBF_FDMIMO-Core
36.331	1963	-	Rel-11	F	RP-152050	R2-156731	approved	Clarification on FDD/TDD difference for UL CA IDC indication	11.13.0	11.14.0	R2	SPIA_IDC_LTE-Core
36.331	1964	-	Rel-12	A	RP-152050	R2-156732	approved	Clarification on FDD/TDD difference for UL CA IDC indication	12.7.0	12.8.0	R2	SPIA_IDC_LTE-Core
36.331	1965	1	Rel-12	F	RP-152055	R2-157050	approved	Correction on capability rsrq-OnAllSymbols	12.7.0	12.8.0	R2	TEI12
36.331	1966	1	Rel-10	F	RP-152046	R2-157034	approved	MaxLayerMIMO in HandoverPreparationInformation	10.18.0	10.19.0	R2	LTE-L23, TEI10
36.331	1969	1	Rel-12	F	RP-152053	R2-157040	approved	Correction on measurement identity autonomous removal in dual connectivity	12.7.0	12.8.0	R2	LTE_SC_enh_dualC-Core
36.331	1970	1	Rel-11	A	RP-152046	R2-157035	approved	MaxLayerMIMO in HandoverPreparationInformation	11.13.0	11.14.0	R2	LTE-L23, TEI10
36.331	1971	1	Rel-12	A	RP-152046	R2-157036	approved	MaxLayerMIMO in HandoverPreparationInformation	12.7.0	12.8.0	R2	LTE-L23, TEI10
36.331	1972	-	Rel-13	C	RP-152084	R2-156748	approved	White-list of cells for EUTRA measurement reporting	12.7.0	13.0.0	R2	TEI13
36.331	1973	3	Rel-12	F	RP-152053	R2-157184	approved	Clarification of MCG	12.7.0	12.8.0	R2	LTE_SC_enh_dualC-Core
36.331	1974	-	Rel-11	F	RP-152046	R2-156751	approved	Correction to SystemTimeInfoCDMA2000 IE	11.13.0	11.14.0	R2	LTE-L23, TEI11
36.331	1975	-	Rel-12	A	RP-152046	R2-156752	approved	Correction to SystemTimeInfoCDMA2000 IE	12.7.0	12.8.0	R2	LTE-L23, TEI11
36.331	1979	1	Rel-12	F	RP-152053	R2-157042	approved	Clarification on tdd-FDD-CA-PCellDuplex	12.7.0	12.8.0	R2	LTE_CA_TDD_FDD-Core, LTE_SC_enh_dualC-Core
36.331	1983	2	Rel-13	B	RP-152078	R2-156917	approved	Introduction of Licensed-Assisted Access using LTE	12.7.0	13.0.0	R2	LTE_LAA-Core
36.331	1984	1	Rel-13	B	RP-152066	R2-157100	approved	Introduction of Application specific Congestion control for Data Communication in LTE	12.7.0	13.0.0	R2	ACDC-RAN-Core
36.331	1986	1	Rel-12	F	RP-152053	R2-156843	approved	Correction to the support of Mobility State reporting	12.7.0	12.8.0	R2	HetNet_eMOB_LTE-Core
36.331	1987	-	Rel-12	F	RP-152046	R2-157037	approved	Correction to ASN.1 field names for 4-layer TM3/4	12.7.0	12.8.0	R2	LTE-L23, TEI12
36.331	1988	-	Rel-13	B	RP-152076	R2-157167	approved	Introducing extended DRX	12.7.0	13.0.0	R2	LTE_extDRX-Core
36.331	1989	-	Rel-12	C	RP-152057	R2-157182	not pursued	Addition of establishment cause for mobile-originating VoLTE calls without network indication in SIB2	12.7.0		R2	TEI12
36.331	1999	-	Rel-12	F	RP-151936	-	revised	CR on unknown Establishment Cause handling	12.7.0		R2	TEI12
36.331	1999	1	Rel-12	F	RP-152174	-	not pursued	CR on unknown Establishment Cause handling	12.7.0		R2	TEI12
36.355	0134	1	Rel-12	F	RP-152055	R2-157058	approved	Correction to the definition of Need codes	12.4.0	12.5.0	R2	TEI12
36.355	0137	3	Rel-13	B	RP-152068	R2-157125	approved	RAT-Independent positioning enhancements	12.4.0	13.0.0	R2	UTRA_LTE_iPos_enh-Core

Samsung Exhibit 1025, Page 1096 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.401	0072	3	Rel-12	F	RP-152085	R3-152317	approved	Correction on UE associations in eNB	12.2.0	12.3.0	R3	TEI12
36.401	0076	1	Rel-13	B	RP-152102	R3-152387	approved	Extension of X2AP IDs	12.2.0	13.0.0	R3	LTE_dualC_ext-Core
36.413	1315	6	Rel-13	B	RP-152100	R3-152652	approved	ProSe UE Relaying Support in S1AP	13.0.0	13.1.0	R3	LTE_eD2D_Prox-Core
36.413	1345	2	Rel-13	C	RP-152099	R3-152752	approved	Extension of PDCP SN	13.0.0	13.1.0	R3	LTE_CA_enh_b5C-Core
36.413	1348	4	Rel-13	B	RP-152102	R3-152896	approved	Adding CSG support to DC	13.0.0	13.1.0	R3	LTE_dualC_ext-Core
36.413	1362	4	Rel-13	B	RP-152096	R3-152915	approved	Introduction of Dedicated Core Network (DCN) feature	13.0.0	13.1.0	R3	DECOR-UTRA_LTE-Core
36.413	1368	1	Rel-13	B	RP-152102	R3-152789	approved	Support of SIPTO and LIPA for DC	13.0.0	13.1.0	R3	LTE_dualC_ext-Core
36.413	1369	3	Rel-13	B	RP-152103	R3-152916	approved	Introduction of feMDT	13.0.0	13.1.0	R3	LTE_eMDT2-Core
36.413	1372	-	Rel-13	B	RP-152102	R3-152600	approved	Tunnel Information of BBAI in Dual Connectivity	13.0.0	13.1.0	R3	LTE_dualC_ext-Core
36.413	1373	2	Rel-13	B	RP-152108	R3-152843	approved	Introduction of PWS Failure Indication message	13.0.0	13.1.0	R3	TEI13,WSR_EPS
36.423	0850	5	Rel-13	B	RP-152100	R3-152497	approved	UE-to-Network Relay authorization	13.1.0	13.2.0	R3	LTE_eD2D_Prox-Core
36.423	0892	2	Rel-13	C	RP-152099	R3-152753	approved	Extension of PDCP SN	13.1.0	13.2.0	R3	LTE_CA_enh_b5C-Core
36.423	0901	4	Rel-13	B	RP-152102	R3-152898	approved	Adding CSG support to DC	13.1.0	13.2.0	R3	LTE_dualC_ext-Core
36.423	0907	-	Rel-13	F	RP-152086	R3-151987	approved	Correction on inter eNB CoMP	13.1.0	13.2.0	R3	COMP_LTE_IeNB_sig-Core
36.423	0910	5	Rel-13	B	RP-152102	R3-152892	approved	Support of SIPTO stand-alone architecture in dual connectivity	13.1.0	13.2.0	R3	LTE_dualC_ext-Core
36.423	0911	2	Rel-13	B	RP-152102	R3-152889	approved	Support of SIPTO and LIPA in dual connectivity	13.1.0	13.2.0	R3	LTE_dualC_ext-Core
36.423	0912	6	Rel-13	B	RP-152102	R3-152897	approved	Support of handover without SeNB change	13.1.0	13.2.0	R3	LTE_dualC_ext-Core
36.423	0916	2	Rel-13	B	RP-152102	R3-152397	approved	Handling of user inactivity in the SeNB	13.1.0	13.2.0	R3	LTE_dualC_ext-Core
36.423	0918	-	Rel-13	F	RP-152086	R3-152066	approved	Correction of Subband Index	13.1.0	13.2.0	R3	COMP_LTE_IeNB_sig-Core
36.423	0923	4	Rel-12	F	RP-152085	R3-152871	approved	Correction of intra cell handovers in multiband deployments	12.7.0	12.8.0	R3	TEI12
36.423	0924	4	Rel-13	A	RP-152085	R3-152872	approved	Correction of intra cell handovers in multiband deployments	13.1.0	13.2.0	R3	TEI12
36.423	0927	2	Rel-13	B	RP-152102	R3-152785	approved	Extension of UE X2AP ID	13.1.0	13.2.0	R3	LTE_dualC_ext-Core
36.423	0929	2	Rel-13	B	RP-152102	R3-152888	approved	SIPTO@LN and LIPA bearer deactivation for DC (follow existing principle)	13.1.0	13.2.0	R3	LTE_dualC_ext-Core
36.423	0932	3	Rel-13	B	RP-152103	R3-152917	approved	Introduction of feMDT	13.1.0	13.2.0	R3	LTE_eMDT2-Core
36.423	0936	2	Rel-13	B	RP-152108	R3-152912	approved	Addition of the Cell Deployment Status Indicator and replacing cell information	13.1.0	13.2.0	R3	TEI13
36.423	0939	1	Rel-13	B	RP-152102	R3-152836	approved	Tunnel Information of BBAI in Dual Connectivity	13.1.0	13.2.0	R3	LTE_dualC_ext-Core
36.425	0006	2	Rel-13	C	RP-152099	R3-152914	approved	Extension of PDCP SN	12.1.0	13.0.0	R3	LTE_CA_enh_b5C-Core
36.443	0109	5	Rel-13	B	RP-152101	R3-152813	approved	Introduction of SC-PTM	13.1.0	13.2.0	R3	LTE_SC_PTM-Core
36.444	0072	7	Rel-13	B	RP-152101	R3-152812	approved	Introduction of SC-PTM	13.0.0	13.1.0	R3	LTE_SC_PTM-Core
36.508	0641	-	Rel-12	F	RP-151703	R5-155083	approved	Update generic procedures 4.5A.19 and 4.5A.20	12.7.0	12.8.0	R5	EVS_codec-UEConTest
36.508	0642	-	Rel-12	F	RP-151685	R5-155111	approved	Editor notes correction in clause 5.2A.1A	12.7.0	12.8.0	R5	TEI8_Test
36.508	0643	-	Rel-12	F	RP-151705	R5-155130	approved	Editorial correction to Device to Device Proximity Services Test Environment	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.508	0644	-	Rel-12	F	RP-151710	R5-155234	approved	Introduction of combinations of system information blocks for Dual Connectivity	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.508	0645	1	Rel-12	F	RP-151712	R5-156088	approved	Adding default message contents for NAICS test cases	12.7.0	12.8.0	R5	LTE_NAICS-UEConTest

Samsung Exhibit 1025, Page 1097 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.508	0647	1	Rel-12	F	RP-151705	R5-156159	approved	Add generic procedures for ProSe UE registration	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.508	0648	1	Rel-12	F	RP-151705	R5-156012	approved	ProSe: Connection diagram for basic Tx/Rx testing	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.508	0650	1	Rel-12	F	RP-151701	R5-155961	approved	Addition of new generic procedures to check UE does not offload	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.508	0651	-	Rel-12	F	RP-151710	R5-155419	approved	Introduction of generic test procedures for Dual Connectivity for signalling testing	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.508	0652	-	Rel-12	F	RP-151710	R5-155434	approved	Introduction of default messages for Dual Connectivity	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.508	0653	1	Rel-12	F	RP-151685	R5-156094	approved	Correction to UE test states for RF/RRM testing	12.7.0	12.8.0	R5	TEI8_Test
36.508	0654	1	Rel-12	F	RP-151700	R5-155865	approved	Connections for 3DL CA RRM test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0655	-	Rel-12	F	RP-151685	R5-155490	approved	Correction to procedure for UE triggered establishment of a default EPS bearer context associated with an additional PDN	12.7.0	12.8.0	R5	TEI8_Test
36.508	0657	1	Rel-12	F	RP-151701	R5-155962	approved	Update of WLAN Offload procedures to and from EUTRA	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.508	0658	1	Rel-12	F	RP-151700	R5-155910	approved	3DL carrier aggregation combination corrections to Table 6.2.3.2-2 “Test frequencies for E-UTRA PCell and SCell for CA Inter-band operation (two bands)”	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0659	-	Rel-12	F	RP-151705	R5-155647	approved	Addition of default Test UICC contents for DF_ProSe	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.508	0661	1	Rel-12	F	RP-151699	R5-155958	approved	Add generic procedures for IMS over WLAN	12.7.0	12.8.0	R5	MTSI_WLAN-UEConTest
36.508	0662	1	Rel-12	F	RP-151713	R5-155800	approved	Removal of incorrect test frequencies for CA_12B	12.7.0	12.8.0	R5	TEI12_Test
36.508	0663	1	Rel-12	F	RP-151705	R5-155922	approved	Clarification of SIB18/19 Table	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.509	0149	-	Rel-12	F	RP-151705	R5-155362	approved	ProSe test loop modes Enhancements	12.1.0	12.2.0	R5	LTE_D2D_Prox-UEConTest
36.521-1	2151	1	Rel-12	F	RP-151700	R5-155844	approved	New CA band combination CA_1A-3A-8A - Updates of 7.3A.5 RefSens	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2152	1	Rel-12	F	RP-151700	R5-155845	approved	New CA band combination CA_1A-3A-8A - Updates of 7.3.3 Delta RIB	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2153	1	Rel-13	F	RP-151714	R5-156071	approved	New TC: Maximum Power Reduction (MPR) for CA (intra-band contiguous DL CA and UL CA) for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2154	2	Rel-13	F	RP-151714	R5-156188 (actually R5-156072 is included in RP-151714 but it has the same contents but R5-156188 is for REL-13)	approved	New TC: Adjacent Channel Leakage power Ratio for CA (intra-band contiguous DL CA and UL CA) for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2155	1	Rel-12	F	RP-151689	R5-156095	approved	Update Minimum requirements for test case 6.2.3A.1	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2156	-	Rel-12	F	RP-151700	R5-155112	approved	Addition of simplified CA testing method (Annex C.3.5) into 36.521-1	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2157	-	Rel-12	F	RP-151708	R5-155113	approved	Uncertainty and Test Tolerance for FDD TM3 test case for LTE Type C performance requirements (8.2.1.3.1B)	12.7.0	12.8.0	R5	LTE_SUMIMO_RX-UEConTest

Samsung Exhibit 1025, Page 1098 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	2158	1	Rel-12	F	RP-151708	R5-155840	approved	Uncertainty and Test Tolerance for FDD TM4 test case for LTE Type C performance requirements (8.2.1.4.2A)	12.7.0	12.8.0	R5	LTE_SUMIMO_RX-UEConTest
36.521-1	2159	1	Rel-12	F	RP-151708	R5-155841	approved	Uncertainty and Test Tolerance for TDD TM4 test case for LTE Type C performance requirements (8.2.2.4.2A)	12.7.0	12.8.0	R5	LTE_SUMIMO_RX-UEConTest
36.521-1	2160	-	Rel-12	F	RP-151708	R5-155116	approved	Uncertainty and Test Tolerance for TDD TM8 test case for LTE Type C performance requirements (8.3.2.2.2)	12.7.0	12.8.0	R5	LTE_SUMIMO_RX-UEConTest
36.521-1	2161	-	Rel-12	F	RP-151708	R5-155117	approved	Uncertainty and Test Tolerance for FDD TM9 test case for LTE Type C performance requirements (8.3.1.2.2)	12.7.0	12.8.0	R5	LTE_SUMIMO_RX-UEConTest
36.521-1	2162	-	Rel-12	F	RP-151708	R5-155118	approved	Uncertainty and Test Tolerance for FDD TM3 multi-cell test case with TM1 interference for LTE Type C performance requirements (8.2.1.3.1C)	12.7.0	12.8.0	R5	LTE_SUMIMO_RX-UEConTest
36.521-1	2163	-	Rel-12	F	RP-151708	R5-155119	approved	Uncertainty and Test Tolerance for TDD TM3 multi-cell test case with TM1 interference for LTE Type C performance requirements (8.2.2.3.1C)	12.7.0	12.8.0	R5	LTE_SUMIMO_RX-UEConTest
36.521-1	2164	1	Rel-12	F	RP-151687	R5-156134	approved	Update to in-band Emissions Limits for less than 1GHz Carrier Frequencies	12.7.0	12.8.0	R5	TEI9_Test
36.521-1	2165	1	Rel-12	F	RP-151708	R5-155842	approved	Update of SUMIMO for LTE Type C performance TC 8.2.2.3.1B	12.7.0	12.8.0	R5	LTE_SUMIMO_RX-UEConTest
36.521-1	2166	1	Rel-12	F	RP-151708	R5-156062	approved	Addition of Minimum test time for LTE Type C performance in Annex G	12.7.0	12.8.0	R5	LTE_SUMIMO_RX-UEConTest
36.521-1	2167	1	Rel-12	F	RP-151684	R5-156100	approved	Deleting redundant and outdated Demod scenario in Minimum test time	12.7.0	12.8.0	R5	TEI8_Test
36.521-1	2168	1	Rel-12	F	RP-151704	R5-155892	approved	Correction of test cases title for eDL MIMO Enhancement test cases	12.7.0	12.8.0	R5	LTE_eDL_MIMO_enh-UEConTest
36.521-1	2169	-	Rel-12	F	RP-151704	R5-155205	approved	Addition of test time for testing throughput ratios for eDL MIMO Enhancement	12.7.0	12.8.0	R5	LTE_eDL_MIMO_enh-UEConTest
36.521-1	2170	1	Rel-12	F	RP-151706	R5-156035	approved	New TC: 8.9.1.1.2 FDD Closed-loop spatial multiplexing performance (Cell-Specific Reference Symbols) for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2171	1	Rel-12	F	RP-151706	R5-156036	approved	New TC: 8.9.1.2.2 TDD Closed-loop spatial multiplexing performance (Cell-Specific Reference Symbols) for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2173	1	Rel-12	F	RP-151706	R5-156037	approved	Add new LC MTC test case 8.9.1.1.3 FDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2174	1	Rel-12	F	RP-151706	R5-156038	approved	Add new LC MTC test case 8.9.1.2.1 TDD PDSCH Transmit Diversity for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2175	1	Rel-12	F	RP-151706	R5-156039	approved	Add new LC MTC test case 8.9.1.2.3 TDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2176	1	Rel-12	F	RP-151706	R5-155807	approved	Add new LC MTC test case 9.7.2.1 FDD CQI Reporting under fading conditions for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest

Samsung Exhibit 1025, Page 1099 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	2177	1	Rel-12	F	RP-151706	R5-155808	approved	Add new LC MTC test case 9.7.2.2 TDD CQI Reporting under fading conditions for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2182	1	Rel-12	F	RP-151712	R5-155848	approved	LTE Type B performance requirements - Changes to clause 3	12.7.0	12.8.0	R5	LTE_NAICS-UEConTest
36.521-1	2183	1	Rel-12	F	RP-151712	R5-155846	approved	LTE Type B performance requirements - Addition of fixed reference channels into Annex A	12.7.0	12.8.0	R5	LTE_NAICS-UEConTest
36.521-1	2184	1	Rel-12	F	RP-151712	R5-155847	approved	LTE Type B performance requirements - Introduction of new interference models into Annex B.6	12.7.0	12.8.0	R5	LTE_NAICS-UEConTest
36.521-1	2185	1	Rel-12	F	RP-151712	R5-156089	approved	LTE Type B performance requirements - Introduction of new test cases 8.2.1.2.5 and 8.2.1.2.6	12.7.0	12.8.0	R5	LTE_NAICS-UEConTest
36.521-1	2186	1	Rel-12	F	RP-151712	R5-156090	approved	LTE Type B performance requirements - Introduction of new test cases 8.2.2.2.6 and 8.2.2.2.7	12.7.0	12.8.0	R5	LTE_NAICS-UEConTest
36.521-1	2187	1	Rel-12	F	RP-151712	R5-156091	approved	LTE Type B performance requirements - Introduction of new test cases 9.3.8.1.1 and 9.3.8.1.2	12.7.0	12.8.0	R5	LTE_NAICS-UEConTest
36.521-1	2188	1	Rel-12	F	RP-151712	R5-156092	approved	LTE Type B performance requirements - Adding six NAICS test cases into Annex F and G	12.7.0	12.8.0	R5	LTE_NAICS-UEConTest
36.521-1	2189	1	Rel-12	F	RP-151706	R5-156040	approved	Addition of Minimum test time for Demodulation performance for UE category 0 in Annex G	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2190	1	Rel-12	F	RP-151706	R5-156110	approved	Introduction of new test case 8.9.2.1.1 MTC	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2191	1	Rel-12	F	RP-151706	R5-156041	approved	Introduction of new test case 8.9.2.2.1 MTC	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2192	2	Rel-12	F	RP-151707	R5-156130	approved	New CA 2UL Tx test case 6.3.5A.3.3 of Aggregate Power Control Tolerance for CA (intra-band non-contiguous DL CA and UL CA)	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2193	1	Rel-12	F	RP-151707	R5-156057	approved	New CA 2UL Tx test case 6.5.1A.3 Frequency Error for CA (intra-band non-contiguous DL CA and UL CA)	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2194	1	Rel-13	F	RP-151714	R5-156073	approved	New TC: 6.2.3_3 MPR for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2195	1	Rel-13	F	RP-151714	R5-156074	approved	New TC: 6.2.3_4 MPR for Multi-Cluster PUSCH with UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2196	1	Rel-13	F	RP-151714	R5-156075	approved	New TC: 6.2.4_2 AMPR for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2197	1	Rel-13	F	RP-151714	R5-156076	approved	New TC: 6.5.2.1_1 EVM for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2198	1	Rel-13	F	RP-151714	R5-156077	approved	New TC: 6.5.2A.1.1_1 EVM for CA with UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2199	1	Rel-13	F	RP-151714	R5-156078	approved	New TC: 6.6.2.2_1 Additional Spectrum Emission Mask for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2200	1	Rel-13	F	RP-151714	R5-156079	approved	New TC: 6.6.2.3_3 ACLR for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2201	1	Rel-13	F	RP-151714	R5-156080	approved	New TC: 6.6.2.3_4 ACLR for Multi-Cluster PUSCH with UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2202	1	Rel-13	F	RP-151714	R5-156081	approved	New TC: 6.6.3.3_1 Additional spurious emissions for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2203	1	Rel-13	F	RP-151714	R5-156082	approved	Addition of RMCs for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2204	1	Rel-13	F	RP-151714	R5-156083	approved	Introduction of uncertainties and TTs in Annex F for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2206	-	Rel-12	F	RP-151689	R5-155300	approved	Update of editor's note for TC 6.6.2.2A.1	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2207	1	Rel-12	F	RP-151700	R5-156020	approved	Update of RB configrations for TC 7.3A.5	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest

Samsung Exhibit 1025, Page 1100 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	2208	-	Rel-12	F	RP-151705	R5-155309	approved	ProSe: Update of general chapters in 36.521-1	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.521-1	2209	1	Rel-12	F	RP-151705	R5-156014	approved	ProSe: Reference sensitivity test	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.521-1	2210	1	Rel-12	F	RP-151705	R5-156013	approved	ProSe: Additions to Annexes for RF testing	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.521-1	2211	-	Rel-12	F	RP-151705	R5-155312	approved	ProSe: Update of annexes in 36.521-1	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.521-1	2212	-	Rel-12	F	RP-151684	R5-155313	approved	Update of UE categories for R8 in 36.521-1	12.7.0	12.8.0	R5	TEI8_Test
36.521-1	2213	1	Rel-12	F	RP-151689	R5-155804	approved	Update of UE categories for R10 in 36.521-1	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2214	-	Rel-12	F	RP-151696	R5-155316	approved	Update of UE categories for R11 in 36.521-1	12.7.0	12.8.0	R5	TEI11_Test
36.521-1	2215	-	Rel-12	F	RP-151707	R5-155360	approved	Test description for test case 6.3.3A.3: UE Transmit OFF power for CA (intra-band non-contiguous DL CA and UL CA)	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2216	-	Rel-12	F	RP-151689	R5-155361	approved	Correction to Test cases 9.6.1.1_A.1 and 9.6.1.2_A.1: FDD/TDD CQI Reporting under AWGN conditions – PUCCH 1-0 (2DL CA)	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2222	1	Rel-12	F	RP-151700	R5-156021	approved	Addition of soft-buffer test cases for FDD-TDD 2DL CA (8.2.3.2.1A, 8.2.3.2.2A)	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2224	1	Rel-12	F	RP-151700	R5-155851	approved	Update of 2DL TDD FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for TDD PCell (8.2.3.3.2.1)	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2225	1	Rel-12	F	RP-151700	R5-155852	approved	Update of 3DL TDD FDD CA PDSCH Closed Loop Multi Layer Spatial Multiplexing 4x2 for TDD PCell (8.2.3.3.2.2)	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2226	-	Rel-12	F	RP-151707	R5-155394	approved	Updates of the test configuration about occupied bandwidth for CA (inter-band DL CA and UL CA)	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2227	1	Rel-12	F	RP-151689	R5-156096	approved	Updates of test configuration for OBW for intra-band contiguous UL CA	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2228	-	Rel-12	F	RP-151707	R5-155401	approved	Updates of message contents for ON/OFF time mask for 2UL inter-band CA	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2229	1	Rel-12	F	RP-151707	R5-156006	approved	Addition of initial conditions for frequency error for 2UL inter-band CA	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2230	1	Rel-12	F	RP-151707	R5-156007	approved	Updates of SEM for 2UL inter-band CA	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2231	1	Rel-12	F	RP-151707	R5-156008	approved	Updates of test requirements for general spurious for 2UL inter-band CA	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2232	-	Rel-12	F	RP-151707	R5-155405	approved	Updates of Refsens for 2UL inter-band CA	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2233	-	Rel-12	F	RP-151700	R5-155406	approved	Addition of CA_3A-42A to 7.3A.3 and applicability updates for all inter-band 2DL CA receiver test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2234	1	Rel-12	F	RP-151700	R5-156022	approved	Delta RIB,c updates for 3DL CA supporting UE	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2235	-	Rel-12	F	RP-151700	R5-155409	approved	Updatest of CA demodulation applicabilities in general section	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2236	1	Rel-12	F	RP-151700	R5-155850	approved	Addition of new test cases for TDD FDD CA PDSCH Open Loop for FDD PCell(2DL and 3DL)	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2237	1	Rel-12	F	RP-151700	R5-156023	approved	Addition of new test cases for TDD FDD CA PDSCH Closed Loop 4x2 for FDD PCell (2DL and 3DL)	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2239	1	Rel-12	F	RP-151700	R5-156024	approved	Correction to test point selection table for TDD-FDD CA cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2240	1	Rel-12	F	RP-151706	R5-156042	approved	Update of TC 9.7.1.2 TDD CQI reporting definition under AWGN conditions for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest

Samsung Exhibit 1025, Page 1101 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	2241	-	Rel-12	F	RP-151710	R5-155420	approved	Changes to general clauses for Dual Connectivity	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.521-1	2242	1	Rel-12	F	RP-151710	R5-156016	approved	Introduction of FDD PDSCH Closed Loop Multi-Layer Spatial Multiplexing 4x2 for Dual Connectivity	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.521-1	2243	1	Rel-12	F	RP-151710	R5-156017	approved	Introduction of TDD PDSCH Closed Loop Multi-Layer Spatial Multiplexing 4x2 for Dual Connectivity	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.521-1	2244	1	Rel-12	F	RP-151710	R5-156018	approved	Introduction of FDD sustained data rate performance for Dual Connectivity	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.521-1	2245	1	Rel-12	F	RP-151710	R5-156019	approved	Introduction of TDD sustained data rate performance for Dual Connectivity	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.521-1	2246	-	Rel-12	F	RP-151710	R5-155425	approved	Introduction of the reference and abbreviations for Dual Connectivity	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.521-1	2247	-	Rel-12	F	RP-151700	R5-155426	approved	Removal of the duplicate clause 8.2.1.4.2_A.2.5	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2248	1	Rel-12	F	RP-151700	R5-155853	approved	Update for Annex for TDD/FDD Perf test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2250	1	Rel-12	F	RP-151700	R5-155855	approved	Clean up of 3DL CA Rx test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2251	1	Rel-12	F	RP-151700	R5-156025	approved	Correction to 7.3A.5	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2252	1	Rel-12	F	RP-151700	R5-156026	approved	Update CA perf test cases in clause 8	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2253	-	Rel-12	F	RP-151689	R5-155444	approved	Clean up of Tx test cases	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2254	1	Rel-12	F	RP-151689	R5-155802	approved	Correction to 2DL CA Rx test cases	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2255	-	Rel-12	F	RP-151689	R5-155446	approved	Correction to Rx UL CA test cases	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2256	-	Rel-12	F	RP-151684	R5-155447	approved	Correction to reference channel for CQI requirements	12.7.0	12.8.0	R5	TEI8_Test
36.521-1	2257	-	Rel-12	F	RP-151687	R5-155448	approved	Correction to UL RMC for single carrier SDR	12.7.0	12.8.0	R5	TEI9_Test
36.521-1	2258	1	Rel-12	F	RP-151689	R5-156101	approved	Clarification of DL configuration for wideband	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2259	-	Rel-12	F	RP-151696	R5-155450	approved	Correction to CoMP demodulation requirements	12.7.0	12.8.0	R5	TEI11_Test
36.521-1	2260	1	Rel-12	F	RP-151696	R5-156102	approved	Correction to Enhanced Performance Type A performance test cases	12.7.0	12.8.0	R5	TEI11_Test
36.521-1	2261	-	Rel-12	F	RP-151696	R5-155452	approved	Correction to Enhanced Performance Type A CQI reporting test	12.7.0	12.8.0	R5	TEI11_Test
36.521-1	2262	-	Rel-12	F	RP-151696	R5-155453	approved	Correction to CQI and RI Reporting test cases for feICIC	12.7.0	12.8.0	R5	TEI11_Test
36.521-1	2263	1	Rel-12	F	RP-151704	R5-155893	approved	Corrections to eDL MIMO enhancement TC 9.3.7.1_G+9.3.7.2_G	12.7.0	12.8.0	R5	LTE_eDL_MIMO_enh-UEConTest
36.521-1	2264	1	Rel-12	F	RP-151704	R5-155894	approved	Corrections to eDL MIMO enhancement TC 9.4.1.4.1_G+9.4.1.4.2_G	12.7.0	12.8.0	R5	LTE_eDL_MIMO_enh-UEConTest
36.521-1	2265	-	Rel-12	F	RP-151700	R5-155460	approved	CA RF: Update 3DL Refsense test requirements	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2266	1	Rel-12	F	RP-151689	R5-155803	approved	CA RF: Correction to message contents for 2DL Max Input Power TCs	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2267	-	Rel-12	F	RP-151700	R5-155462	approved	Corrections to Refsense minimum requirements	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2268	1	Rel-12	F	RP-151689	R5-156097	approved	CA RF: Minor corrections to section 6.6.3.3A	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2269	-	Rel-12	F	RP-151689	R5-155464	approved	CA RF: Update of test points for Rx inter-band test cases	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2271	1	Rel-12	F	RP-151700	R5-156027	approved	CA RF: Update to 3DL Refsense test configurations	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest

Samsung Exhibit 1025, Page 1102 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	2272	1	Rel-12	F	RP-151700	R5-155859	approved	CA RF: Correction to message contents for 3DL Max Input Power	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2274	-	Rel-12	F	RP-151700	R5-155471	approved	Corrections to message contents for CSI 3DL CA TCs 9.6.1.3.2+9.6.1.4.2	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2275	-	Rel-12	F	RP-151700	R5-155474	approved	Corrections to CA demodulation tests	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2276	-	Rel-12	F	RP-151689	R5-155476	approved	Corrections to message exceptions for CSI-RS setting	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2277	1	Rel-12	F	RP-151684	R5-156103	approved	Correction and addition of minimum test time for several tests	12.7.0	12.8.0	R5	TEI8_Test
36.521-1	2278	-	Rel-12	F	RP-151684	R5-155478	approved	Updates to Annexes A.2 and A.3	12.7.0	12.8.0	R5	TEI8_Test
36.521-1	2280	1	Rel-12	F	RP-151700	R5-155857	approved	Completion of Testcase 7.3A.5	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2281	1	Rel-12	F	RP-151700	R5-156028	approved	Improvements to 3DL OOB Testcase (7.6.2A.5)	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2282	-	Rel-12	F	RP-151706	R5-155530	approved	Addition of measurement uncertainty and test tolerances for TC 9.7.1.2 TDD CQI reporting definition under AWGN conditions for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2283	-	Rel-12	F	RP-151687	R5-155543	approved	Correction to Test Parameters for the test cases 10.1 and 10.2	12.7.0	12.8.0	R5	TEI9_Test
36.521-1	2284	1	Rel-12	F	RP-151684	R5-156104	approved	Correction to test cases of the section of 9.5.1	12.7.0	12.8.0	R5	TEI8_Test
36.521-1	2285	1	Rel-13	F	RP-151714	R5-156084	approved	New TC: A-MPR for CA (intra-band contiguous DL CA and UL CA) for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2286	1	Rel-13	F	RP-151714	R5-156085	approved	New TC: A-SEM for CA (intra-band contiguous DL CA and UL CA) for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2287	1	Rel-13	F	RP-151714	R5-156086	approved	New TC: Additional spurious emissions for CA (intra-band contiguous DL CA and UL CA) for UL 64QAM	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-1	2288	1	Rel-12	F	RP-151689	R5-155801	approved	Correction to 6.2.4A.1	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2289	-	Rel-12	F	RP-151689	R5-155554	approved	Correction to 6.6.3.3A.1	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2290	2	Rel-12	F	RP-151707	R5-156131	approved	New TC of Aggregate Power Control Tolerance for 2UL inter-band CA(6.3.5A.3.2)	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2291	1	Rel-12	F	RP-151707	R5-156058	approved	New TC of A-MPR for 2UL inter-band CA (6.2.4A.2)	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2292	1	Rel-12	F	RP-151707	R5-156098	approved	Revise Configured UE transmitted Output Power for 2UL intra-band contiguous CA test case 6.2.5A.1	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2293	1	Rel-12	F	RP-151707	R5-156059	approved	New TC of Additional spurious emissions for intra-band non-contiguous CA 6.6.3.3A.3	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	2294	1	Rel-12	F	RP-151687	R5-156133	approved	Correction to the appliable test release of 1.4MHz Bandwidth MBMS test	12.7.0	12.8.0	R5	TEI9_Test
36.521-1	2295	1	Rel-12	F	RP-151700	R5-156029	approved	Updates to 8.7.5 about TDD-FDD CA SDR performance test	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2297	1	Rel-12	F	RP-151709	R5-156063	approved	Addition of new TC 7.4_H Maximum input level for SCE-L1	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2298	1	Rel-12	F	RP-151709	R5-156064	approved	Addition of new TC 7.4A.1_H Maximum input level for SCE-L1 for CA (intra-band contiguous DL CA and UL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2299	1	Rel-12	F	RP-151709	R5-156065	approved	Addition of new TC 7.4A.2_H Maximum input level for SCE-L1for CA (intra-band contiguous DL CA without UL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2300	1	Rel-12	F	RP-151709	R5-156066	approved	Addition of new TC 7.4A.5_H Maximum input level for SCE-L1 for CA (3DL CA without UL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest

Samsung Exhibit 1025, Page 1103 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	2301	1	Rel-12	F	RP-151709	R5-156113	approved	Addition of new TC 8.2.1.4.1_H FDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 2x2 for SCE-L1	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2302	1	Rel-12	F	RP-151709	R5-156114	approved	Addition of new TC 8.2.2.4.1_H TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 2x2 for SCE-L1	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2303	1	Rel-12	F	RP-151709	R5-156115	approved	Addition of new TC 8.3.1.1.1_H FDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 without a simultaneous transmission for SCE-L1 for eDL-MIMO	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2304	1	Rel-12	F	RP-151709	R5-156116	approved	Addition of new TC 8.3.2.1.2_H TDD PDSCH Single-layer Spatial Multiplexing on antenna ports 7 or 8 without a simultaneous transmission for eDL-MIMO for SCE-L1	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2305	1	Rel-12	F	RP-151709	R5-156117	approved	Addition of new TC 8.7.1.1_H FDD sustained data rate performance for SCE-L1	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2306	1	Rel-12	F	RP-151709	R5-156118	approved	Addition of new TC 8.7.1.1_H.2 FDD Sustained data rate performance for CA for SCE-L1 (2DL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2307	1	Rel-12	F	RP-151709	R5-156119	approved	Addition of new TC 8.7.1.1_H.3 FDD Sustained data rate performance for CA for SCE-L1 (3DL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2308	1	Rel-12	F	RP-151709	R5-156120	approved	Addition of new TC 8.7.2.1_H.1 TDD sustained data rate performance for SCE-L1 (Single Carrier)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2309	1	Rel-12	F	RP-151709	R5-156121	approved	Addition of new TC 8.7.2.1_H.2 TDD sustained data rate performance for CA for SCE-L1 (2DL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2310	1	Rel-12	F	RP-151709	R5-156122	approved	Addition of new TC 8.7.2.1_H.3 TDD Sustained data rate performance for CA for SCE-L1 (3DL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2311	1	Rel-12	F	RP-151709	R5-156183	approved	Addition of new TC 8.7.5.1_H.1 TDD FDD CA Sustained data rate performance for FDD PCell for SCE-L1 (2DL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2312	1	Rel-12	F	RP-151709	R5-156124	approved	Addition of new TC 8.7.5.1_H.2 TDD FDD CA Sustained data rate performance for FDD PCell for SCE-L1 (3DL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2313	1	Rel-12	F	RP-151709	R5-156125	approved	Addition of new TC 8.7.5.2_H.1 TDD FDD CA Sustained data rate performance for TDD PCell for SCE-L1 (2DL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2314	1	Rel-12	F	RP-151709	R5-156126	approved	Addition of new TC 8.7.5.2_H.2 TDD FDD CA Sustained data rate performance for TDD PCell for SCE-L1 (3DL CA)	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-1	2315	1	Rel-12	F	RP-151706	R5-156043	approved	Update test requirement for MTC test cases: 7.6.1E, 7.6.2E and 7.6.3E	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2316	1	Rel-12	F	RP-151706	R5-156044	approved	Addition of Maximum Test System Uncertainty and Derivation of Test Requirements in Annex F for MTC test cases	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2317	1	Rel-12	F	RP-151706	R5-156045	approved	Additions to test case 6.2.3E - Maximum Power Reduction (MPR) for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2318	1	Rel-12	F	RP-151706	R5-155809	approved	Test case 6.2.4E – Additional Maximum Power Reduction (A-MPR) for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2320	1	Rel-12	F	RP-151706	R5-156046	approved	Additions to test case 6.3.2E – Minimum Output Power for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2321	1	Rel-12	F	RP-151706	R5-155810	approved	Additions to test case 6.3.3E – UE Transmit OFF Power for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest

Samsung Exhibit 1025, Page 1104 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	2322	1	Rel-12	F	RP-151706	R5-155811	approved	Additions to test case 6.3.4E.1 – General ON/OFF time mask for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2324	1	Rel-12	F	RP-151684	R5-156099	approved	Introduction of new A-MPR test with PUSCH frequency hopping	12.7.0	12.8.0	R5	TEI8_Test
36.521-1	2325	-	Rel-12	F	RP-151700	R5-155668	approved	Addition of CA configuration CA_2A-4A-5A in Reference sensitivity level for 3DL CA	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2326	-	Rel-12	F	RP-151706	R5-155670	approved	Correction to DL RMCs for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2327	1	Rel-12	F	RP-151700	R5-155860	approved	Correction of BW to be tested and CA Capability to be tested for TM3 Test Cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2328	1	Rel-12	F	RP-151700	R5-155861	approved	36.521-1 – CA_2A-12B updates	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2329	1	Rel-12	F	RP-151706	R5-155812	approved	Additions to test case 6.3.5E.1 – Power Control Absolute power tolerance for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2330	1	Rel-12	F	RP-151706	R5-155813	approved	Additions to test case 6.3.5E.2 – Power Control Relative power tolerance for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2331	-	Rel-12	F	RP-151689	R5-155709	approved	Editorial corrections to TC 8.2.2.1.1_A.1	12.7.0	12.8.0	R5	TEI10_Test
36.521-1	2332	1	Rel-12	F	RP-151706	R5-156047	approved	Additions to test case 6.3.5E.3 – Aggregate power control tolerance for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2333	1	Rel-12	F	RP-151706	R5-155814	approved	Additions to test case 6.5.1E – Frequency Error for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2334	1	Rel-12	F	RP-151706	R5-155815	approved	Additions to test case 6.5.2.1E.1 – Error Vector Magnitude for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2336	1	Rel-12	F	RP-151706	R5-155816	approved	Additions to test case 6.5.2.2E – Carrier Leakage for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2337	1	Rel-12	F	RP-151700	R5-156030	approved	36.521-1: CA_1A-3A-20A & CA_1A-7A-20A updates	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2338	1	Rel-12	F	RP-151706	R5-155817	approved	Additions to test case 6.5.2.3E – In-band emissions for non allocated RB for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2339	1	Rel-12	F	RP-151706	R5-155818	approved	Additions to test case 6.5.2.4E – EVM equalizer spectrum flatness for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2340	1	Rel-12	F	RP-151706	R5-156048	approved	Additions to test case 6.6.1E – Occupied bandwidth for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2341	1	Rel-12	F	RP-151706	R5-156049	approved	Additions to test case 6.6.2.1E – Spectrum Emission Mask for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2342	1	Rel-12	F	RP-151706	R5-155819	approved	Additions to test case 6.2.5E – Configurated Transmitted Power for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-1	2346	1	Rel-12	F	RP-151700	R5-156031	approved	Addition of 2x2 FDD-TDD CA test cases with TDD PCELL	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	2346 a	-	Rel-12	F	RP-151689	R5-155745	approved	Correction to CQI test cases for LTE CA	12.7.0	12.8.0	R5	TEI10_Test
36.521-2	0308	1	Rel-12	F	RP-151706	R5-156050	approved	Addition of applicability for newly introduced MTC RRM tests	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-2	0309	1	Rel-12	F	RP-151708	R5-155843	approved	Update of applicability of SU-MIMO conformance tests	12.7.0	12.8.0	R5	LTE_SUMIMO_RX-UEConTest
36.521-2	0313	1	Rel-12	F	RP-151712	R5-156093	approved	LTE Type B performance requirements - Addition of applicability for 6 new NAICS test cases	12.7.0	12.8.0	R5	LTE_NAICS-UEConTest

Samsung Exhibit 1025, Page 1105 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-2	0314	-	Rel-12	F	RP-151707	R5-155275	approved	Introduction of applicabilities of 2 test cases for 2UL CA Tx test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-2	0315	1	Rel-13	F	RP-151714	R5-156087	approved	Introduction of test applicabilities for UL 64QAM cases	12.7.0	13.0.0	R5	LTE_UL64QAM-UEConTest
36.521-2	0316	-	Rel-12	F	RP-151689	R5-155301	approved	Introduction of test applicability for TC 6.6.2.2A.1	12.7.0	12.8.0	R5	TEI10_Test
36.521-2	0318	2	Rel-12	F	RP-151713	R5-156135	approved	Update of test applicabilities for R12 RRM cases in 36.521-2	12.7.0	12.8.0	R5	TEI12_Test
36.521-2	0319	-	Rel-12	F	RP-151684	R5-155318	approved	Update of UE categories for R8 in 36.521-2	12.7.0	12.8.0	R5	TEI8_Test
36.521-2	0320	-	Rel-12	F	RP-151689	R5-155319	approved	Update of UE categories for R10 in 36.521-2	12.7.0	12.8.0	R5	TEI10_Test
36.521-2	0322	-	Rel-12	F	RP-151696	R5-155323	approved	Update of UE categories for R11 in 36.521-2	12.7.0	12.8.0	R5	TEI11_Test
36.521-2	0323	1	Rel-12	F	RP-151700	R5-155870	approved	Applicability updates on inter-band CA receiver test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0324	1	Rel-12	F	RP-151700	R5-155871	approved	Correction of applicability for FDD-TDD CA	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0325	1	Rel-12	F	RP-151684	R5-156107	approved	Correction to test case condition for the test cases 9.5.1.x	12.7.0	12.8.0	R5	TEI8_Test
36.521-2	0326	-	Rel-12	F	RP-151687	R5-155544	approved	Correction to conditions C32 and C35 in Table 4.1-1 and Table 4.1-1a	12.7.0	12.8.0	R5	TEI9_Test
36.521-2	0327	-	Rel-12	F	RP-151687	R5-155545	approved	Correction to condiotions of Table 4.1-1a	12.7.0	12.8.0	R5	TEI9_Test
36.521-2	0328	-	Rel-12	F	RP-151687	R5-155556	approved	Correction of RRM Condition C77	12.7.0	12.8.0	R5	TEI9_Test
36.521-2	0329	-	Rel-12	F	RP-151687	R5-155558	approved	Correction of RRM Condition C79	12.7.0	12.8.0	R5	TEI9_Test
36.521-2	0330	-	Rel-12	F	RP-151687	R5-155560	approved	Correction of RRM Condition C80	12.7.0	12.8.0	R5	TEI9_Test
36.521-2	0331	1	Rel-12	F	RP-151707	R5-156060	approved	Addition of applicability for 2UL CA test cases 6.2.5A.3 and 6.2.5A.4	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-2	0332	-	Rel-12	F	RP-151687	R5-155563	approved	Correction of RRM Condition C81	12.7.0	12.8.0	R5	TEI9_Test
36.521-2	0333	1	Rel-12	F	RP-151707	R5-156061	approved	Addition of applicability for 2UL CA test cases 6.2.4A.3, 6.3.5A.3.2 and 6.6.3.3A.3	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-2	0334	-	Rel-12	F	RP-151687	R5-155565	approved	Correction of RRM Condition C82	12.7.0	12.8.0	R5	TEI9_Test
36.521-2	0335	1	Rel-12	F	RP-151700	R5-155873	approved	Introduction of applicability expression for new 3DL CA RRM tes case TC 8.16.41	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0336	1	Rel-12	F	RP-151700	R5-155872	approved	Applicability update to FDD-TDD CA test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0337	1	Rel-12	F	RP-151687	R5-156136	approved	Update of the 1.4MHz MBMS test applicability	12.7.0	12.8.0	R5	TEI9_Test
36.521-2	0338	2	Rel-12	F	RP-151709	R5-156132	approved	Applicability for new SCE-L1 test cases	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-2	0339	-	Rel-12	F	RP-151684	R5-155635	approved	Release indication corrections in table A.4.1-1: UE Radio Technologies	12.7.0	12.8.0	R5	TEI8_Test
36.521-2	0340	1	Rel-12	F	RP-151700	R5-155874	approved	36.521-2: CA_2A-2A-13A update	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0341	-	Rel-12	F	RP-151706	R5-155750	approved	Addition of test cases in Table 4.1-1: Applicability of RF conformance test cases.	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-2	0342	-	Rel-12	F	RP-151706	R5-155777	approved	Test applicability for Intra Frequency RSRP Accuracy for UE category 0 Test Cases	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1250	1	Rel-12	F	RP-151706	R5-155820	approved	Introduction of new test case 6.1.8 MTC	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1251	1	Rel-12	F	RP-151706	R5-156051	approved	Introduction of new test case 8.1.11 MTC	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1252	1	Rel-12	F	RP-151706	R5-155821	approved	Introduction of new test case 8.1.12 MTC	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1253	1	Rel-12	F	RP-151706	R5-155822	approved	Introduction of new test case 8.1.13 MTC	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest

Samsung Exhibit 1025, Page 1106 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-3	1254	1	Rel-12	F	RP-151706	R5-155823	approved	Introduction of new test case 8.1.17 MTC	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1255	1	Rel-12	F	RP-151706	R5-155824	approved	Introduction of new test case 8.1.18 MTC	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1256	1	Rel-12	F	RP-151684	R5-155805	approved	Update minimum requirements for test case 8.1.1	12.7.0	12.8.0	R5	TEI8_Test
36.521-3	1257	1	Rel-12	F	RP-151707	R5-155881	approved	Updated to TC 7.1.4A	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-3	1258	-	Rel-12	F	RP-151687	R5-155108	approved	Correction to test procedure of inter-frequency autonomous gaps test cases	12.7.0	12.8.0	R5	TEI9_Test
36.521-3	1259	1	Rel-12	F	RP-151706	R5-155825	approved	Adding new MTC handover test case 5.1.10	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1260	1	Rel-12	F	RP-151706	R5-155826	approved	Adding new MTC handover test case 5.1.11	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1261	1	Rel-12	F	RP-151706	R5-155827	approved	Adding new MTC handover test case 5.1.12	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1262	-	Rel-12	F	RP-151706	R5-155134	approved	Updating Annex E and F with newly introduced test cases for MTC	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1263	-	Rel-12	F	RP-151706	R5-155135	approved	Adding RMCs for MTC to Annex A	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1264	-	Rel-12	F	RP-151706	R5-155136	approved	Adding abbreviations and SS HD-FDD testing information	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1265	1	Rel-12	F	RP-151713	R5-155806	approved	Updating and aligning of RMC tables in TS36.521-3	12.7.0	12.8.0	R5	TEI12_Test
36.521-3	1266	-	Rel-12	F	RP-151687	R5-155139	approved	Uncertainties and Test tolerances for Test cases 4.3.2 and 4.3.4.2	12.7.0	12.8.0	R5	TEI9_Test
36.521-3	1267	-	Rel-12	F	RP-151684	R5-155141	approved	Uncertainties and Test tolerances for Test cases 4.4.1 and 4.4.2	12.7.0	12.8.0	R5	TEI8_Test
36.521-3	1268	-	Rel-12	F	RP-151684	R5-155143	approved	Uncertainties and Test tolerances for Test cases 4.5.1.1 and 4.5.2.1	12.7.0	12.8.0	R5	TEI8_Test
36.521-3	1269	-	Rel-12	F	RP-151689	R5-155145	approved	Uncertainties and Test tolerances for Test case 8.20.2A	12.7.0	12.8.0	R5	TEI10_Test
36.521-3	1270	-	Rel-12	F	RP-151689	R5-155147	approved	Uncertainties and Test tolerances for Test case 8.20.4A	12.7.0	12.8.0	R5	TEI10_Test
36.521-3	1271	-	Rel-12	F	RP-151689	R5-155149	approved	Uncertainties and Test tolerances for Test case 8.20.4B	12.7.0	12.8.0	R5	TEI10_Test
36.521-3	1272	1	Rel-12	F	RP-151706	R5-155828	approved	Adding new MTC FD-FDD RLM test case for out-of-sync and definition update	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1273	1	Rel-12	F	RP-151706	R5-155829	approved	Adding new MTC FD-FDD RLM test case for in-sync	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1274	1	Rel-12	F	RP-151706	R5-155830	approved	Adding new MTC FD-FDD RLM test case for out-of-sync in DRX	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1275	1	Rel-12	F	RP-151706	R5-155831	approved	Adding new MTC FD-FDD RLM test case for in-sync in DRX	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1276	1	Rel-12	F	RP-151706	R5-155832	approved	Adding new MTC HD-FDD RLM test case for out-of-sync	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1277	1	Rel-12	F	RP-151706	R5-155833	approved	Adding new MTC HD-FDD RLM test case for in-sync	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1278	1	Rel-12	F	RP-151706	R5-155834	approved	Adding new MTC HD-FDD RLM test case for out-of-sync in DRX	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1279	1	Rel-12	F	RP-151706	R5-155835	approved	Adding new MTC HD-FDD RLM test case for in-sync in DRX	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1280	1	Rel-12	F	RP-151706	R5-155836	approved	Adding new MTC TDD RLM test case for out-of-sync	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1281	1	Rel-12	F	RP-151706	R5-155837	approved	Adding new MTC TDD RLM test case for in-sync	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1282	1	Rel-12	F	RP-151706	R5-155838	approved	Adding new MTC TDD RLM test case for out-of-sync in DRX	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1283	1	Rel-12	F	RP-151706	R5-155839	approved	Adding new MTC TDD RLM test case for in-sync in DRX	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1284	1	Rel-12	F	RP-151700	R5-155862	approved	Update to RSRP accuracy test cases for FDD-TDD CA	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest

Samsung Exhibit 1025, Page 1107 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-3	1285	1	Rel-12	F	RP-151689	R5-155888	approved	Update RSRQ and reported values for serving cell Intra Frequency Absolute RSRQ Accuracy Test cases	12.7.0	12.8.0	R5	TEI10_Test
36.521-3	1286	-	Rel-12	F	RP-151707	R5-155197	approved	Uncertainties and Test Tolerance for E-UTRAN TDD – UE Timing Advanced Adjustment Accuracy Test for SCell in sTAG	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-3	1287	1	Rel-12	F	RP-151689	R5-155889	approved	Uncertainties and Test Tolerances for 2DL CA activation and deactivation of known SCell in non-DRX Test cases	12.7.0	12.8.0	R5	TEI10_Test
36.521-3	1288	1	Rel-12	F	RP-151700	R5-155878	approved	Uncertainties and Test Tolerances for 3DL CA Event Triggered Reporting under Deactivated SCells in Non-DRX Test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1289	1	Rel-12	F	RP-151700	R5-156032	approved	Uncertainties and Test Tolerances for 3DL E-UTRA for Carrier Aggregation RSRP Accuracy Test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1290	1	Rel-12	F	RP-151700	R5-155879	approved	Uncertainties and Test Tolerances for 3DL E-UTRA for Carrier Aggregation RSRQ Accuracy Test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1291	1	Rel-12	F	RP-151706	R5-156053	approved	Add new LC MTC test case 6.1.6 E-UTRAN FD-FDD Intra-frequency RRC Re-establishment for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1292	1	Rel-12	F	RP-151706	R5-156054	approved	Add new LC MTC test case 6.1.7 E-UTRAN HD-FDD Intra-frequency RRC Re-establishment for UE category 0category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1293	1	Rel-12	F	RP-151706	R5-155896	approved	Add new LC MTC test case 8.1.19 E-UTRAN FD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1294	1	Rel-12	F	RP-151706	R5-155897	approved	Add new LC MTC test case 8.1.20 E-UTRAN FDD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX for UE category 0.	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1295	1	Rel-12	F	RP-151706	R5-155898	approved	Add new LC MTC test case 8.1.21 E-UTRAN HD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1296	1	Rel-12	F	RP-151706	R5-155899	approved	Add new LC MTC test case 8.1.22 E-UTRAN HD - FDD Intra-frequency identification of a new CGI of E-UTRA cell using autonomous gaps with DRX for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1297	-	Rel-12	F	RP-151684	R5-155270	approved	Correction to test case 7.1.2	12.7.0	12.8.0	R5	TEI8_Test
36.521-3	1298	1	Rel-12	F	RP-151707	R5-156009	approved	Update Test applicability for test case 7.1.7 and 7.2.5	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-3	1299	1	Rel-12	F	RP-151700	R5-155863	approved	Update of message contents for 3DL CA RSRP and RSRQ Accuracy tests	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1301	2	Rel-12	F	RP-151696	R5-156137	approved	Update of test applicabilities for R12 RRM cases in 36.521-3	12.7.0	12.8.0	R5	TEI11_Test
36.521-3	1304	-	Rel-12	F	RP-151706	R5-155399	approved	Addition of cell configuration mapping for newly introduced MTC tests	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1305	-	Rel-12	F	RP-151700	R5-155427	approved	Uncertainties and Test Tolerances for 3DL FDD RSRP for E-UTRAN in Carrier Aggregation	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1307	-	Rel-12	F	RP-151700	R5-155429	approved	Update to 3DL PCell in FDD RSRQ for E-UTRAN in Carrier Aggregation	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1308	1	Rel-12	F	RP-151700	R5-156033	approved	Update of Annex E for 3DL CA RRM	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1309	1	Rel-12	F	RP-151700	R5-155864	approved	Correction to test applicability in 3DL CA RRM test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1310	-	Rel-12	F	RP-151700	R5-155437	approved	Removable of wait time after activation of Scell	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest

Samsung Exhibit 1025, Page 1108 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-3	1311	1	Rel-12	F	RP-151700	R5-156034	approved	Correction to 3DL CA RSRP/RSRQ test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1313	1	Rel-12	F	RP-151700	R5-156128	approved	Correction to message contents for RRM 3DL CA TC 9.2.41	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1314	1	Rel-12	F	RP-151700	R5-156129	approved	Corrections to message contents for RRM 3DL CA TCs 8.16.27+8.16.28	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1315	1	Rel-12	F	RP-151700	R5-155866	approved	Clarification on frequency swapping and references to connection diagrams in 3DL CA RRM test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1316	1	Rel-12	F	RP-151700	R5-155867	approved	Addition of missing applicability release to test case 9.2.39	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1319	-	Rel-12	F	RP-151689	R5-155574	approved	Incorrect Io values for eICIC tests	12.7.0	12.8.0	R5	TEI10_Test
36.521-3	1320	1	Rel-12	F	RP-151700	R5-155868	approved	Introduction of new 3DL CA RRM test case TC 8.16.41 “3 DL FDD CA activation and deactivation of unknown SCell in non-DRX”	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1321	1	Rel-12	F	RP-151700	R5-155880	approved	Uncerts and Test Tols for TCs 8.16.31+8.16.32+8.16.33+8.16.34 36.521-3 CR	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1322	1	Rel-12	F	RP-151709	R5-156067	approved	Addition of new SCE-L1 RRM TC 8.22.1 E-UTRAN FDD-FDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells in DRX based on CRS based discovery signal	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-3	1323	1	Rel-12	F	RP-151709	R5-156068	approved	Addition of new SCE-L1 RRM TC 8.22.2 E-UTRAN TDD-TDD intra-frequency event triggered reporting under fading propagation conditions in synchronous cells in DRX based on CRS based discovery signal	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-3	1324	1	Rel-12	F	RP-151709	R5-156069	approved	Addition of new SCE-L1 RRM TC 8.22.3 E-UTRAN FDD-FDD inter-frequency event triggered reporting under fading propagation conditions in DRX based on CRS based discovery signal	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-3	1325	1	Rel-12	F	RP-151709	R5-156070	approved	Addition of new SCE-L1 RRM TC 8.22.4 E-UTRAN TDD-TDD inter-frequency event triggered reporting under fading propagation conditions in DRX based on CRS based discovery signal	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.521-3	1326	1	Rel-12	F	RP-151705	R5-156015	approved	Addition of UE transmit timing accuracy test case for PRoSe Direct discovery.	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.521-3	1327	1	Rel-12	F	RP-151700	R5-155869	approved	Updating 3DL CA test cases 8.16.29 and 8.16.30	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1328	-	Rel-12	F	RP-151700	R5-155680	approved	Adding new RRM test case 8.16.35 for 3DL CA	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1329	-	Rel-12	F	RP-151700	R5-155681	approved	Adding new RRM test case 8.16.36 for 3DL CA	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1330	-	Rel-12	F	RP-151706	R5-155770	approved	Introduction of test case 9.1.41.1 - FD-FDD Intra Frequency Absolute RSRP Accuracy for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1331	-	Rel-12	F	RP-151706	R5-155771	approved	Introduction of test case 9.1.41.2 - FD-FDD Intra Frequency Relative RSRP Accuracy for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1332	-	Rel-12	F	RP-151706	R5-155772	approved	Introduction of test case 9.1.42.1 - HD-FDD Intra Frequency Absolute RSRP Accuracy for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1333	-	Rel-12	F	RP-151706	R5-155773	approved	Introduction of test case 9.1.42.2 - HD-FDD Intra Frequency Relative RSRP Accuracy for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest

Samsung Exhibit 1025, Page 1109 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-3	1334	-	Rel-12	F	RP-151706	R5-155774	approved	Introduction of test case 9.1.43.1 - TDD Intra Frequency Absolute RSRP Accuracy for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1335	-	Rel-12	F	RP-151706	R5-155775	approved	Introduction of test case 9.1.43.2 - TDD Intra Frequency Relative RSRP Accuracy for UE category 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.521-3	1336	-	Rel-12	F	RP-151706	R5-155776	approved	Introduction of cell configuration mapping for Intra Frequency RSRP Accuracy for UE category 0 Test Cases	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.523-1	3145	1	Rel-12	F	RP-151685	R5-155781	approved	Corrections to MFBI test case 6.1.2.22	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3147	-	Rel-12	F	RP-151685	R5-155080	approved	Correction to GCF WI-87 GERAN-LTE cell reselection test cases 6.2.3.27	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3148	1	Rel-12	F	RP-151685	R5-155794	approved	Update test case 9.2.1.1.28	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3149	1	Rel-12	F	RP-151685	R5-155795	approved	Update test case 9.2.1.1.28a	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3150	1	Rel-12	F	RP-151696	R5-155798	approved	Correction to Table 9.2.1.2.4.3.3-5: Message ATTACH REQUEST of Test Case 9.2.1.2.4 to reflect TS 24.008 Rel-11 changes	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3151	1	Rel-12	F	RP-151696	R5-155983	approved	Correction to eMDT test cases 8.6.8.x and 8.6.9.x	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3152	1	Rel-12	F	RP-151706	R5-155935	approved	Update of MAC test case 7.1.4.15 for UE Cat 0	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.523-1	3153	1	Rel-12	F	RP-151685	R5-155936	approved	Update of MAC test case 7.1.4.16 for UE Cat 0	12.7.0	12.8.0	R5	TEI8_Test, LC_MTC_LTE-UEConTest
36.523-1	3154	1	Rel-12	F	RP-151685	R5-155937	approved	Update of MAC test case 7.1.4.21 for UE Cat 0	12.7.0	12.8.0	R5	TEI8_Test, LC_MTC_LTE-UEConTest
36.523-1	3161	1	Rel-12	F	RP-151685	R5-155938	approved	Update of MAC test case 7.1.4.7a for UE Cat 0	12.7.0	12.8.0	R5	TEI8_Test, LC_MTC_LTE-UEConTest
36.523-1	3162	1	Rel-12	F	RP-151710	R5-155947	approved	New Dual Connectivity test case 7.3.7.1 for PDCP Uplink Routing / Split DRB	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.523-1	3163	1	Rel-12	F	RP-151714	R5-155942	approved	Update of MAC test case 7.1.7.2.1 for LTE 64QAM UL	12.7.0	12.8.0	R5	LTE_UL64QAM-UEConTest
36.523-1	3165	1	Rel-12	F	RP-151685	R5-155978	approved	Corrections to LTE CSG Idle mode testcases	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3166	1	Rel-12	F	RP-151687	R5-155904	approved	Correction to LTE CSG testcase 11.2.3	12.7.0	12.8.0	R5	TEI9_Test
36.523-1	3167	1	Rel-12	F	RP-151685	R5-155799	approved	Correction to LTE CSG test case 9.2.3.1.9	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3168	1	Rel-12	F	RP-151687	R5-155786	approved	Corrections to LTE CSG test case 8.3.4.2	12.7.0	12.8.0	R5	TEI9_Test
36.523-1	3169	1	Rel-12	F	RP-151701	R5-155963	approved	Correction 3GPP-WLAN interworking test case 6.5.5	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	3170	1	Rel-12	F	RP-151701	R5-155964	approved	Correction of Beacon RSSI parameters in test case 6.5.6	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	3171	1	Rel-12	F	RP-151706	R5-155939	approved	Update to title of MAC MTC test case 7.1.1.1a	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.523-1	3172	1	Rel-12	F	RP-151701	R5-155965	approved	Correction of Beacon RSSI parameters in test case 8.4.8.3	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	3173	1	Rel-12	F	RP-151706	R5-155940	approved	Update to title of MTC test case 7.1.1.1a in 36.523-2	12.7.0	12.8.0	R5	LC_MTC_LTE-UEConTest
36.523-1	3174	1	Rel-12	F	RP-151701	R5-155966	approved	Addition of new WLAN interworking test case for RRC Idle Mode	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	3175	1	Rel-12	F	RP-151701	R5-155967	approved	Addition of new WLAN interworking test case for RRC Connected Mode	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest

Samsung Exhibit 1025, Page 1110 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-1	3176	1	Rel-12	F	RP-151685	R5-155984	approved	Optimization of EPS attach test case 9.2.1.1.13	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3177	-	Rel-12	F	RP-151685	R5-155357	approved	[PTCO] Implicit testing: Test title corrections for Clause 8	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3178	-	Rel-12	F	RP-151685	R5-155358	approved	[PTCO] Implicit testing: Test title corrections for Clause 9	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3179	1	Rel-12	F	RP-151710	R5-155948	approved	Addition of TC 8.2.2.9.5 Dual Connectivity test case for RRC connection reconfiguration / SCG change without handover / Split DRB modification within the same PSCell	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.523-1	3181	2	Rel-12	F	RP-151687	R5-155985	approved	Correction to Test Case 9.1.3.3	12.7.0	12.8.0	R5	TEI9_Test
36.523-1	3182	1	Rel-12	F	RP-151685	R5-155979	approved	Correction to Test Case 6.3.4	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3183	1	Rel-12	F	RP-151687	R5-155980	approved	Correction to Test Case 6.4.6	12.7.0	12.8.0	R5	TEI9_Test
36.523-1	3184	1	Rel-12	F	RP-151709	R5-155970	approved	Addition of new TC 7.1.7.1.8 SCE-L1 / DL-SCH transport block size selection / DCI format 1 / RA type 1	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.523-1	3185	1	Rel-12	F	RP-151709	R5-155971	approved	Addition of new TC 7.1.7.1.9 SCE-L1 / DL-SCH transport block size selection / DCI format 1A / RA type 2 / Localised VRB	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.523-1	3186	1	Rel-12	F	RP-151709	R5-155972	approved	Addition of new TC 7.1.7.1.10 SCE-L1 / DL-SCH transport block size selection / DCI format 1A / RA type 2 / Distributed VRB	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.523-1	3187	1	Rel-12	F	RP-151705	R5-155923	approved	Addition of new D2D test case 8.8.1.5 for successful monitoring for SyncRef UE/Direct Communication	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	3188	1	Rel-12	F	RP-151705	R5-155924	approved	Addition of new D2D test case 8.8.2.5 for successful monitoring for SyncRef UE/Direct Discovery	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	3189	-	Rel-12	F	RP-151705	R5-155433	approved	Adding main clause 8.8, 8.8.1 for Direct Communication and 8.8.2 for Direct Discovery	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	3190	-	Rel-12	F	RP-151688	R5-155455	approved	Correction to RRC CA test case 8.2.4.16.1	12.7.0	12.8.0	R5	TEI10_Test
36.523-1	3191	-	Rel-12	F	RP-151696	R5-155487	approved	Correction to EMM test case 9.2.3.1.8a	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3192	-	Rel-12	F	RP-151685	R5-155488	approved	Correction to various ESM test cases for IP address allocation	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3194	1	Rel-12	F	RP-151688	R5-155789	approved	Correction to MDT test case 8.6.4.4	12.7.0	12.8.0	R5	TEI10_Test
36.523-1	3195	-	Rel-12	F	RP-151696	R5-155492	approved	Correction to SIMTC test case 10.5.1b	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3196	1	Rel-12	F	RP-151696	R5-155790	approved	Correction to MDT test case 8.6.2.3a	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3197	-	Rel-12	F	RP-151687	R5-155494	approved	Correction to eMBMS test case 17.2.4	12.7.0	12.8.0	R5	TEI9_Test
36.523-1	3198	-	Rel-12	F	RP-151696	R5-155495	approved	AP#68.02: Correction to Rel-11 eMBMS test cases	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3199	1	Rel-12	F	RP-151696	R5-155782	approved	Correction to MAC CA test cases 7.1.3.11.1, 7.1.3.11.4 and 7.1.3.11.5	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3200	1	Rel-12	F	RP-151696	R5-155986	approved	Correction to Rel-11 SIMTC test case 9.2.3.1.8b	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3201	1	Rel-12	F	RP-151685	R5-155981	approved	Update of RLC Test Case 7.2.2.5.1	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3202	-	Rel-12	F	RP-151685	R5-155522	approved	Correction to Cell selection test case 6.1.2.3	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3203	1	Rel-12	F	RP-151705	R5-155925	approved	Correction to TC8.8.2.1	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	3204	-	Rel-12	F	RP-151685	R5-155525	approved	Correction to Cell reselection test case 6.1.2.6	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3205	-	Rel-12	F	RP-151685	R5-155526	approved	Correction to Measurement reporting test case 8.3.1.4	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3206	-	Rel-12	F	RP-151687	R5-155527	approved	Correction to EUTRA measurement test cases 8.3.1.13 and 8.3.1.13a	12.7.0	12.8.0	R5	TEI9_Test

Samsung Exhibit 1025, Page 1111 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-1	3207	1	Rel-12	F	RP-151687	R5-155988	approved	Adding TC 13.1.19 and 13.1.20 for emergency call via CS domain	12.7.0	12.8.0	R5	TEI9_Test
36.523-1	3209	-	Rel-12	F	RP-151687	R5-155533	approved	Moving Rel-9 SSAC test descriptions into 36.523-1	12.7.0	12.8.0	R5	TEI9_Test
36.523-1	3210	-	Rel-12	F	RP-151713	R5-155534	approved	Moving Rel-12 SSAC test descriptions into 36.523-1	12.7.0	12.8.0	R5	TEI12_Test
36.523-1	3211	1	Rel-12	F	RP-151713	R5-155787	approved	Correction to SI acquisition TCs	12.7.0	12.8.0	R5	TEI12_Test
36.523-1	3212	1	Rel-12	F	RP-151713	R5-155905	approved	Update eMBMS test case 17.3.2	12.7.0	12.8.0	R5	TEI12_Test
36.523-1	3214	1	Rel-12	F	RP-151685	R5-155944	approved	[PTCO] Implicit Testing: Removal of TC 8.1.2.1 update of 8.1.1.3	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3217	1	Rel-12	F	RP-151688	R5-155784	approved	Correction to the testcase 8.2.4.20.x	12.7.0	12.8.0	R5	TEI10_Test
36.523-1	3219	1	Rel-12	F	RP-151688	R5-155791	approved	Correction to eMDT testcase 8.6.7.1	12.7.0	12.8.0	R5	TEI10_Test
36.523-1	3220	-	Rel-12	F	RP-151688	R5-155620	approved	Correction to LTE-A MAC test cases 7.1.3.11.x	12.7.0	12.8.0	R5	TEI10_Test
36.523-1	3221	-	Rel-12	F	RP-151687	R5-155624	approved	Update of IMS Emergency Call test case 11.2.6	12.7.0	12.8.0	R5	TEI9_Test
36.523-1	3222	1	Rel-12	F	RP-151696	R5-156150	approved	Correction to LTE-A rSRVCC test cases	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3223	1	Rel-12	F	RP-151696	R5-155785	approved	Corrections to eDDA testcases 8.2.2.6.1 and 8.2.2.6.2	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3224	1	Rel-12	F	RP-151710	R5-155949	approved	Addition of Dual Connectivity RRC test case	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.523-1	3225	2	Rel-12	F	RP-151685	R5-156138	approved	Extension of TC 8.5.4.1 for Multi PDN configuration	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3226	1	Rel-12	F	RP-151685	R5-156152	approved	Clarification to EMM test case 9.3.1.16 for IMS enabled UEs	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3227	-	Rel-12	F	RP-151685	R5-155638	approved	Correction to ESM test case 10.2.1	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3228	1	Rel-12	F	RP-151710	R5-155950	approved	Addition of Dual Connectivity RRC test case 8.2.4.25.2	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.523-1	3229	1	Rel-12	F	RP-151705	R5-155926	approved	Addition of ProSe Direct Communication test case 19.1.6	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	3230	1	Rel-12	F	RP-151705	R5-155927	approved	Addition of ProSe Direct Communication test case 19.1.10	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	3231	1	Rel-12	F	RP-151705	R5-155929	approved	Correction to ProSe Direct Communication test case 19.1.4	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	3232	1	Rel-12	F	RP-151705	R5-155930	approved	Correction to ProSe Direct Communication test case 19.1.5	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	3234	1	Rel-12	F	RP-151685	R5-155902	approved	Correction to GCF WI-087 EUTRA EMM testcase 9.2.3.3.5	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3235	1	Rel-12	F	RP-151685	R5-155783	approved	Update 7.1.7.x test cases with UE Category 11 and 12 information	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3236	1	Rel-12	F	RP-151705	R5-155932	approved	Correction to testcase 19.2.4 Successful EPC-LEVEL ProSe Discovery	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	3237	1	Rel-12	F	RP-151685	R5-155987	approved	Correction to GCF WI-082 EUTRA Testcase 9.1.5.1	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3238	-	Rel-12	F	RP-151685	R5-155661	approved	Correction to test case 7.1.7.1.6	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3239	1	Rel-12	F	RP-151710	R5-155951	approved	Add test case 8.2.2.9.1 for dual connectivity	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.523-1	3241	1	Rel-12	F	RP-151710	R5-155952	approved	Add test case 8.2.2.9.2 for dual connectivity	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.523-1	3244	-	Rel-12	F	RP-151701	R5-155683	approved	Editorial Correction of clause 8.4	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	3245	-	Rel-12	F	RP-151701	R5-155684	approved	Editorial Correction of clause 6.5	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	3247	1	Rel-12	F	RP-151701	R5-155968	approved	Addition of new test case - WLAN Offload / T350 expiry	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest

Samsung Exhibit 1025, Page 1112 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-1	3248	1	Rel-12	F	RP-151701	R5-155969	approved	Addition of new test case - WLAN Offload / Offload Success / EUTRA RRC_Connected to/from WLAN (ANDSF and RAN rules co-existence)	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	3249	1	Rel-12	F	RP-151711	R5-155955	approved	New UEPCOP test case 9.2.1.1.7c Attach / Success / PSM	12.7.0	12.8.0	R5	MTCe-UEPCOP-UEConTest
36.523-1	3253	1	Rel-12	F	RP-151705	R5-155933	approved	Addition of new D2D test case for Successful ProSe Direct Communication/Limited Service state	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	3254	1	Rel-12	F	RP-151696	R5-155792	approved	Corrections to eMDT test case 8.6.5.1a	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3255	1	Rel-12	F	RP-151696	R5-155793	approved	Corrections to eMDT test case 8.6.7.4	12.7.0	12.8.0	R5	TEI11_Test
36.523-1	3256	1	Rel-12	F	RP-151685	R5-156153	approved	Update of RLC test case 7.2.2.6 for UE Cat 0	12.7.0	12.8.0	R5	TEI8_Test, LC_MTC_LTE-UEConTest
36.523-1	3257	1	Rel-12	F	RP-151685	R5-156154	approved	Update of RLC test case 7.2.2.7 for UE Cat 0	12.7.0	12.8.0	R5	TEI8_Test, LC_MTC_LTE-UEConTest
36.523-1	3258	1	Rel-12	F	RP-151685	R5-156155	approved	Update of RLC test case 7.2.3.2 for UE Cat 0	12.7.0	12.8.0	R5	TEI8_Test, LC_MTC_LTE-UEConTest
36.523-1	3259	1	Rel-12	F	RP-151685	R5-156156	approved	Update of RLC test case 7.2.3.10 for UE Cat 0	12.7.0	12.8.0	R5	TEI8_Test, LC_MTC_LTE-UEConTest
36.523-1	3260	1	Rel-12	F	RP-151685	R5-156157	approved	Update of RLC test case 7.2.3.13 for UE Cat 0	12.7.0	12.8.0	R5	TEI8_Test, LC_MTC_LTE-UEConTest
36.523-1	3261	1	Rel-12	F	RP-151685	R5-156158	approved	Update of RLC test case 7.2.3.15 for UE Cat 0	12.7.0	12.8.0	R5	TEI8_Test, LC_MTC_LTE-UEConTest
36.523-1	3262	-	Rel-12	F	RP-151685	R5-155991	approved	Correction to EMM test case 9.3.1.4 for IMS enabled Ues	12.7.0	12.8.0	R5	TEI8_Test
36.523-1	3263	-	Rel-12	F	RP-151685	R5-155992	approved	Correction to ESM test case 10.5.3 for IMS enabled Ues	12.7.0	12.8.0	R5	TEI8_Test
36.523-2	0789	1	Rel-12	F	RP-151710	R5-155953	approved	Applicability of new protocol Dual Connectivity test cases	12.7.0	12.8.0	R5	LTE_SC_enh_dualC-UEConTest
36.523-2	0790	1	Rel-12	F	RP-151705	R5-155934	approved	Add UE implementation capability for ProSe	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-2	0791	-	Rel-12	F	RP-151701	R5-155347	approved	Addition of applicability for new WLAN interworking test cases	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-2	0792	-	Rel-12	F	RP-151688	R5-155364	approved	Correction to “Release other RAT” for CA test case 8.4.2.7.1, 8.4.2.7.2 & 8.4.2.7.3	12.7.0	12.8.0	R5	TEI10_Test
36.523-2	0793	1	Rel-12	F	RP-151709	R5-155973	approved	Addition of applicability for new SCE-L1 test cases 7.1.7.1.8, 7.1.7.1.9 and 7.1.7.1.10	12.7.0	12.8.0	R5	LTE_SC_enh_L1-UEConTest
36.523-2	0794	-	Rel-12	F	RP-151705	R5-155432	approved	Addition of applicability for new D2D test cases 8.8.1.5 and 8.8.2.5	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-2	0797	-	Rel-12	F	RP-151685	R5-155621	approved	[PTCO] Voiding TC 8.1.2.1 in applicability table	12.7.0	12.8.0	R5	TEI8_Test
36.523-2	0798	-	Rel-12	F	RP-151685	R5-155622	approved	[PTCO] Repairing error when attempting to remove 9.2.1.1.21	12.7.0	12.8.0	R5	TEI8_Test
36.523-2	0799	1	Rel-12	F	RP-151685	R5-155906	approved	Correction to C56 selection expression to remove redundant PICS for Category 6 to Category10	12.7.0	12.8.0	R5	TEI8_Test
36.523-2	0801	-	Rel-12	F	RP-151701	R5-155682	approved	Addition of applicability of new 3GPP/WLAN test case	12.7.0	12.8.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-2	0802	1	Rel-12	F	RP-151711	R5-155956	approved	Addition of applicability statements for new UEPCOP test case	12.7.0	12.8.0	R5	MTCe-UEPCOP-UEConTest
36.523-2	0803	-	Rel-12	F	RP-151688	R5-155711	approved	Editorial Correction to pics declaration for standalone GNSS location information	12.7.0	12.8.0	R5	TEI10_Test

Samsung Exhibit 1025, Page 1113 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-2	0804	-	Rel-12	F	RP-151705	R5-155723	approved	Addition of applicability for new D2D test case on Successful ProSe Direct Communication/Limited Service state	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-2	0805	1	Rel-12	F	RP-151700	R5-155911	approved	36.523-2: CA_2A-2A-13A editorial update	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-2	0807	-	Rel-12	F	RP-151714	R5-155753	approved	Addition of ICS for support of 64QAM in UL	12.7.0	12.8.0	R5	LTE_UL64QAM-UEConTest
36.523-2	0809	-	Rel-12	F	RP-151688	R5-155908	approved	Correction to execution guideline of 7.1.3.11.2	12.7.0	12.8.0	R5	TEI10_Test
36.523-2	0810	-	Rel-12	F	RP-151705	R5-155941	approved	Addition of applicability for new Direct Communication test cases	12.7.0	12.8.0	R5	LTE_D2D_Prox-UEConTest
36.523-2	0811	-	Rel-12	F	RP-151685	R5-156162	approved	Update the applicabity of loopback mode test cases for Multi-PDN	12.7.0	12.8.0	R5	TEI8_Test
36.523-2	0812	-	Rel-12	F	RP-151687	R5-156139	approved	Addition of new applicability of Emergency call via CS domain TCs for IMS capable UE	12.7.0	12.8.0	R5	TEI9_Test
36.523-3	2904	-	Rel-11	F	RP-151696	R5-155040	approved	Removal of technical content in 36.523-3 v11.6.0 and substitution with pointer to the next Release	11.6.0	11.7.0	R5	TEI11_Test
36.523-3	2906	-	Rel-12	F	RP-151706	R5-155055	approved	Low-cost MTC: Test Model enhancement for half-duplex FDD Cat.0 UEs	12.3.0	12.4.0	R5	LC_MTC_LTE-UEConTest
36.523-3	2907	-	Rel-12	F	RP-151701	R5-155057	approved	3GPP / WLAN Radio Interworking: Introduction of Test Model	12.3.0	12.4.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-3	2908	-	Rel-12	F	RP-151705	R5-155058	approved	D2D ProSe: Introduction of Test Model	12.3.0	12.4.0	R5	LTE_D2D_Prox-UEConTest
36.523-3	2909	1	Rel-12	F	RP-151687	R5-155909	approved	Editorial update of Guidelines of EUTRA MFBI test cases	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2911	1	Rel-12	F	RP-151685	R5-156151	approved	Routine maintenance for TS 36.523-3	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2912	-	Rel-12	F	RP-151695	R5s150694	approved	LTE_TDD: Addition of GCF WI-201 LTE-A eICIC test case 8.3.1.21 ^^(… new test model with OCNG simulation in non-ABS subframes)	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2913	-	Rel-12	B	RP-151695	R5s150704	approved	Addition of Rel-11 EUTRA<>UTRA rSRVCC test case 13.4.3.32	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2914	-	Rel-12	F	RP-151695	R5s150741	approved	Correction to IMS SIP De-registration procedure for xSRVCC test cases	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2915	-	Rel-12	B	RP-151695	R5s150751	approved	Addition of Rel-11 EUTRA<>UTRA rSRVCC test case 13.4.3.34	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2916	-	Rel-12	F	RP-151695	R5s150771	approved	Correction of Cell reselection test case 6.1.2.3	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2917	-	Rel-12	F	RP-151695	R5s150772	approved	Correction of Intra E-UTRAN measurement test case 8.3.1.4	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2918	-	Rel-12	F	RP-151695	R5s150774	approved	Correction to GCF WI-0150 EUTRA RRC test case 8.5.1.6	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2919	-	Rel-12	F	RP-151695	R5s150777	approved	Correction to GCF WI-082 SMS over SGs test cases 11.1.3, 11.1.4, 11.1.5, 11.1.6	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2920	-	Rel-12	B	RP-151695	R5s150778	approved	Addition of Rel-11 LTE-A SIMTC test case 10.5.1b	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2921	-	Rel-12	B	RP-151695	R5s150782	approved	Addition of LTE-A 2x UL Carrier Aggregation test case 8.2.2.7.2	12.3.0	12.4.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.523-3	2922	-	Rel-12	B	RP-151695	R5s150784	approved	LTE_TDD: Addition of LTE-A 2x UL Carrier Aggregation test case 8.2.2.7.2	12.3.0	12.4.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.523-3	2923	-	Rel-12	B	RP-151695	R5s150787	approved	Addition of LTE-A 2UL Carrier Aggregation MAC test case 7.1.4.19.2	12.3.0	12.4.0	R5	LTE_CA_Rel12_2UL-UEConTest

Samsung Exhibit 1025, Page 1114 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2924	-	Rel-12	B	RP-151695	R5s150789	approved	LTE_TDD: Addition of LTE-A 2UL Carrier Aggregation MAC test case 7.1.4.19.2	12.3.0	12.4.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.523-3	2925	-	Rel-12	B	RP-151695	R5s150790	approved	LTE_TDD: Addition of LTE-A 2x UL Carrier Aggregation test case 8.2.2.7.3	12.3.0	12.4.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.523-3	2926	-	Rel-12	F	RP-151695	R5s150793	approved	Correction to LTE-A RRC CA test cases 8.3.1.18.1, 8.3.1.18.2 and 8.3.1.18.3	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2927	-	Rel-12	F	RP-151695	R5s150794	approved	Correction to GCF WI-082 EMM test case 9.2.1.2.4	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2928	-	Rel-12	F	RP-151695	R5s150796	approved	Correction to GEA4 and A5/4 Ciphering Algorithm Implementation	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2929	-	Rel-12	B	RP-151695	R5s150797	approved	Addition of LTE-A 2UL Carrier Aggregation RACH on SCell test case 7.1.2.10.2	12.3.0	12.4.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.523-3	2930	-	Rel-12	F	RP-151695	R5s150799	approved	Correction to GCF WI-172 aSRVCC test case 13.4.3.8	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2931	-	Rel-12	F	RP-151695	R5s150801	approved	Correction to EUTRA Idle-mode test case 6.1.2.3a	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2932	-	Rel-12	F	RP-151695	R5s150802	approved	Correction to GCF WI-081 EUTRA Idle Mode test case 6.1.1.1b	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2933	-	Rel-12	F	RP-151695	R5s150803	approved	Correction to LTE UTRA CSG test case 6.3.3	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2934	-	Rel-12	F	RP-151695	R5s150804	approved	Correction to LTE-UTRA CSG test case 6.3.4	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2935	-	Rel-12	F	RP-151695	R5s150806	approved	Correction to GCF WI-082 ESM test case 10.2.1	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2936	-	Rel-12	F	RP-151695	R5s150807	approved	Correction to LTE-A (Rel-11) rSRVCC test case 13.4.3.34	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2937	-	Rel-12	F	RP-151695	R5s150808	approved	Correction of 7.1.7.1.x and 7.1.7.2.1 test cases	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2938	-	Rel-12	B	RP-151695	R5s150810	approved	Addition of Rel-11 LTE-A SIMTC test case 9.2.3.1.8a	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2939	-	Rel-12	F	RP-151695	R5s150812	approved	Correction to GCF WI-087 EUTRA RRC Test case 8.4.3.3	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2940	-	Rel-12	F	RP-151695	R5s150815	approved	Correction to GCF WI-087 EUTRA Idle mode Testcases 6.2.3.28, 6.2.3.30	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2941	-	Rel-12	F	RP-151695	R5s150816	approved	Correction to GCF WI-179 LTE-NIMTC testcase 9.2.1.1.2a	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2942	-	Rel-12	F	RP-151695	R5s150819	approved	Correction to LTE-A MAC test case 7.1.3.11.x	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2943	-	Rel-12	F	RP-151695	R5s150820	approved	Correction to LTE-A RRC CA test cases 8.2.4.16.1,8.2.4.16.2 and 8.2.4.16.3	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2944	-	Rel-12	B	RP-151695	R5s150821	approved	Addition of Rel-11 LTE-A SIMTC test case 9.2.3.1.8b	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2945	-	Rel-12	F	RP-151695	R5s150824	approved	Correction to GCF WI-087 Multi-layer testcase 13.3.2.2	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2946	-	Rel-12	F	RP-151695	R5s150828	approved	Correction to GCF WI-162 CA IRAT test case 8.4.2.7.1, 8.4.2.7.2 and 8.4.2.7.3	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2947	-	Rel-12	B	RP-151695	R5s150833	approved	Addition of GCF WI-227 Inter-RAT eMDT test case 8.6.7.4	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2948	-	Rel-12	F	RP-151695	R5s150836	approved	Correction to TestCases 6.2.2.2, 6.2.3.1, 6.2.3.1a	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2949	-	Rel-12	F	RP-151695	R5s150837	approved	Correction to configuration of DRX	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2950	-	Rel-12	F	RP-151695	R5s150838	approved	Correction to UTRAN function f_UTRAN_GMM_ServReq	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2951	-	Rel-12	F	RP-151695	R5s150839	approved	Correction of GCF WI-081 Testcases 12.2.x and 12.3.x	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2952	-	Rel-12	F	RP-151695	R5s150840	approved	Correction of GCF WI-082 EPC test case 9.3.2.1	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2953	-	Rel-12	F	RP-151695	R5s150842	approved	Correction of GCF WI 82 EPC test case 9.1.2.3	12.3.0	12.4.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1115 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2954	-	Rel-12	F	RP-151695	R5s150844	approved	Correction to Rel-9 eMBMS test case 17.2.4	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2955	-	Rel-12	F	RP-151695	R5s150845	approved	Correction to SS configuration for UTRAN	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2956	-	Rel-12	F	RP-151695	R5s150847	approved	Correction to GCF WI-162 CA testcases 8.4.2.7.x	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2957	-	Rel-12	F	RP-151695	R5s150848	approved	Correction to GCF WI-162 TestCase 7.1.3.11.2	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2958	-	Rel-12	F	RP-151695	R5s150849	approved	Correction to IMSs emergency call TestCases 11.2.1, 11.2.2 and 11.2.5	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2959	-	Rel-12	F	RP-151695	R5s150852	approved	Correction of GCF WI-162-Inter test cases 8.2.2.3.x	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2960	-	Rel-12	F	RP-151695	R5s150853	approved	Correction to GCF WI-086 SRVCC Testcases 13.4.3.x	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2961	-	Rel-12	F	RP-151695	R5s150855	approved	Correction to IMS emergency call TestCases 11.2.6	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2962	-	Rel-12	F	RP-151695	R5s150856	approved	Correction to Rel-11 rSRVCC test case 13.4.3.32	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2963	-	Rel-12	F	RP-151695	R5s150857	approved	Correction of function f_EUTRA_508Check_TrackingAreaUpdating_AfterHO_Steps7to8	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2964	-	Rel-12	F	RP-151695	R5s150858	approved	Correction to GCF WI-087 EUTRA EMM testcase 9.2.3.3.5	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2965	-	Rel-12	F	RP-151695	R5s150859	approved	Correction to GCF WI-081 testcase 7.2.3.5	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2966	-	Rel-12	F	RP-151695	R5s150860	approved	Correction to GCF WI-082 EUTRA EMM test case 9.2.1.1.22	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2967	-	Rel-12	F	RP-151695	R5s150861	approved	Correction to eMBMS-SC test cases 17.4.x	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2968	-	Rel-12	F	RP-151695	R5s150862	approved	Correction to Bandwidth in MIB in initialisation of CA Testcases	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2969	-	Rel-12	F	RP-151695	R5s150863	approved	Correction to EMM test case 9.2.2.1.3	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2970	-	Rel-12	F	RP-151695	R5s150867	approved	Correction to Rel-8 LTE<>GERAN test cases	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2971	-	Rel-12	F	RP-151695	R5s150869	approved	Correction to ESM test case 10.2.1	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2972	-	Rel-12	F	RP-151695	R5s150870	approved	Correction to Rel-10 MDT test case 8.6.4.4	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2973	-	Rel-12	B	RP-151695	R5s150871	approved	Addition of LTE-A Rel-11 test case 8.5.4.2	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2974	-	Rel-12	F	RP-151695	R5s150874	approved	Correction to Rel-11 SIMTC test case 10.5.1b	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2975	-	Rel-12	F	RP-151695	R5s150875	approved	Correction of GCF WI-227-Handover failure logging test case 8.6.6.6	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2976	-	Rel-12	F	RP-151695	R5s150876	approved	Correction of GCF WI-227 RLF logging test case 8.6.4.9	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2977	-	Rel-12	F	RP-151695	R5s150877	approved	Correction to EMM test case 9.2.1.1.30	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2978	-	Rel-12	B	RP-151695	R5s150882	approved	LTE_TDD: Addition of LTE-A Rel-11 test case 8.5.4.2	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2979	-	Rel-12	F	RP-151695	R5s150884	approved	Correction of Postamble procedure for LTE<>1xRTT Pre-registration TCs	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2980	-	Rel-12	F	RP-151695	R5s150887	approved	Correction to IMS Emergency Call test case 11.2.10	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2981	-	Rel-12	F	RP-151695	R5s150899	approved	Correction to UTRAN postamble function for IMS emergency call test cases	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2982	-	Rel-12	F	RP-151695	R5s150901	approved	Correction to GCF WI-172 EUTRA<>GERAN aSRVCC testcases 13.4.3.26 and 13.4.3.28	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2983	-	Rel-12	F	RP-151695	R5s150902	approved	Correction to test case 9.2.3.2.12 with IMS enabled	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2984	-	Rel-12	F	RP-151695	R5s150903	approved	Correction to GCF WI-179 NiMTC test case 6.1.1.7	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2985	-	Rel-12	F	RP-151695	R5s150904	approved	Correction to MAC layer CA test cases 7.1.4.19.x	12.3.0	12.4.0	R5	TEI11_Test

Samsung Exhibit 1025, Page 1116 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2986	-	Rel-12	F	RP-151695	R5s150905	approved	Correction to LTE<>GERAN test cases 6.2.3.23, 6.2.3.24, 6.2.3.29	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2987	-	Rel-12	B	RP-151695	R5s150906	approved	LTE_TDD: Addition of Rel-10 LTE-A NIMTC test case 6.1.1.7	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2988	-	Rel-12	F	RP-151695	R5s150912	approved	Correction to EUTRA eMDT test case 8.6.11.1	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2989	-	Rel-12	F	RP-151695	R5s150913	approved	Correction to TestCases 6.2.2.2, 6.2.3.1, 6.2.3.1a with IMS enabled	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2990	-	Rel-12	F	RP-151695	R5s150914	approved	Correction to UL EARFCN for CA_4A-30A	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2991	-	Rel-12	F	RP-151695	R5s150917	approved	Correction to SS configuration for UTRAN	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2992	-	Rel-12	B	RP-151695	R5s150920	approved	LTE_TDD: Addition of Rel-10 LTE-A NIMTC test case 6.1.1.7a	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2993	-	Rel-12	F	RP-151695	R5s150922	approved	Correction to LTE MAC test cases ((IMS enabled UE / Multi-PDN)	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	2994	-	Rel-12	F	RP-151695	R5s150923	approved	Correction to MDT test cases 8.6.6.1,8.6.6.2 and 8.6.6.4	12.3.0	12.4.0	R5	TEI10_Test
36.523-3	2995	-	Rel-12	B	RP-151695	R5s150924	approved	Addition of EUTRA eMDT test case 8.6.8.4	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2996	-	Rel-12	B	RP-151695	R5s150926	approved	LTE-TDD : Addition of EUTRA eMDT test case 8.6.8.4	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	2997	-	Rel-12	B	RP-151695	R5s150928	approved	Addition of SSAC test case 13.5.1	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2998	-	Rel-12	B	RP-151695	R5s150930	approved	Addition of SSAC test case 13.5.2	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	2999	-	Rel-12	B	RP-151695	R5s150932	approved	Addition of SSAC test case 13.5.3	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	3000	-	Rel-12	B	RP-151695	R5s150935	approved	LTE_TDD : Addition of SSAC test case 13.5.1	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	3001	-	Rel-12	B	RP-151695	R5s150937	approved	LTE_TDD : Addition of SSAC test case 13.5.2	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	3002	-	Rel-12	B	RP-151695	R5s150939	approved	LTE_TDD : Addition of SSAC test case 13.5.3	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	3003	-	Rel-12	B	RP-151695	R5s150941	approved	Addition of 6.2.3.27 - InterRAT GCF WI-87 EUTRA<>GERAN Test case	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	3004	-	Rel-12	F	RP-151695	R5s150943	approved	Correction to LTE-IRAT CSG and Home eNB testcases with UTRAN Bands 4,9 and 10	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	3005	-	Rel-12	F	RP-151695	R5s150944	approved	Correction to test case 9.2.3.2.2 with IMS enabled	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	3006	-	Rel-12	F	RP-151695	R5s150947	approved	Correction for LTE test cases requiring IMS registration	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	3007	-	Rel-12	F	RP-151695	R5s150948	approved	Correction to eMBMS_SC_CA test cases 17.4.11.1 and 17.4.11.2	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	3008	-	Rel-12	B	RP-151695	R5s150954	approved	Addition of EUTRA Rel-11 eDDA test case 8.2.2.6.1	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	3009	-	Rel-12	B	RP-151695	R5s150957	approved	LTE-TDD : Addition of EUTRA Rel-11 eDDA test case 8.2.2.6.1	12.3.0	12.4.0	R5	TEI11_Test
36.523-3	3010	-	Rel-12	F	RP-151695	R5s150960	approved	Correction to EUTRA RRC test case 8.2.4.1 ((IMS enabled UE / Multi-PDN)	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	3011	-	Rel-12	F	RP-151695	R5s150961	approved	Correction to EMM test case 9.2.2.2.1 ((IMS enabled UE / Multi-PDN)	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	3012	-	Rel-12	F	RP-151695	R5s150963	approved	Correction to EMM test cases for IMS-enabled UEs	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	3013	-	Rel-12	F	RP-151695	R5s150964	approved	Correction of f_EUTRA_508_IMSEmergencyCallLimitedService_Steps5a1_15	12.3.0	12.4.0	R5	TEI9_Test
36.523-3	3014	-	Rel-12	F	RP-151695	R5s150966	approved	Correction to function f_TC_8_4_2_7_Common_UTRAN	12.3.0	12.4.0	R5	TEI10_Test

Samsung Exhibit 1025, Page 1117 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	3015	-	Rel-12	F	RP-151695	R5s150969	approved	Correction to GCF WI-082 EMM test case 9.3.1.18	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	3016	-	Rel-12	F	RP-151695	R5s150971	approved	Correction to function f_IMS_InviteRequest_MessageHeaderRX() for SRVCC test cases	12.3.0	12.4.0	R5	TEI8_Test
36.523-3	3017	-	Rel-12	F	RP-151694	-	approved	CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (prose), Annex A	12.3.0	12.4.0	R5	TEI8_Test
36.833-2-07	0003	-	Rel-12	B	RP-152170	R4-157431	approved	CR for TR 36.833-2-07 on CA_7A-7A BCS1	12.1.0	12.2.0	R4	LTE_CA_NC_B7_BWset-Core
36.856	0001	1	Rel-13	B	RP-152098	R3-152373	approved	Description of soltions for RRC rejections during Overload Start	12.0.0	13.0.0	R3	RSE-RAN_LTE-Core
36.903	0213	-	Rel-12	F	RP-151713	R5-155017	approved	Add Test Tolerance Analyses for TS 37.571-1 Test Cases 10.3A_1 and 10.4A_1	12.7.0	12.8.0	R5	TEI12_Test
36.903	0214	-	Rel-12	F	RP-151707	R5-155095	approved	Add Test Tolerance analysis for 7.1.4A	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.903	0215	-	Rel-12	F	RP-151687	R5-155140	approved	Update Test Tolerance analysis for TS 36.521-3 Test cases 4.3.2 and 4.3.4.2	12.7.0	12.8.0	R5	TEI9_Test
36.903	0216	-	Rel-12	F	RP-151685	R5-155142	approved	Update Test Tolerance analysis for TS 36.521-3 Test cases 4.4.1 and 4.4.2	12.7.0	12.8.0	R5	TEI8_Test
36.903	0217	1	Rel-12	F	RP-151685	R5-155886	approved	Update Test Tolerance analysis for TS 36.521-3 Test cases 4.5.1.1 and 4.5.2.1	12.7.0	12.8.0	R5	TEI8_Test
36.903	0218	1	Rel-12	F	RP-151688	R5-155887	approved	Add Test Tolerance analysis for TS 36.521-3 Test case 8.20.2A	12.7.0	12.8.0	R5	TEI10_Test
36.903	0219	-	Rel-12	F	RP-151688	R5-155148	approved	Add Test Tolerance analysis for TS 36.521-3 Test case 8.20.4A	12.7.0	12.8.0	R5	TEI10_Test
36.903	0220	-	Rel-12	F	RP-151688	R5-155150	approved	Add Test Tolerance analysis for TS 36.521-3 Test case 8.20.4B	12.7.0	12.8.0	R5	TEI10_Test
36.903	0221	-	Rel-12	F	RP-151688	R5-155195	approved	Update Test Tolerance analyses for serving cell Intra Frequency Absolute RSRQ Accuracy Test cases	12.7.0	12.8.0	R5	TEI10_Test
36.903	0222	-	Rel-12	F	RP-151688	R5-155198	approved	Add Test Tolerance analysis for 2DL CA activation and deactivation of known SCell in non-DRX Test cases	12.7.0	12.8.0	R5	TEI10_Test
36.903	0223	1	Rel-12	F	RP-151707	R5-155882	approved	Add Test Tolerance analysis for E-UTRAN TDD – UE Timing Advanced Adjustment Accuracy Test for SCell in sTAG	12.7.0	12.8.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.903	0224	-	Rel-12	F	RP-151700	R5-155202	approved	Add Test Tolerance analysis for 3DL CA Event Triggered Reporting under Deactivated SCells in Non-DRX Test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.903	0225	-	Rel-12	F	RP-151700	R5-155206	approved	Add Test Tolerance analysis for 3DL E-UTRA for Carrier Aggregation RSRP Accuracy Test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.903	0226	-	Rel-12	F	RP-151700	R5-155208	approved	Add Test Tolerance analysis for 3DL E-UTRA for Carrier Aggregation RSRQ Accuracy Test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.903	0227	-	Rel-12	F	RP-151700	R5-155418	approved	Addition of Test Tolerance analysis for 3DL E-UTRA for Carrier Aggregation RSRP Accuracy Test cases	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.903	0228	-	Rel-12	F	RP-151700	R5-155588	approved	Add Test Tolerance analysis for TCs 8.16.31+8.16.32+8.16.33+8.16.34 36.903 CR	12.7.0	12.8.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.904	0020	1	Rel-12	F	RP-151708	R5-155883	approved	Add Test Tolerance analysis for FDD multi-cell SU-MIMO test case (8.2.1.3.1C)	11.3.0	12.0.0	R5	LTE_SUMIMO_RX-UEConTest

Samsung Exhibit 1025, Page 1118 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.904	0021	1	Rel-12	F	RP-151708	R5-155884	approved	Add Test Tolerance analysis for TDD multi-cell SU-MIMO test case (8.2.2.3.1C)	11.3.0	12.0.0	R5	LTE_SUMIMO_RX-UEConTest
36.904	0022	1	Rel-12	F	RP-151708	R5-155885	approved	Addition of LTE Type C group into 36.904	11.3.0	12.0.0	R5	LTE_SUMIMO_RX-UEConTest
37.104	0265	-	Rel-13	B	RP-152171	R4-156493	approved	Introduction of Band 66	12.8.0	13.0.0	R4	LTE_1980_2170_REG1-Core
37.104	0268	1	Rel-11	F	RP-152132	R4-156730	approved	Tx IM requirement correction	11.12.0	11.13.0	R4	TEI11
37.104	0269	-	Rel-12	A	RP-152132	R4-156545	approved	Tx IM requirement correction	12.8.0	12.9.0	R4	TEI11
37.104	0270	1	Rel-13	B	RP-152157	R4-156891	approved	Introduction of Band 67 to 37.104	12.8.0	13.0.0	R4	LTE_CA_700EU_B20-Core
37.104	0271	-	Rel-13	B	RP-152172	R4-157183	approved	Introduction of Band 66	12.8.0	13.0.0	R4	LTE_AWS_EXT-Core
37.104	0272	-	Rel-13	B	RP-152173	R4-157595	approved	Introduction of 1447-1467MHz Band into 37.104	12.8.0	13.0.0	R4	LTE_TDD_1447MHz_China-Core
37.104	0273	1	Rel-11	F	RP-152132	R4-158349	approved	BS Spec improvements: TS 37.104 Corrections	11.12.0	11.13.0	R4	TEI11
37.104	0274	-	Rel-12	A	RP-152132	R4-157753	approved	BS Spec improvements: TS 37.104 Corrections	12.8.0	12.9.0	R4	TEI11
37.104	0275	-	Rel-11	F	RP-152132	R4-157851	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	11.12.0	11.13.0	R4	LTE_CA_enh-Core
37.104	0276	-	Rel-12	A	RP-152132	R4-157852	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	12.8.0	12.9.0	R4	LTE_CA_enh-Core
37.104	0279	1	Rel-11	F	RP-152132	R4-158232	approved	Correction of Unwanted Emission Mask (UEM) for MSR BS capable of multiband operation	11.12.0	11.13.0	R4	MB_MSR_RF-Core
37.104	0280	-	Rel-12	A	RP-152132	R4-158012	approved	Correction of Unwanted Emission Mask (UEM) for MSR BS capable of multiband operation	12.8.0	12.9.0	R4	MB_MSR_RF-Core
37.113	0039	-	Rel-13	B	RP-152171	R4-156090	approved	Introduction of Band 65	12.3.0	13.0.0	R4	LTE_1980_2170_REG1-Core
37.113	0040	-	Rel-13	B	RP-152172	R4-156098	approved	Introduction of Band 66	12.3.0	13.0.0	R4	LTE_AWS_EXT-Core
37.113	0041	-	Rel-13	B	RP-152157	R4-156102	approved	Introduction of Band 67	12.3.0	13.0.0	R4	LTE_CA_700EU_B20-Core
37.113	0042	-	Rel-13	B	RP-152173	R4-157596	approved	Introduction of 1447-1467MHz Band into 37.113	12.3.0	13.0.0	R4	LTE_TDD_1447MHz_China-Core
37.141	0422	1	Rel-13	B	RP-152157	R4-156893	approved	Introduction of Band 67 to 37.141	13.0.0	13.1.0	R4	LTE_CA_700EU_B20-Perf
37.141	0427	-	Rel-13	B	RP-152172	R4-157185	approved	Introduction of Band 66	13.0.0	13.1.0	R4	LTE_AWS_EXT-Perf
37.141	0428	-	Rel-13	B	RP-152171	R4-157189	approved	Introduction of Band 65	13.0.0	13.1.0	R4	LTE_1980_2170_REG1-Perf
37.141	0429	-	Rel-13	B	RP-152173	R4-157608	approved	Introduction of 1447-1467MHz Band into 37.141	13.0.0	13.1.0	R4	LTE_TDD_1447MHz_China-Core
37.141	0430	1	Rel-11	F	RP-152132	R4-158350	approved	BS Spec improvements: TS 37.141 Corrections	11.12.0	11.13.0	R4	TEI11
37.141	0431	-	Rel-12	A	RP-152132	R4-157755	approved	BS Spec improvements: TS 37.141 Corrections	12.8.0	12.9.0	R4	TEI11
37.141	0432	-	Rel-13	A	RP-152132	R4-157756	approved	BS Spec improvements: TS 37.141 Corrections	13.0.0	13.1.0	R4	TEI11
37.141	0433	1	Rel-11	F	RP-152132	R4-158231	approved	Multi-band test configuration clarification	11.12.0	11.13.0	R4	MB_MSR_RF-Perf
37.141	0434	-	Rel-12	A	RP-152132	R4-157762	approved	Multi-band test configuration clarification	12.8.0	12.9.0	R4	MB_MSR_RF-Perf
37.141	0435	-	Rel-13	A	RP-152132	R4-157763	approved	Multi-band test configuration clarification	13.0.0	13.1.0	R4	MB_MSR_RF-Perf
37.141	0436	-	Rel-11	F	RP-152132	R4-157853	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	11.12.0	11.13.0	R4	LTE_CA_Enh-Perf

Samsung Exhibit 1025, Page 1119 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
37.141	0437	-	Rel-12	A	RP-152132	R4-157854	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	12.8.0	12.9.0	R4	LTE_CA_Enh-Perf
37.141	0438	-	Rel-13	A	RP-152132	R4-157855	approved	Corrections on definition of f_offsetmax for BS operating in multiple bands or non-contiguous spectrum	13.0.0	13.1.0	R4	LTE_CA_Enh-Perf
37.141	0442	1	Rel-11	F	RP-152132	R4-158286	approved	Clarification on the transmitter intermodulation requirement in TS37.141	11.12.0	11.13.0	R4	TEI11
37.141	0443	-	Rel-12	A	RP-152132	R4-157982	approved	Clarification on the transmitter intermodulation requirement in TS37.141	12.8.0	12.9.0	R4	TEI11
37.141	0444	-	Rel-13	A	RP-152132	R4-157983	approved	Clarification on the transmitter intermodulation requirement in TS37.141	13.0.0	13.1.0	R4	TEI11
37.141	0445	1	Rel-11	F	RP-152132	R4-158367	approved	Correction of Unwanted Emission Mask (UEM) for MSR BS capable of multiband operation	11.12.0	11.13.0	R4	MB_MSR_RF-Perf
37.141	0446	-	Rel-12	A	RP-152132	R4-158014	approved	Correction of Unwanted Emission Mask (UEM) for MSR BS capable of multiband operation	12.8.0	12.9.0	R4	MB_MSR_RF-Perf
37.141	0447	-	Rel-13	A	RP-152132	R4-158015	approved	Correction of Unwanted Emission Mask (UEM) for MSR BS capable of multiband operation	13.0.0	13.1.0	R4	MB_MSR_RF-Perf
37.320	0067	1	Rel-13	B	RP-152082	R2-156954	approved	Further Enhancements of MDT for E-UTRA	12.2.0	13.0.0	R2	LTE_eMDT2-Core
37.571-1	0145	-	Rel-12	F	RP-151713	R5-155018	approved	Uncertainties and Test Tolerances for RSTD Test Cases 10.3A_1 and 10.4A_1	12.4.0	12.5.0	R5	TEI12_Test
37.571-1	0146	-	Rel-12	F	RP-151713	R5-155035	approved	Incorrect Table Note referenced in LPP Request Table	12.4.0	12.5.0	R5	TEI12_Test
37.571-1	0147	-	Rel-10	F	RP-151688	R5-155041	approved	Removal of technical content in 37.571-1 v10.7.0 and substitution with pointer to the next Release	10.7.0	10.8.0	R5	TEI10_Test
37.571-1	0148	-	Rel-11	F	RP-151696	R5-155042	approved	Removal of technical content in 37.571-1 v11.2.0 and substitution with pointer to the next Release	11.2.0	11.3.0	R5	TEI11_Test
37.571-1	0149	-	Rel-12	F	RP-151713	R5-155063	approved	Incorrect references in TDD test cases	12.4.0	12.5.0	R5	TEI12_Test
37.571-1	0150	-	Rel-12	F	RP-151713	R5-155064	approved	Reference [2] has no explanation	12.4.0	12.5.0	R5	TEI12_Test
37.571-1	0151	-	Rel-12	F	RP-151713	R5-155065	approved	Remove square brackets from RSTD tests	12.4.0	12.5.0	R5	TEI12_Test
37.571-1	0152	-	Rel-12	F	RP-151713	R5-155066	approved	Incorrect Section number referenced	12.4.0	12.5.0	R5	TEI12_Test
37.571-1	0153	-	Rel-12	F	RP-151713	R5-155081	approved	Editorial changes to correct Section and Table references	12.4.0	12.5.0	R5	TEI12_Test
37.571-1	0154	1	Rel-12	F	RP-151700	R5-155875	approved	Two new 3 DL CA RSTD Measurement Reporting Delay test cases	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
37.571-1	0155	1	Rel-12	F	RP-151700	R5-156111	approved	Two new 3 DL CA RSTD Measurement Accuracy test cases	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
37.571-2	0062	-	Rel-10	F	RP-151688	R5-155043	approved	Removal of technical content in 37.571-2 v10.9.0 and substitution with pointer to the next Release	10.9.0	10.10.0	R5	TEI10_Test
37.571-2	0063	-	Rel-11	F	RP-151696	R5-155044	approved	Removal of technical content in 37.571-2 v11.0.0 and substitution with pointer to the next Release	11.0.0	11.1.0	R5	TEI11_Test
37.571-2	0064	-	Rel-12	F	RP-151713	R5-155101	approved	Correction to use of Modernized GPS with BDS	12.3.0	12.4.0	R5	TEI12_Test
37.571-3	0040	-	Rel-10	F	RP-151688	R5-155045	approved	Removal of technical content in 37.571-3 v10.7.0 and substitution with pointer to the next Release	10.7.0	10.8.0	R5	TEI10_Test
37.571-3	0041	-	Rel-11	F	RP-151696	R5-155046	approved	Removal of technical content in 37.571-3 v11.0.0 and substitution with pointer to the next Release	11.0.0	11.1.0	R5	TEI11_Test

Samsung Exhibit 1025, Page 1120 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
37.571-3	0042	1	Rel-12	F	RP-151700	R5-155876	approved	Applicabilities for two new 3 DL CA RSTD Measurement Reporting Delay test cases	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
37.571-3	0043	1	Rel-12	F	RP-151700	R5-156112	approved	Applicabilities for two new 3 DL CA RSTD Measurement Accuracy test cases	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
37.571-3	0044	-	Rel-12	F	RP-151696	R5-155137	approved	Updating applicability statements for ECID feICIC test cases 8.1.5 and 8.1.6	12.4.0	12.5.0	R5	TEI11_Test
37.571-3	0045	1	Rel-12	F	RP-151685	R5-156010	approved	Addition of release RAT column to applicability table 4-3	12.4.0	12.5.0	R5	TEI8_Test
37.571-3	0047	1	Rel-12	F	RP-151685	R5-155945	approved	Addition of release RAT column to applicability tables 4-7	12.4.0	12.5.0	R5	TEI8_Test
37.571-4	0066	-	Rel-10	F	RP-151688	R5-155047	approved	Removal of technical content in 37.571-4 v10.9.0 and substitution with pointer to the next Release	10.9.0	10.10.0	R5	TEI10_Test
37.571-4	0067	-	Rel-11	F	RP-151696	R5-155048	approved	Removal of technical content in 37.571-4 v11.0.0 and substitution with pointer to the next Release	11.0.0	11.1.0	R5	TEI11_Test
37.571-4	0068	-	Rel-12	B	RP-151698	R5s150710	approved	Addition of GCF WI-166 EUTRA UE Positioning test case 7.3.4.2.7s	12.2.0	12.3.0	R5	TEI9_Test
37.571-4	0069	-	Rel-12	B	RP-151698	R5s150712	approved	Addition of GCF WI-166 EUTRA UE Positioning test case 7.3.4.4.7s	12.2.0	12.3.0	R5	TEI9_Test
37.571-4	0070	-	Rel-12	F	RP-151698	R5s150805	approved	Correction to POS capability check procedure	12.2.0	12.3.0	R5	TEI9_Test
37.571-4	0071	-	Rel-12	F	RP-151698	R5s150911	approved	Code improvements in Positioning test cases	12.2.0	12.3.0	R5	TEI8_Test
37.571-4	0072	-	Rel-12	F	RP-151697	-	approved	CR to 37.571-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (prose), Annex A	12.2.0	12.3.0	R5	TEI9_Test
37.571-5	0128	-	Rel-10	F	RP-151688	R5-155049	approved	Removal of technical content in 37.571-5 v10.10.0 and substitution with pointer to the next Release	10.10.0	10.11.0	R5	TEI10_Test
37.571-5	0129	-	Rel-11	F	RP-151696	R5-155050	approved	Removal of technical content in 37.571-5 v11.0.0 and substitution with pointer to the next Release	11.0.0	11.1.0	R5	TEI11_Test
37.571-5	0130	1	Rel-12	F	RP-151700	R5-155877	approved	Values for two new 3 DL CA RSTD Measurement Reporting Delay test cases	12.3.0	12.4.0	R5	LTE_CA_Rel12_3DL-UEConTest
37.571-5	0131	-	Rel-12	F	RP-151700	R5-155185	approved	Values for two new 3 DL CA RSTD Measurement Accuracy test cases	12.3.0	12.4.0	R5	LTE_CA_Rel12_3DL-UEConTest
37.571-5	0132	2	Rel-12	F	RP-151713	R5-156187	approved	LBS-Perf: Corrections to A-BDS navigation files	12.3.0	12.4.0	R5	TEI12_Test
37.571-5	0133	2	Rel-12	F	RP-151713	R5-156186	approved	LBS-Sig: Corrections to A-BDS navigation files	12.3.0	12.4.0	R5	TEI12_Test
37.857	0001	1	Rel-13	F	RP-152028	R1-156113	approved	Clarification on Baseline performance of existing positioning techniques	13.0.0	13.1.0	R1	FS_UTRA_LTE_iPos_enh
37.977	0023	1	Rel-13	F	RP-152145	R4-158318	approved	CR to 37.977 on harmonization test campaign	13.1.0	13.2.0	R4	UTRA_LTE_MIMO_OTA-Core
37.977	0025	-	Rel-13	F	RP-152145	R4-157285	approved	CR to 37.977 to clarify BS antenna assumptions for channel model validation	13.1.0	13.2.0	R4	UTRA_LTE_MIMO_OTA-Core
37.977	0026	2	Rel-13	F	RP-152145	R4-158370	approved	CR to TR37.977: Measurement uncertainty budget for AC and RC Methodologies	13.1.0	13.2.0	R4	UTRA_LTE_MIMO_OTA-Core

Samsung Exhibit 1025, Page 1121 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

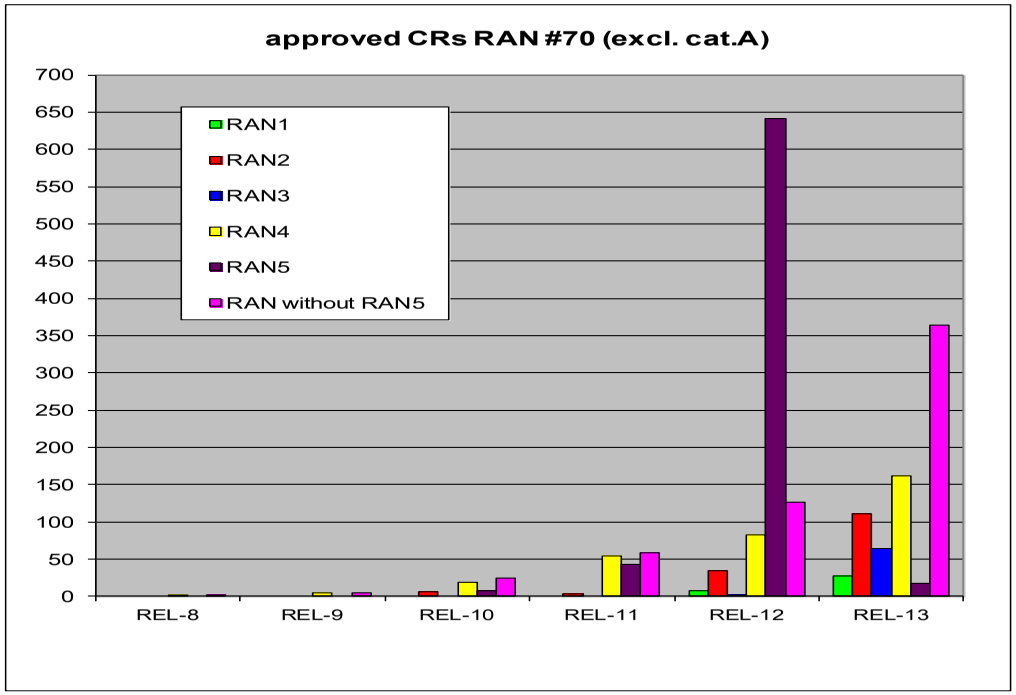


Fig. E-1: Approved CRs (excluding category A CRs) of RAN #70 per WG and release

Samsung Exhibit 1025, Page 1122 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

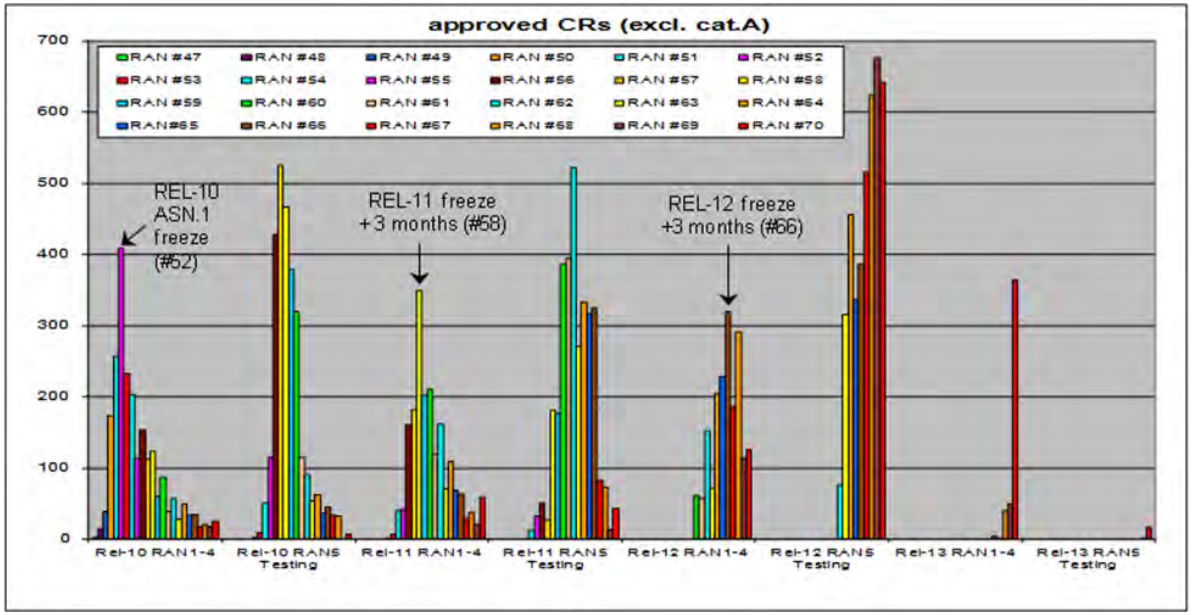


Fig. E-2: Approved CRs (<u>excluding</u> category A CRs) of previous RAN meetings per release
<u>REL freeze</u>: REL-8: RAN #42, REL-9: RAN #46, REL-10: RAN #51, REL-11: RAN #57, REL-12: RAN #65, REL-13: RAN #70
<u>ASN.1 freeze</u>: REL-8: RAN #43 (713 CRs), REL-9: RAN #47 (355 CRs), REL-10: RAN #52 (apart from Un), REL-11: RAN #59, REL-12: RAN #67, REL-13: RAN #71*
***: planned**

Samsung Exhibit 1025, Page 1123 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

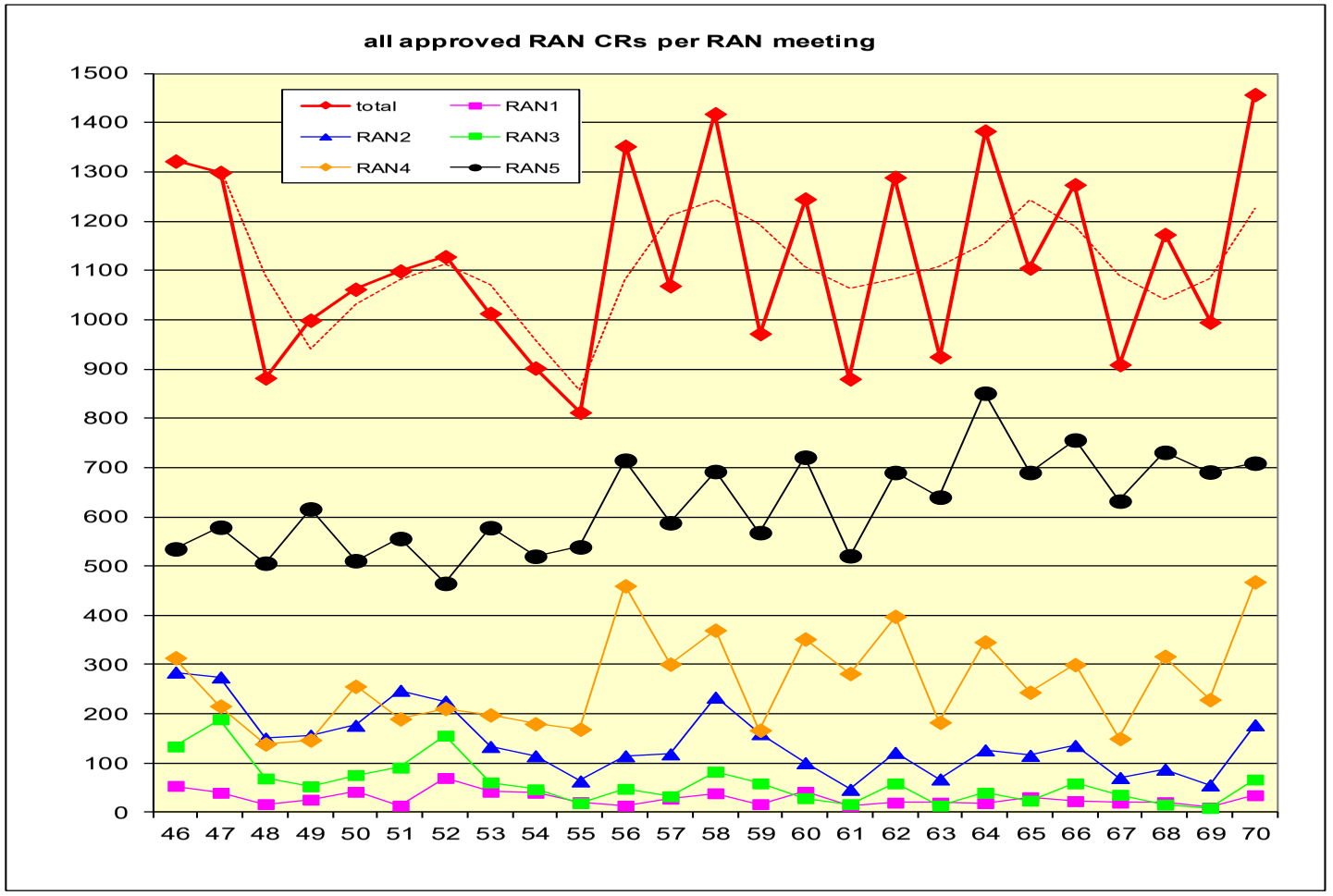


Fig. E-3: Approved CRs (all releases <u>including</u> category A CRs) per RAN WG and per RAN meeting
REL freeze: REL-8: RAN #42, REL-9: RAN #46, REL-10: RAN #51, REL-11: RAN #57, REL-12: RAN #65, REL-13: RAN #70
ASN.1 freeze: REL-8: RAN #43, REL-9: RAN #47, REL-10: RAN #52 (apart from Un), REL-11: RAN #59, REL-12: RAN #67, REL-13: RAN #71*
***: planned**

Samsung Exhibit 1025, Page 1124 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex F:
Summary of RAN work items (WI) and study items (SI)

An overview of recent RAN work items and study items (starting from REL-9 and including the new WIs & SIs approved at this meeting) is attached to this report.

This overview is used as input for the 3GPP workplan which lists all 3GPP work and study items.

NOTE: REL-4, REL-5, REL-6 and REL-7 were closed after RAN #65, i.e. no CRs to specifications of these releases will be considered anymore.

status after RAN #69:

REL-7:		
REL-7 stage 1 freeze:	Sep.05	TSG #29
REL-7 stage 2 freeze:	Sep. 06	TSG #33
REL-7 freeze:	March 07	TSG #35
REL-7 ASN.1 freeze:	March 08	TSG #39
REL-8:	7 quarters	
REL-8 stage 1 freeze:	Dec.07	TSG #38
REL-8 stage 2 freeze:	June 08	TSG #40
REL-8 freeze:	Dec.08	TSG #42
REL-8 ASN.1 freeze:	March 09	TSG #43
REL-9:	4 quarters	
REL-9 stage 1 freeze:	Dec.08	TSG #42
REL-9 stage 2 freeze:	June 09	TSG #44
REL-9 freeze:	Dec.09	TSG #46
REL-9 ASN.1 freeze:	March 10	TSG #47
REL-10:	5 quarters	
REL-10 stage 1 freeze:	March 10	TSG #47
REL-10 stage 2 freeze:	Sep.10	TSG #49
REL-10 freeze:	March 11	TSG #51
REL-10 ASN.1 freeze:	June 11	TSG #52 (apart from Un for Relays: frozen in Sep.11 at TSG #53)
REL-11:	6 quarters	
REL-11 stage 1 freeze:	Sep.11	TSG #53
REL-11 stage 2 freeze:	March 12	TSG #55
REL-11 freeze:	Sep.12	TSG #57
REL-11 ASN.1 freeze:	March 13	TSG #59

Samsung Exhibit 1025, Page 1125 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

REL-12:	8 quarters	
REL-12 stage 1 freeze:	March 13	TSG #59
REL-12 stage 2 freeze:	Dec.13	TSG #62
REL-12 freeze:	Sep.14	TSG #65
REL-12 ASN.1 freeze:	March 15	TSG #67

REL-13:	5 quarters	
REL-13 stage 1 freeze:	Sep.14	TSG #65
REL-13 stage 2 freeze:	June 15	TSG #68
REL-13 freeze:	Dec.15	TSG #70
REL-13 ASN.1 freeze:	March 16	TSG #71 (planned)

REL-14:	5 quarters	
REL-14 stage 1 freeze:	March 16	TSG #71 (tentative)**
REL-14 stage 2 freeze:	Sep.16	TSG #73 (tentative)**
REL-14 freeze:	March 17	TSG #75 (planned)**
REL-14 ASN.1 freeze:	June 17	TSG #76 (planned)**

**: These target dates were endorsed by SA #69 (in connection with proposal SP-150564), and with RP-152228 the REL-14 freeze date was confirmed.

REL-15:	5 quarters	
REL-15 stage 1 freeze:	tbd	
REL-15 stage 2 freeze:	tbd	
REL-15 freeze:	June 18	TSG #80 (planned), see RP-152228
REL-15 ASN.1 freeze:	Sep.18	TSG #81 (planned)

REL-16:	6 quarters	
REL-16 stage 1 freeze:	tbd	
REL-16 stage 2 freeze:	tbd	
REL-16 freeze:	Dec.19	TSG #86 (planned), see RP-152228
REL-16 ASN.1 freeze:	March 20	TSG #87 (planned)

Samsung Exhibit 1025, Page 1126 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

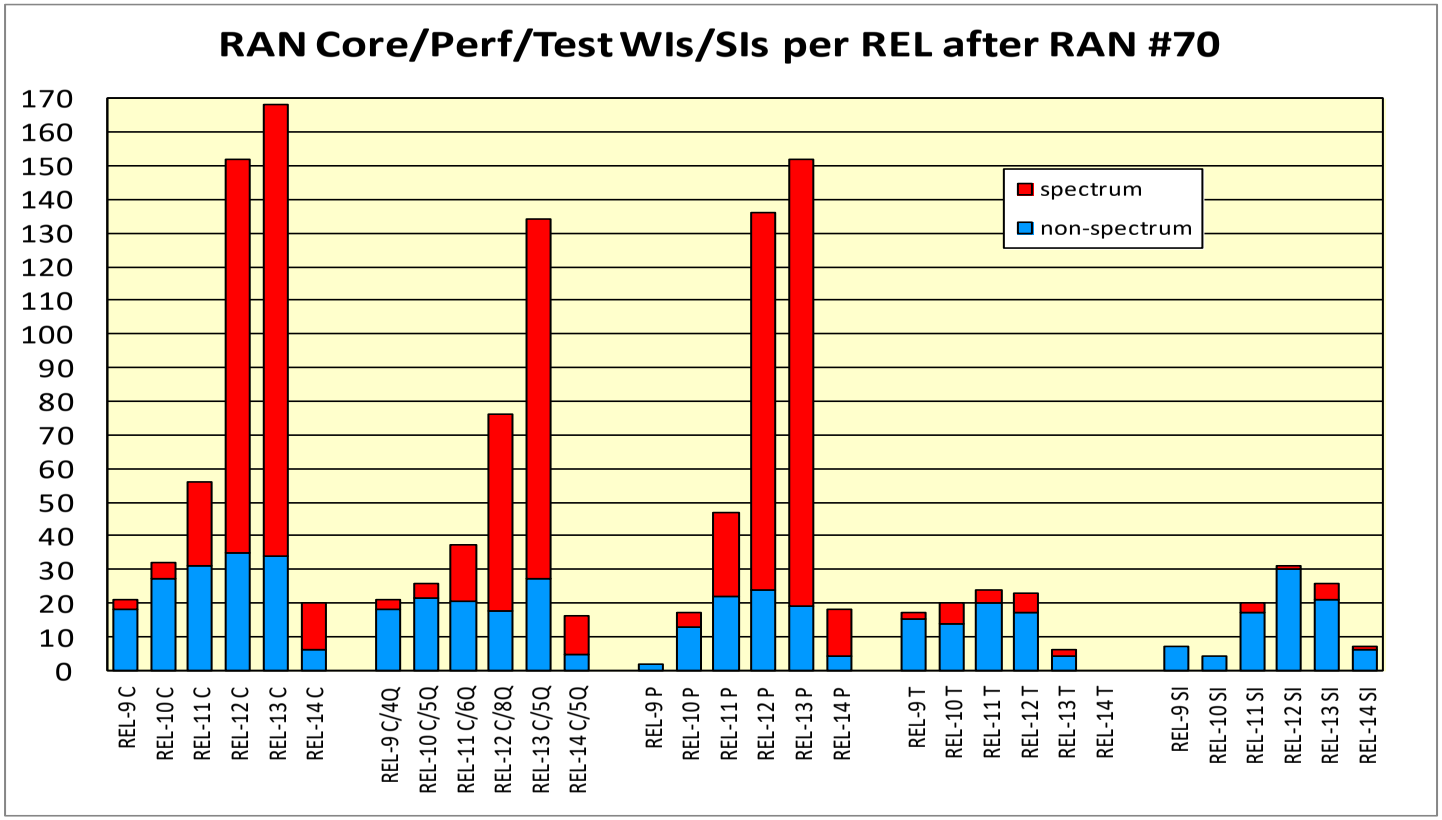


Fig. F-1: Statistics of all approved RAN WIs/SIs of REL-9/10//11/12/13/14 (status: after RAN #70) split into spectrum and non-spectrum related topics (<u>including</u> already completed WIs/SIs)
Note: For REL-14 the planned freeze in March 17 was used in this figure.

Samsung Exhibit 1025, Page 1127 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

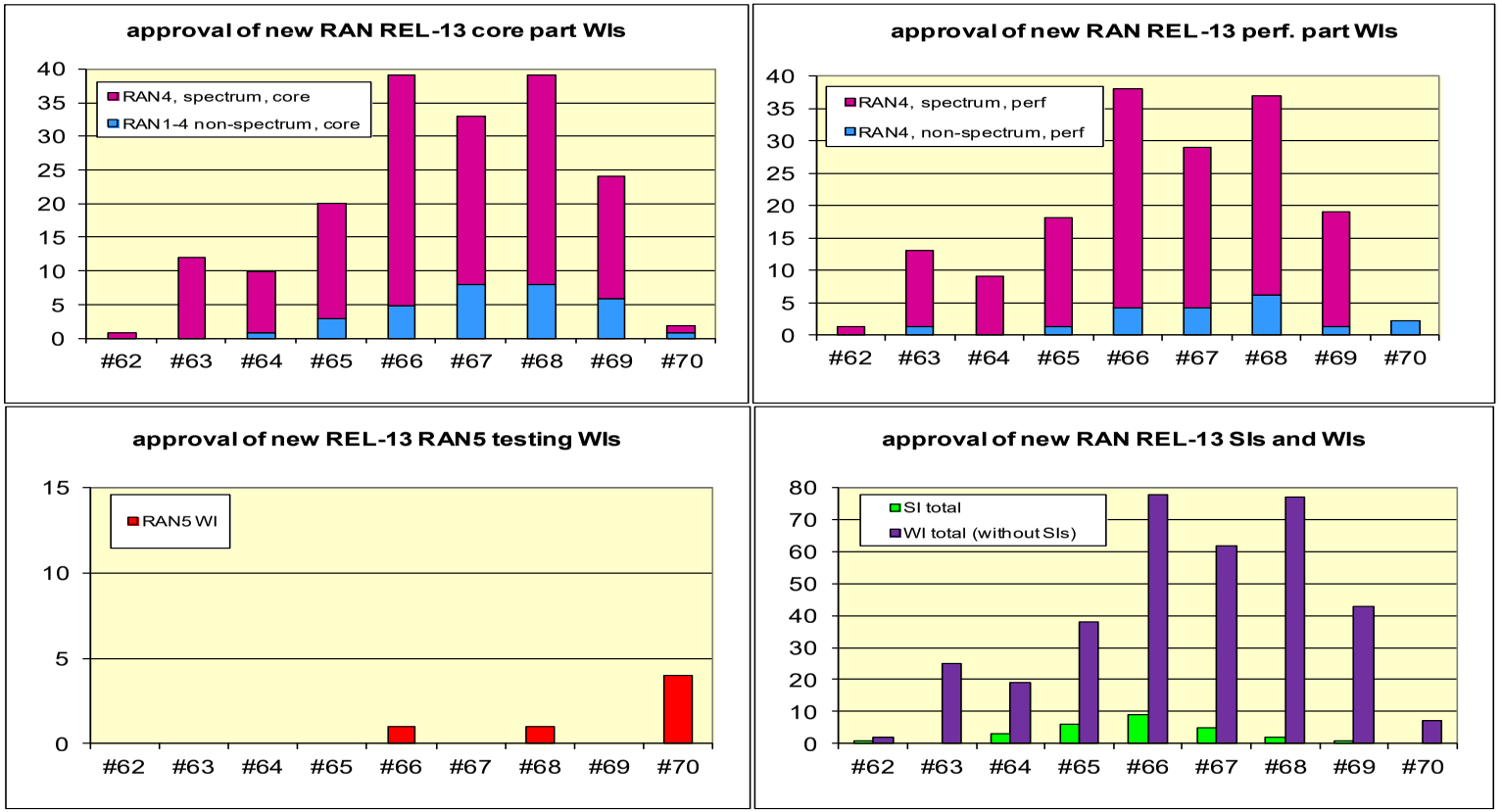


Fig. F-2: Overview of new REL-13 WIs and SIs per RAN meeting
(REL-12 freeze: RAN #65 (Sep.14), ASN.1 freeze: RAN #67;
REL-13 freeze: RAN #70 (Dec.15), ASN.1 freeze: planned for RAN #71)
(including WIs shifted from REL-12 to REL-13)

Samsung Exhibit 1025, Page 1128 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex G:
RAN email discussions between RAN #70 and RAN #71:

Announced by the RAN chairman on 11.12./14.12.2015 via the RAN reflector:

[Post-RAN#70-01] Scenarios and Requirements for Next Generation Access Technologies, see approved SI RP-152257
rapporteur: CMCC
- First goal of the discussion is to have a stable version of the TR; then we can start to populate it with initial agreeable scenarios and requirements
- Output of the discussion should be inputs (hopefully having broad support) to next RAN AH*: TR skeleton and possibly initial TR text proposals.
  *: 28/29.01.2016
  => conclusion: Email discussion summary RPa160012 and TR 38.913 v0.0.2 RPa160013 were submitted to the RAN ad hoc in Jan. 28-29, 2016 in Barcelona.

[Post-RAN#70-02] Downlink Multiuser Superposition Transmission for LTE
rapporteur: Mediatek
- Goal is to discuss exact scope and objectives of the proposed work in this area (RP-152289). It is also important that the discussion clearly highlights the different components of the new proposal and their expected benefits.
- Output of the discussion should be a proposal for RAN#71
  => conclusion: RP-160261 (new WID), RP-160262 (motivation) and RP-160263 (workplan) were submitted to RAN #71 as output of this email discussion.

[Post-RAN#70-03] FD-MIMO enhancements
rapporteur: Samsung
- Goal is to discuss exact scope and objectives of the proposed work in this area (RP-152287). It is also important that the discussion clearly highlights the different components of the new proposal and their expected benefits.
- Output of the discussion should be a proposal for RAN#71
  => conclusion: RP-160212 (new WID) was provided to RAN #71 as output of this email discussion.

[Post-RAN#70-04] eMBMS enhancements for LTE
rapporteur: Ericsson
- Goal is to discuss exact scope and objectives of the proposed work in this area (RP-152273). It is also important that the discussion clearly highlights the different components of the new proposal and their expected benefits.
- Output of the discussion should be a proposal for RAN#71
  => conclusion: RP-160273 (new WID) was provided to RAN #71 as output of this email discussion.

[Post-RAN#70-05] Support of 256QAM for UE categories 6/7/9/10
rapporteur: Intel
- Goal is to discuss the issue raised in RP-152243 and possible ways to address it.
- Output of the discussion should be a proposal for RAN#71
  => conclusion: Email discussion summary is provided to RAN #71 in RP-160423.

Samsung Exhibit 1025, Page 1129 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

[Post-RAN#70-06] ToRs update for moving GERAN into RAN, see RP-151781, RP-151783, RP-151784 (AI 19)
rapporteur: GERAN chairman (Ericsson)

- Goal is to discuss the ToRs update for moving GERAN into RAN.
- Output of the discussion should be a proposals for RAN#71
  => conclusion: Revised ToR were provided to RAN #70 in RP-160055 (for RAN), RP-160056 (for RAN5) and RP-160058 (for RAN6).

Annex H:
Actions decided by RAN #70

ACTION_ITEM_1:	Document on interaction plan with ITU-R for IMT-2020 (see RP-152228)
for:	RAN ITU-R ad hoc group/convener
task:	Prepare a living document with a plan for the 3GPP submission to IMT 2020 and, more in general, for the whole interaction with ITU-R WP5D (requirements, initial submission, final submission…) as input to RAN #71.
completion date:	RAN #71 => provided to RAN #71 in RP-160057
ACTION_ITEM_2:	WG chairs' plans on how to accomodate work on next generation (see RP-152228)
for:	RAN WG chairs (less critical for RAN5)
task:	RAN WG Chairs should start planning to accommodate after March a track for the work on the new radio and architecture, in addition to the existing WG capacity that will continue to be dedicated to the LTE evolution (and HSPA enhancements) and provide a corresponding input to RAN #71.
completion date:	RAN #71

Samsung Exhibit 1025, Page 1130 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex I: History

Document history		
Date	**TSG RAN Tdoc**	**Subject**
06.12.2015	-	Skeleton report for RAN #70 provided before the meeting.
10.12.2015	-	Draft report of RAN #70 provided directly after RAN #70
22.01.2016	-	Draft report of RAN #70 v1.0 (revision marks compared to version of the end of the meeting)
05.03.2016	RP-160002	Draft report of RAN #70 v2.0 (revision marks compared to version 1.0)

In case of comments/questions/corrections please contact:

Author: **Dr. Joern Krause (3GPP TSG RAN MCC Support)**

ETSI Mobile Competence Centre (MCC)
Tel. +33-492-94 4261
email: Joern.Krause@etsi.org

Samsung Exhibit 1025, Page 1131 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 36

www.3gpp.org / ftp / Specs / archive / 36_series / 36.212

	sort by name/desc	sort by date/desc	sort by size/desc
36212-000.zip	2006/10/12 9:28	33,1 KB
36212-010.zip	2006/10/16 9:19	33 KB
36212-020.zip	2006/11/14 13:04	40,3 KB
36212-021.zip	2006/12/18 8:35	50,5 KB
36212-100.zip	2007/03/19 15:45	91,7 KB
36212-120.zip	2007/06/13 17:51	92,1 KB
36212-130.zip	2007/07/30 10:13	130,6 KB
36212-200.zip	2007/09/24 9:00	504,6 KB
36212-800.zip	2007/09/27 11:30	506,9 KB
36212-810.zip	2007/12/20 11:12	582,9 KB
36212-820.zip	2008/03/18 17:31	585,2 KB
36212-830.zip	2008/06/19 13:26	665,9 KB
36212-840.zip	2008/09/16 12:23	707,6 KB
36212-850.zip	2008/12/18 11:44	829,6 KB
36212-860.zip	2009/03/13 21:09	846,2 KB
36212-870.zip	2009/06/08 11:39	848,1 KB
36212-880.zip	2009/12/09 16:22	849,7 KB
36212-900.zip	2009/12/12 20:04	856,2 KB
36212-910.zip	2010/03/30 11:55	848,9 KB
36212-920.zip	2010/05/31 20:03	859,1 KB
36212-930.zip	2010/09/17 20:06	790 KB
36212-940.zip	2011/09/25 20:42	819,1 KB
36212-a00.zip	2010/12/22 11:19	902,5 KB
36212-a10.zip	2011/03/29 10:31	926,6 KB
36212-a20.zip	2011/06/21 12:39	953,5 KB
36212-a30.zip	2011/09/25 20:43	933 KB
36212-a40.zip	2011/12/12 20:29	934,4 KB
36212-a50.zip	2012/03/07 16:45	935,2 KB
36212-a60.zip	2012/06/26 12:33	935,9 KB
36212-a70.zip	2012/12/15 20:03	938,5 KB

Samsung Exhibit 1025, Page 1133 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

	sort by name/desc	sort by date/desc	sort by size/desc
	36212-a80.zip	2013/06/17 12:43	941,3 KB
	36212-a90.zip	2015/09/22 11:44	900,4 KB
	36212-b00.zip	2012/09/18 16:56	946,5 KB
	36212-b10.zip	2012/12/20 9:24	959,2 KB
	36212-b20.zip	2013/03/12 16:44	959,6 KB
	36212-b30.zip	2013/06/17 13:40	961,9 KB
	36212-b40.zip	2013/12/15 17:57	948,5 KB
	36212-b50.zip	2014/06/16 13:10	913,4 KB
	36212-b51.zip	2014/09/22 15:55	913,7 KB
	36212-b60.zip	2015/09/22 11:52	914,4 KB
	36212-b70.zip	2016/03/27 20:21	915,4 KB
	36212-c00.zip	2013/12/15 17:58	971,7 KB
	36212-c10.zip	2014/06/17 15:52	948,3 KB
	36212-c20.zip	2014/09/23 14:14	949,3 KB
	36212-c30.zip	2015/01/03 20:41	951,3 KB
	36212-c40.zip	2015/03/18 18:28	971,4 KB
	36212-c50.zip	2015/06/24 13:04	972,5 KB
	36212-c60.zip	2015/09/22 12:24	972,2 KB
	36212-c70.zip	2015/12/09 8:58	972,6 KB
	36212-c80.zip	2016/03/27 20:29	972,9 KB
	36212-c90.zip	2018/01/05 13:32	979,5 KB
	36212-c91.zip	2018/01/20 8:35	979,2 KB
	36212-d00.zip	2016/01/05 13:28	1073 KB
	36212-d10.zip	2016/03/29 21:22	1090 KB
	36212-d20.zip	2016/06/30 12:53	1193 KB
	36212-d30.zip	2016/09/29 9:50	1197,6 KB
	36212-d40.zip	2017/01/02 16:34	1197,2 KB
	36212-d50.zip	2017/03/23 11:55	1198,1 KB
	36212-d60.zip	2017/06/23 20:13	1200,7 KB
	36212-d70.zip	2018/01/05 13:33	1204,5 KB
	36212-d71.zip	2018/01/20 8:33	1203,9 KB
	36212-d80.zip	2018/07/05 19:11	1205,7 KB
	36212-d90.zip	2019/06/24 9:53	1219,5 KB
	36212-da0.zip	2020/01/06 15:24	1224,6 KB

Samsung Exhibit 1025, Page 1134 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

	sort by name/desc	sort by date/desc	sort by size/desc
	36212-db0.zip	2021/03/31 7:50	1229,4 KB
	36212-e00.zip	2016/09/29 9:54	1227,5 KB
	36212-e10.zip	2017/01/02 16:35	1229,1 KB
	36212-e11.zip	2017/01/04 18:39	1236,3 KB
	36212-e20.zip	2017/03/23 14:58	1459,3 KB
	36212-e30.zip	2017/06/23 20:14	1466,2 KB
	36212-e40.zip	2017/09/26 15:35	1467,6 KB
	36212-e50.zip	2018/01/05 13:34	1479,7 KB
	36212-e51.zip	2018/01/20 8:32	1477,1 KB
	36212-e60.zip	2018/07/05 19:10	1478,6 KB
	36212-e70.zip	2018/09/27 8:04	1479 KB
	36212-e80.zip	2019/01/11 14:01	1481,9 KB
	36212-e90.zip	2019/03/28 7:38	1479,8 KB
	36212-ea0.zip	2019/06/24 9:52	1482,9 KB
	36212-eb0.zip	2020/01/06 15:25	1492 KB
	36212-ec0.zip	2020/04/03 10:59	1490,4 KB
	36212-ed0.zip	2020/07/14 9:39	1501,8 KB
	36212-ee0.zip	2020/10/01 15:11	1507,4 KB
	36212-ef0.zip	2021/03/31 7:52	1503,4 KB
	36212-eg0.zip	2021/06/30 15:23	1510,5 KB
	36212-f00.zip	2018/01/09 8:16	1592,4 KB
	36212-f01.zip	2018/01/16 20:46	1578,3 KB
	36212-f10.zip	2018/04/02 19:53	1597,2 KB
	36212-f20.zip	2018/07/05 19:08	1003,6 KB
	36212-f21.zip	2018/07/11 21:12	1008,2 KB
	36212-f30.zip	2018/09/27 8:05	1010,3 KB
	36212-f40.zip	2019/01/11 14:02	1009,9 KB
	36212-f50.zip	2019/03/28 7:40	1012,9 KB
	36212-f60.zip	2019/06/24 9:50	1015,2 KB
	36212-f70.zip	2019/09/28 19:52	1009,6 KB
	36212-f80.zip	2020/01/06 15:26	1009,8 KB
	36212-f90.zip	2020/04/03 10:57	1010,1 KB
	36212-fa0.zip	2020/07/14 9:40	1005,8 KB
	36212-fb0.zip	2020/10/01 15:12	1011,6 KB

Samsung Exhibit 1025, Page 1135 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
36212-fc0.zip	2021/01/08 8:13	1010,5 KB
36212-fd0.zip	2021/03/31 7:54	1199,8 KB
36212-fe0.zip	2021/06/30 15:25	1202 KB
36212-ff0.zip	2022/01/05 19:29	1204,1 KB
36212-g00.zip	2020/01/14 14:52	1020,8 KB
36212-g10.zip	2020/04/03 10:58	1026,7 KB
36212-g20.zip	2020/07/14 9:41	1027,4 KB
36212-g30.zip	2020/10/01 15:14	1030,6 KB
36212-g40.zip	2021/01/08 8:14	1037 KB
36212-g50.zip	2021/03/31 7:55	1223 KB
36212-g60.zip	2021/06/30 15:26	1222,4 KB
36212-g70.zip	2022/01/05 19:30	1227,9 KB
36212-h00.zip	2022/01/05 19:31	1239 KB
36212-h10.zip	2022/04/01 20:41	1237,8 KB
36212-i00.zip	2023/09/28 9:33	1286,6 KB

113 items.

Samsung Exhibit 1025, Page 1136 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 37

3GPP TSG RAN meeting #68 **RP-150526**
Malmö, Sweden, June 15 – 18, 2015

Agenda Item: 3

Source: ETSI MCC

Title: Draft Report of 3GPP TSG RAN meeting #67,
Shanghai, China, March 9 – 12, 2015

Document for: Approval

Draft Report of 3GPP TSG RAN meeting #67

held in Shanghai, China

March 9 – 12, 2015



colour code:	
yellow:	please ignore, preparations that will be revised later
blue:	text that will be revised in the final report
green:	approved new TSs/TRs/WIs/SIs/Report/Exception
grey:	outgoing LSs/LTIs
red:	WI/SI closed/completed or moved to next REL
purple:	pendingTdocs

The present document has been developed within the 3rd Generation Partnership Project (3GPP ™) and it has not been subject to any approval process by the 3GPP Organizational Partners.

Keywords
RAN, UTRA, LTE

3GPP

Postal address

3GPP support office address
650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet
http://www.3gpp.org

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© 2015, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
All rights reserved.

UMTS™ is a Trade Mark of ETSI registered for the benefit of its members
3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners
LTE™ is a Trade Mark of ETSI currently being registered for the benefit of its Members and of the 3GPP Organizational Partners
GSM® and the GSM logo are registered and owned by the GSM Association

Samsung Exhibit 1025, Page 1139 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Contents

Meeting Organisation 6
Executive Summary 6
1 Opening of the Meeting 11
2 Reminders for usage of IT resources, IPR declaration and antitrust compliance 11
3 Approval of the Agenda 12
4 Approval of the meeting report of TSG-RAN #66 13
5 Reports from other meetings 14
5.1 Report from TSG SA 14
5.2 Report from PCG 14
5.3 Report from other meetings 14
6 Liaison activity of TSG RAN 15
6.1 Groups outside 3GPP 15
6.2 TSG SA, TSG CT, TSG GERAN 16
6.3 TSG RAN WG1, WG2, WG3, WG4, WG5, RAN ITU-R ad hoc 17
7 ITU-R Ad hoc 19
7.1 Status report 19
7.2 Submission to ITU-R 19
7.2.1 Submission to ITU-R WP5A 19
7.2.2 Submission to ITU-R WP5D 19
7.2.3 Other ITU-R submission 21
8 RAN WGs: WG Status Reports & CR Approvals up to Rel-10 22
8.1 TSG RAN WG1 22
8.1.1 Report from RAN WG1 including report on actions required from the previous meeting 22
8.1.2 Discussions on decisions from RAN WG1 22
8.1.3 Approval of CRs to REL-8 WIs and WIs of previous releases 22
8.1.4 Approval of CRs to Rel-9 WIs 22
8.1.5 Approval of CRs to Rel-10 WIs 22
8.1.6 Approval of CRs to Rel-11 WIs 22
8.1.7 Approval of linked CR packages led by RAN WG1 22
8.2 TSG RAN WG2 22
8.2.1 Report from RAN WG2 including report on actions required from the previous meeting 22
8.2.2 Discussions on decisions from RAN WG2 23
8.2.3 Approval of CRs to REL-8 WIs and WIs of previous releases 23
8.2.4 Approval of CRs to Rel-9 WIs 23
8.2.5 Approval of CRs to Rel-10 WIs 24
8.2.6 Approval of CRs to Rel-11 WIs 24
8.2.7 Approval of linked CR packages led by RAN WG2 24
8.3 TSG RAN WG3 24
8.3.1 Report from RAN WG3 including report on actions required from the previous meeting 24
8.3.2 Discussions on decisions from RAN WG3 24
8.3.3 Approval of CRs to REL-8 WIs and WIs of previous releases 24
8.3.4 Approval of CRs to Rel-9 WIs 24
8.3.5 Approval of CRs to Rel-10 WIs 24
8.3.6 Approval of CRs to Rel-11 WIs 24
8.3.7 Approval of linked CR packages led by RAN WG3 24
8.4 TSG RAN WG4 25
8.4.1 Report from RAN WG4 including report on actions required from the previous meeting 25
8.4.2 Discussions on decisions from RAN WG4 25
8.4.3 Approval of CRs to REL-8 WIs and WIs of previous releases 26
8.4.4 Approval of CRs to Rel-9 WIs 26
8.4.5 Approval of CRs to Rel-10 WIs 26

Samsung Exhibit 1025, Page 1140 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8.4.6 Approval of CRs to Rel-11 WIs 27
8.4.7 Approval of linked CR packages led by RAN WG4 27
8.5 TSG RAN WG5 27
8.5.1 Report from RAN WG5 including report on actions required from the previous meeting 27
8.5.2 Discussions on decisions from RAN WG5 27
8.5.3 Approval of CRs to closed WIs of REL-10 (incl. TEI10_Test) and previous releases 27
8.5.4 Approval of CRs to closed WIs of REL-11 (incl. TEI11_Test) 28
8.5.5 Approval of linked CR packages led by RAN WG5 29

9 Conformance Testing Work Items 30
9.1 Closed REL-12 work items 30
9.2 Open Rel-11 work items 30
9.3 Open Rel-12 work items 31
9.4 Open Rel-13 work items 32

10 Work Items with target Rel-12 (not related to conformance testing) 33
10.1 Closed UTRA only related WIs 33
10.2 Closed UTRA & LTE related WIs 33
10.3 Closed LTE only related WIs 33
10.4 Open UTRA only related WIs 35
10.5 Open UTRA & LTE only related WIs 35
10.6 Open LTE only related WIs (non-spectrum related) 35
10.7 Open LTE only related WIs (spectrum; CA related) 37
10.8 Small Technical Enhancements and Improvements for Rel-12 [TEI12] 44

11 Work Items with target Rel-13 (not related to conformance testing) 45
11.1 Open UTRA related WIs (spectrum related) 45
11.2 Open UTRA & LTE related WIs (non-spectrum related) 45
11.3 Open LTE only related WIs (non-spectrum related) 46
11.4 Open LTE only related WIs (spectrum; CA related) 48
11.5 Open LTE only related WIs (spectrum; not CA related) 54

12 Study Items 55
12.1 Closed study items 55
12.2 Open UTRA related SIs 55
12.3 Open UTRA & LTE related SIs 56
12.4 Open LTE only related SIs 56

13 New Work Items/Study Items 65
13.1 New core functions 65
13.1.1 WIs/SIs led by RAN1 67
13.1.2 WIs/SIs led by RAN2 70
13.1.3 WIs/SIs led by RAN3 76
13.1.4 WIs/SIs led by RAN4 78
13.2 Spectrum related WIs/SIs 80
13.3 UE conformance testing WIs/SIs led by RAN5 85

14 UE capabilities/FGIs 87

15 Inter WG/TSG-related discussions & decisions 90

16 Outputs to other groups 91

17 TSG RAN elections 91
17.1 Election of RAN chairman 91
17.2 Election of RAN vice-chairmen 91

Samsung Exhibit 1025, Page 1141 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

18 Project management 92
19 Future meeting schedule 96
20 Any other business 96
21 Closing of the meeting 96
Annex A: List of participants 97
Annex B: List of Tdocs 98
Annex C: Incoming liaison statements (LSin) 99
Annex D: Outgoing liaison statements (LSout) 104
Annex E: List of Change Requests (CRs) 106
Annex F: Summary of RAN work items (WI) and study items (SI) 138
Annex G: Actions decided by RAN #67 143
Annex H: History 144

Samsung Exhibit 1025, Page 1142 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Meeting Organisation

Meeting:	3GPP TSG RAN #67			
Meeting location:	Shanghai, China			
Duration:	Monday 09.03.2015 - Thursday 12.03.2015			
Host:	Huawei Technologies			
TSG RAN Chairman:	Dino Flore (Qualcomm)	email: oflore@qti.qualcomm.com		
TSG RAN Vice chairman:	Takaharu Nakamura (Fujitsu)	email: n.takaharu@jp.fujitsu.com		
TSG RAN Vice chairman:	Giovanni Romano (Telecom Italia)	email: giovanni.romano@telecomitalia.it		
TSG RAN Vice chairman:	Sharat Chander (AT&T)	email: sharat.chander@att.com		
TSG RAN MCC Support:	Joern Krause (ETSI MCC)	email: Joern.Krause@etsi.org		
Email reflector:	3GPP_TSG_RAN@LIST.ETSI.ORG			
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/TSGR_67/Docs			
next meetings:	TSG RAN #68	15.06. - 18.06.2015	Malmö, Sweden	host: EF3
	TSG RAN #69	14.09. - 17.09.2015	Phoenix, USA	host: NAF3

Executive Summary

3GPP TSG RAN meeting #67 was held in Shanghai, China, March 9-12, 2015, hosted by Huawei Technologies.
The meeting had 229 participants (see Annex A) and 519 Technical Documents (see Annex B).

Main topics/decisions:

- **block approval**: RAN #67 continued to use "block approval process" for agreed CR packages from WGs and WI/SI status reports, i.e. these contributions were only discussed on request (flag) otherwise the CRs were considered approved and the % complete and target date of the status reports were considered approved.

- **time budget analysis (AI 13)**: RAN #67 assessed the modified time budget requests in WI/SI status reports for already approved WIs/SIs relative to the time budget status endorsed by RAN #66 in RP-142318; the RAN WG chairman's provided their estimates of remaining time budgets in their WGs (see WG status reports in AI 8); new WIs/SIs provided their time budget requests in the WI/SI descriptions (see AI 13); the resulting endorsed time budget allocations for all approved WIs/SIs after RAN #67 is provided in **RP-150518** (1 time unit ~ 2h). RAN5 WIs/SIs are excluded from this time budget handling.

- **RAN elections (AI 17)**: All chairman/vice-chairmen were reelected by acclamation for a 2nd term:

RAN chairman:	Mr. Dino Flore	Qualcomm Incorporated / ATIS
RAN vice-chairman:	Mr. Giovanni Romano	TELECOM ITALIA S.p.A. / ETSI
RAN vice-chairman:	Mr. Sharat Chander	AT&T / ATIS
RAN vice-chairman:	Mr. Takaharu Nakamura	Fujitsu Limited / ARIB

- **REL-12 (AI 10, AI 14)**: RAN #66 granted 3 REL-12 Core part WIs (LTE_D2D_Prox-Core, GCSE_LTE-MBMS_CM-Core, LTE_CA_B3_B42_B42-Core) a second 3 months exception to complete the WI in REL-12 by March 2015. These 3 Core part WIs were completed by RAN #67 in March 2015.
  For REL-12 there are still open after RAN #67: 7 RAN4 Perf. part WIs (which are supposed to be completed 3-6 months after their corresponding Core part WIs) and 13 RAN5 Testing WIs (which will be completed independently from the REL-12 schedule).
  Also the ASN.1 of REL-12 was frozen at RAN #67 in March 2015 (6 months after the REL-12 freeze that was declared in Sep.14 at RAN #65).
  REL-12 UE capabilities: no conclusions yet, discussion to be continued at RAN #68.

Samsung Exhibit 1025, Page 1143 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

2 new REL-12 UE categories: DL 750/800Mbps and DL 1Mbps (RAN1 will decide if 750Mbps or 800Mbps and the feature combination to get to the category)

- **5G (AI 18)**: The 5th generation of mobile communication was discussed in connection with incoming LSs from ITU-R WP5D and NGMN, a RAN chairnan's input on "Getting ready for 5G" and a number of company views on this subject.
  It was decided to have a 2-days "3GPP RAN workshop on 5G" on Sep. 17-18, 2015, i.e. on Thursday/Friday of the week of RAN #69, i.e. RAN #69 will be reduced to Monday/Tuesday/Wednesday.
  The RAN timeline for "5G" was endorsed in RP-150483 and will be also presented to SA #67.
  According to this timeline a RAN SI on 5G scope & requirements may be approved at RAN #70 in Dec.15.
  A SI on channel modelling for above 6GHz may already be approved at RAN #69 in Sep.15 but with no RAN1 impact before 2016.

- **Air to Ground Communication (AI 13.1)**: 3GPP TSG RAN completed its assessment (that had an email discussion between RAN #66 and RAN #67) and summarized its views regarding Mission Critical Air Ground Air Communications in RP-150506.

- **Study on possible additional configuration for LTE TDD (AI 12.4.4)**: Progress was made on this RAN level SI is separate ad hoc sessions summarized in Report RP-150405. The latest TR 36.825 v0.1.1 is available in RP-150519.

- **Study on regulatory aspects for flexible duplex for E-UTRAN (AI 13.1):** This new RAN level SI was approved by RAN #67 in RP-150470 to identify regulatory possibilities/constraints for flexible duplex operation. Also an LS on this subject was approved by email after RAN #67 in RP-150509 and it was sent to regulators for feedback.

- **ITU-R:**

  - current implementation of 700 MHz bandplan with 3GPP specification (LSin RP-150028): answer provided in RP-150477 that misalignment of REL-11 and REL-12 is solved (CR R4-151155 in RP-150384)

  - provision of transposition references and certification C for draft revision 2 of Recommendation ITU-R M.2012 (LSin RP-150029): RAN answer with 2 editorial comments provided in RP-150478 (CT had no comments);RAN answer will have to pass SA and PCG review before submission to ITU-R via ATIS

  - preliminary draft new Report ITU-R M.[IMT.ABOVE 6 GHz] (LSin RP-150040): no RAN answer as currently no activity on this topic

  - detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT) (LSin RP-150041), requesting an update on IMT activities (LSin RP-150031): IMT-2020 ("5G"): 3GPP should approve the final specs to be submitted to ITU-R in December 2019 (they have to be transposed); RAN answer in RP-150442 (to pass SA/PCG review and to be sent to ITU-R by ATIS)

- Incoming Liaison Statements/Letters to ITU: 27, see Annex C

- Outgoing Liaison Statements/Letters to ITU: 10 (incl. 2 approved by email), see Annex D

- 13 closed work items (WI) in March 2015 (3 Core, 6 Perf., 4 Testing):

  - 1 RAN1 REL-12 Core part:
    - LTE Device to Device Proximity Services (630130, LTE_D2D_Prox-Core)

  - 1 RAN3 REL-12 Core part:
    - Group Call eMBMS congestion management for LTE (640137, GCSE_LTE-MBMS_CM-Core)

  - RAN4 (1 Core, 6 Perf.):

    5 REL-12 Perf. parts for:
    - Further EUL enhancements (620249, EDCH_enh-Perf)
    - Perf. req. of interf. cancellation & suppression RX for SU-MIMO (630147, LTE_SUMIMO_RX-Perf)
    - LTE-A intra-band contiguous CA in Band 41 for 3DL (610222, LTE_CA_C_B41_3DL-Perf)
    - LTE-A intra-band non-contiguous CA in Band 41 for 3 DL (620238, LTE_CA_NC_B41_3DL-Perf)
    - E-UTRA UE demodulation/Channel State Information (CSI) perf. req. for multiple CA configurations (640127, LTE_CA_Mult-Perf)

Samsung Exhibit 1025, Page 1144 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

REL-12 Core & Performance parts for:
- LTE-A 3 Band CA (3DL/1UL) of Band 3, Band 42 and Band 42 (640x30, LTE_CA_B3_B42_B42)

- 4 RAN5 UE Conformance Test Aspects for:
  - REL-11, Further Enhancements to CELL-FACH (600004, Cell_FACH_enh-UEConTest)
  - REL-11, HSDPA Multiflow Data Transmission (620016, HSDPA_MFTX-UEConTest)
  - REL-11, Single radio voice call continuity from UTRAN/GERAN to E-UTRAN (640012, rSRVCC-UEConTest)
  - REL-12, Further REL-12 Configurations for LTE-A CA (610013, LTE_CA_Rel12-UEConTest)

- 2 closed REL-13 study items (SI) in March 2015:
  - RAN1: Study on Enhanced Multiuser Transmissions and Network Assisted Interference Cancellation for LTE (660065, FS_LTE_MUTX_NAIC)
    Note: This SI was stopped as scope changed completely; new SI see RP-150496.
  - RAN4: Study on LTE DL 4 Rx antenna ports (660070, FS_LTE_4Rx_AP_DL)

- 71 new approved work items (WI) in March 2015 (33 Core, 29 Perf., 9 Testing):

  - 6 RAN2 REL-13:
    - Core part: Multiflow Enhancements for UTRA RP-150288
    - Core part: Dual Connectivity enhancements for LTE RP-150490
    - Core part: Multicarrier Load Distribution of UEs in LTE RP-150491
    - Core part: RAN enhancements for extended DRX in LTE RP-150493
    - Core part: LTE-WLAN Radio Level Integration and Interworking Enhancement RP-150510
    - Core part: RAN aspects of Application specific Congestion control for Data Comm. RP-150512

  - 1 RAN3 REL-13:
    - Core part: RAN aspects for improvem. to CS/PS coordination in UTRAN Shared Network RP-150500

  - RAN4 (26 Core, 29 Perf.):
    REL-13 Performance parts:
    - Perf. part: Dual Connectivity enhancements for LTE RP-150490
    - Perf. part: Multicarrier Load Distribution of UEs in LTE RP-150491
    - Perf. part: LTE-WLAN Radio Level Integration and Interworking Enhancement RP-150510

    REL-13 Core & Performance parts:
    - LTE DL 4 Rx antenna ports RP-150427
    - AWS-Extension Band for LTE RP-150428
    - Add. BCS for LTE-A inter-band CA of Band 5 and Band 7 RP-150171
    - Add. BW combination set for LTE-A inter-band CA of Band 3 and Band 5 RP-150425
    - LTE-A 3 Band CA (3DL/1UL) of Band 1, Band 3 and Band 42 RP-150121
    - LTE-A 3 Band CA (3DL/1UL) of Band 1, Band 19 and Band 42 RP-150122
    - LTE-A 3 Band CA (3DL/1UL) of Band 1, Band 21 and Band 42 RP-150123
    - LTE-A 3 Band CA (3DL/1UL) of Band 3, Band 19 and Band 42 RP-150124
    - LTE-A 3 Band CA (3DL/1UL) of Band 19, Band 21 and Band 42 RP-150125
    - Add. BCS for LTE-A 3 Band CA (3DL/1UL) of Band 4, Band 4 and Band 7 RP-150429
    - Add. BCS for LTE-A 3 Band CA (3DL/1UL) of Band 4, Band 7 and Band 12 RP-150430
    - LTE-A 3 Band CA (3DL/1UL) of Band 2, Band 7 and Band 12 RP-150431
    - LTE-A 3 Band CA (3DL/1UL) of Band 2, Band 4 and Band 7 RP-150432
    - LTE-A 3 Band CA (3DL/1UL) of Band 7, Band 20 and Band 38 RP-150433
    - LTE-A 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 4 and Band 12 RP-150073
    - LTE-A 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 12 RP-150074
    - LTE-A 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 4 RP-150075
    - LTE-A 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 5 and Band 40 RP-150434
    - LTE-A 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 7 and Band 8 RP-150435
    - LTE-A 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 5 and Band 29 RP-150436
    - LTE-A dual uplink inter-band CA FDD-TDD RP-150064
    - LTE-A dual uplink inter-band CA Class A4 RP-150410
    - LTE-A 3DL/2UL inter-band CA RP-150479
    - LTE-A intra-band contiguous CA in Band 8 RP-150437
    - LTE-A intra-band non-contiguous CA in Band 42 for 3DL RP-150246
    - LTE-A intra-band contiguous CA in Band 42 for 4DL RP-150438

Samsung Exhibit 1025, Page 1145 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- 9 RAN5 UE Conformance Test Aspects for:
  - REL-12, Further DL MIMO Enhancement for LTE-Advanced RP-150071
  - REL-12, LTE Device-to-Device Proximity Services RP-150131
  - REL-12, L-band for Supplemental Downlink in E-UTRA and UTRA RP-150134
  - REL-12, Low cost & enhanced coverage MTC UE for LTE RP-150135
  - REL-12, Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL RP-150136
  - REL-12, Codec for Enhanced Voice Services (EVS) RP-150137
  - REL-12, Smart Congestion Mitigation in E-UTRAN RP-150202
  - REL-12, Perf. Requirements of Interf. Cancellation and Suppression Receiver for SU-MIMO for E-UTRA RP-150245
  - REL-12, DCH Enhancements for UMTS RP-150412

- 5 new approved study items (SI) for REL-13 in March 2015:

  - RAN: Study on regulatory aspects for flexible duplex for E-UTRAN RP-150470
  - RAN1: Study on Downlink Multiuser Superposition Transmission for LTE RP-150496
  - RAN2: Study on Latency reduction techniques for LTE RP-150465
  - RAN2: Study on further Enhancements of Minimization of Drive Tests for E-UTRAN RP-150472
  - RAN4: Study on Measurement gap enhancement for LTE RP-150515

- 0 new approved Technical Specifications (TS), i.e. now under CR control

- 5 new approved Technical Reports (TR), i.e. now under CR control:

  - RAN4 REL-12 TR 36.833-5-41 LTE_CA_C_B41_3DL-Perf RP-150116
  - RAN4 REL-12 TR 36.833-6-41 LTE_CA_NC_B41_3DL-Perf RP-150117
  - RAN4 REL-12 TR 36.852-12 LTE_CA_B1_B8-Core RP-150498
  - RAN4 REL-12 TR 36.877 LTE_D2D_Prox-Core RP-150093
  - RAN4 REL-13 TR 36.867 FS_LTE_4Rx_AP_DL RP-150141

- 0 new Technical Specifications (TS) provided for information

- 5 new Technical Reports (TR) provided for information:

  - RAN1 REL-13 TR 25.705 FS_UTRA_SDATA RP-150197
  - RAN2 REL-13 TR 25.706 FS_UTRA_EDL RP-150225
  - RAN3 REL-13 TR 37.870 FS_MultiRAT_JC RP-150264
  - RAN3 REL-13 TR 36.875 FS_LTE_dualC_ext RP-150216
  - RAN4 REL-13 TR 36.833-5-42 LTE_CA_C_B42_3DL-Core RP-150118

Samsung Exhibit 1025, Page 1146 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Change requests statistics (see also Annex E): 919 CRs handled with 909 approved CRs.

Phase	Cat	all CRs	Approved CRs	approved RAN1	approved RAN2	approved RAN3	approved RAN4	approved RAN5
Rel-9	F	1	1	0	0	0	1	0
Rel-10	A	1	1	0	0	0	1	0
Rel-10	B	10	10	0	1	0	0	9
Rel-10	F	42	42	0	4	0	13	25
Rel-11	A	16	15	0	4	0	11	0
Rel-11	B	13	13	0	1	0	0	12
Rel-11	D	1	1	0	0	0	1	0
Rel-11	F	99	99	2	6	3	17	71
Rel-12	A	25	25	2	6	2	15	0
Rel-12	B	108	107	4	8	3	26	66
Rel-12	C	9	5	4	1	0	0	0
Rel-12	D	6	6	0	2	3	1	0
Rel-12	F	584	583	8	38	25	63	449
Rel-13	F	1	1	0	0	0	1	0
sum		916	909	20	71	36	150	632

Samsung Exhibit 1025, Page 1147 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

1 Opening of the Meeting

TSG RAN chairman Mr. Dino Flore (Qualcomm) opened the meeting 3GPP TSG RAN #67 on Monday March 9th, 2015 at 9am.
On behalf of the host, Huawei Technologies, David Mazzarese welcomed the delegates to Shanghai, China and explained organisational issues of the meeting.

NOTE: The TSG meetings #67 will be carried out in the 1 week TSG set up (see RP-131328, RAN/CT at the beginning and SA at the end of the week).

2 Reminders for usage of IT resources, IPR declaration and antitrust compliance

The TSG RAN chairman made the following three announcements to remind the delegates of this meeting:

RAN chair's reminder regarding responsible behaviour regarding IT resources of the meeting:

Delegates are reminded that they share the meeting IT resources with their fellow delegates. You should not abuse the service by using bandwidth-hogging applications such as movie downloads, streaming video, web-based gaming, etc during the meeting. Use the internet service in your hotel rooms for this!
Delegates must respect the law of the hosting country*, and should not visit prohibited internet sites.*
In cases of persistent abuse of the internet bandwidth, MCC may restrict individual's use of the service.
In particular, the PCG has laid down the following network usage conditions:
1. Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws.
2. Users shall not engage in non-work related activities that are consume excessive bandwidth or cause significant degradation of the performance of the network.
Since the network is a shared resource, users should exercise some basic etiquette when using the 3GPP network at a meeting. It is understood that high bandwidth applications such as downloading large files or video streaming might be required for business purposes, but delegates should be strongly discouraged in performing these activities for personal use. Downloading a movie or doing something in an interactive environment for personal use essentially wastes bandwidth that others need to make the meeting effective. The meeting chairman should remind end users that the network is a shared resource; the more one user grabs, the less there is for another. Email and its attachments already take up significant bandwidth (certain email programs are not very bandwidth efficient). In case of need the chair can ask the delegates to restrict IT usage to things that are essential for the meeting itself.

1. ***DON'T place your WiFi device in ad-hoc mode***
2. ***DON'T set up a personal hotspot in the meeting room***
3. ***DO try 802.11a if your WiFi device supports it***
4. ***DON'T manually allocate an IP address***
5. ***DON'T be a bandwidth hog by streaming video, playing online games, or downloading huge files***
6. ***DON'T use packet probing software which clogs the local network (e.g., packet sniffers or port scanners)***

Based on the report of the PCG ad hoc group on IT improvements:
http://www.3gpp.org/ftp/PCG/PCG_27/DOCS/PCG27_13r1.zip
see also http://www.3gpp.org/Delegates-Corner#outil_sommaire_14

RAN chair's reminder regarding IPRs:

The attention of the delegates to the meeting of this Technical Specification Group was drawn to the fact that 3GPP Individual Members have the obligation under the IPR Policies of their respective Organizational Partners to inform their respective Organizational Partners of

Samsung Exhibit 1025, Page 1148 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Essential IPRs they become aware of.
The delegates were asked to take note that they were thereby invited:

- ***to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.***
- ***to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Information Statement and the Licensing declaration forms***

Based on http://www.3gpp.org/3gpp-calendar/89-call-for-ipr-meetings

RAN chair's reminder regarding antitrust and competition law:

The attention of the delegates to the meeting was drawn to the fact that 3GPP activities were subject to all applicable antitrust and competition laws and that compliance with said laws was therefore required by any participant of the meeting, including the Chairman and Vice-Chairmen and were invited to seek any clarification needed with their legal counsel. The leadership would conduct the present meeting with impartiality and in the interests of 3GPP. Delegates were reminded that timely submission of work items in advance of TSG/WG meetings was important to allow for full and fair consideration of such matters.

Based on http://www.3gpp.org/about-3gpp/legal-matters/21-3gpp-calendar/1616-statement-of-antitrust-compliance

3 Approval of the Agenda

NOTE: Agreed CR packages of RAN WGs (if not flagged for discussion) will be approved without presentation. % complete and target dates of WI/SI status reports (if not flagged for discussion) will be approved without presentation.

RP-150001	Agenda for RAN #67 held in Shanghai, China, 09.03.-12.03.2015 Agenda	RAN chairman (Qualcomm)

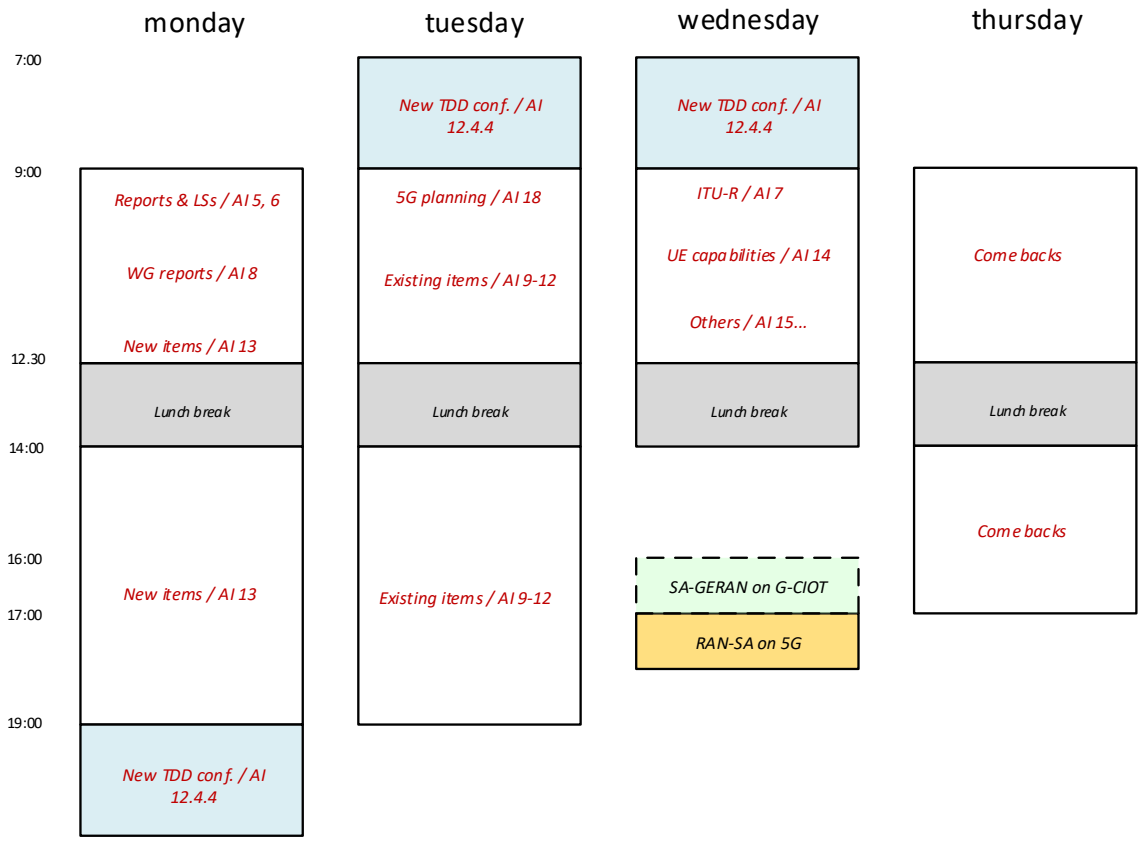
conclusion: revised in RP-150049 (before the meeting) to correct a WI name & acronym

RP-150049	Agenda for RAN #67 held in Shanghai, China, 09.03.-12.03.2015 Agenda	RAN chairman (Qualcomm)

conclusion: approved

Samsung Exhibit 1025, Page 1149 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

tentative meeting schedule as distributed by the RAN chair on 06.03.2015 over the RAN reflector:



note: During the week:
- another session on TDD config. on Thu 7:00-9:00 was decided
- joint RAN-SA session will start at 17:30 on Wed

4 Approval of the meeting report of TSG-RAN #66

RP-150002 Draft report of RAN #66 held in Maui, USA, 08.12.-11.12.2014 ETSI MCC Report
conclusion: revised in RP-150003 before the meeting

RP-150003 Draft report of RAN #66 held in Maui, USA, 08.12.-11.12.2014 ETSI MCC Report
conclusion: revised in RP-150060

RP-150060 Report of RAN #66 held in Maui, USA, 08.12.-11.12.2014 ETSI MCC Report
conclusion: approved

Samsung Exhibit 1025, Page 1150 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

5 Reports from other meetings

5.1 Report from TSG SA

TSG SA #66 was held in Maui, USA, Dec. 10-12, 2014. Due to the one week TSG set up RAN and SA meetings are overlapping and the reporting from SA is reduced:

Reports:
RAN: SP-140851
CT: SP-140855
GERAN: SP-140715

SA1: SP-140746
SA2: SP-140666
SA3: SP-140812
SA4: SP-140718
SA5: SP-140783

SA6: ToR (terms of reference): SP-140884, meeting calendar: SP-140659

REL-12:
stage 1 freeze: March 2013 (#59)
stage 2 freeze: Dec. 2013 (#62)
stage 3 freeze: Sep. 2014 (#65)
ASN.1 freeze: March 2015 (#67)* (equivalent to CT formal interface specification freeze)

REL-13:
stage 1 freeze: Sep. 2014 (#65)
stage 2 freeze: June 2015 (#68)*
stage 3 freeze: Dec. 2015 (#70)*
ASN.1 freeze: March 2016 (#71)* (equivalent to CT formal interface specification freeze)

*: planned dates

discussion: No comments

5.2 Report from PCG

Nothing to report as last PCG meeting was PCG #33 held in Seoul, Korea, on 28.10.2014 (see RAN #66 report) and next PCG meeting will be PCG #34 on 28.04.2015 in Sophia Antipolis, France.

5.3 Report from other meetings

RP-150055 RAN chair's presentation on "3GPP & unlicensed spectrum" at IEEE 802 Interim Session, 11-16.01.2015, Atlanta, USA RAN chairman (Qualcomm) Info REL-13 FS_LTE_LAA
compare LSin RP-150024
conclusion: noted

RP-150054 RAN chair's presentation on "3GPP & unlicensed spectrum" at WFA Board of Directors, Feb. 23, 2015 RAN chairman (Qualcomm) Info REL-13 FS_LTE_LAA
WFA = WiFi Alliance
conclusion: noted

Samsung Exhibit 1025, Page 1151 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

6 Liaison activity of TSG RAN

6.1 Groups outside 3GPP

NGMN:

RP-150019 LS on NGMN's 5G Initiative (2nd LS)
(NGMN_LS_141223; to: SA, RAN, CT; cc: -; contact: NGMN Office) NGMN
LSin - -
RAN action requested
conclusion: LS will be treated under AI 18

ETSI TC RRS:

RP-150020 LS on Licensed Shared Access (LSA) related Activities in TC RRS
(ETSI TC RRS(14)028019r1; to: SA; cc: RAN, SA5; contact: Intel) ETSI TC RRS
LSin - -
RRS = Reconfigurable Radio Systems; no explicit RAN action requested
conclusion: noted, no LS answer

IEEE802 LMSC:

RP-150024 LS regarding coexistence of Licensed Assisted Access (LAA) and IEEE 802
(IEEE_802_LMSC_150202; to: RAN; cc: RAN1, IEEE 802, IEEE 802.19; contact: Chairman IEEE 802 LMSC) IEEE 802 LMSC
LSin REL-13 FS_LTE_LAA
conclusion: LS will be treated under AI 12.4.3
RAN chair: we will come to AI 12.4.3 on Tue in order to provide an answer to IEEE.

ATIS COAST SYNC:

RP-150025 LS on Request for information sharing between ATIS COAST SYNC and 3GPP RAN on timing requirements for wireless base stations in the United States
(ATIS_COAST_SYNC_150122_00007; to: RAN; cc: ATIS; contact: AT&T) ATIS COAST SYNC
LSin - -
COAST = Copper/Optical Access, Synchronization and Transport Committee; SYNC = Synchronization Subcommittee; RAN action requested
conclusion: noted, LS answer is prepared by RAN4 in RP-150038

RP-150038 Response LS to ATIS_COAST_SYNC_150122_00007 = RP-150025 on ATIS COAST SYNC and 3GPP RAN timing requirements for wireless base stations
(R4-151239; to: RAN; cc: -; contact: NSN) RAN4
LSin REL-12 -
RAN action requested; RP-150038 is a reply proposal from RAN4 to LSin RP-150025 (and therefore treated here);
discussion: XX: individual companies have individual requirements will not be enough
RAN chair: could we provide some more detailed answer
RAN4 chair: not sure that this will be possible as this depends on implementations and in 3GPP we have no specific requirements
RAN chair: a ballpark figure should be possible
Ericsson: difficult to speculate about future requirements
RAN chair: you are talking about positioning what about other features?
Ericsson: other features are captured by RAN4 answer
conclusion: noted, no reply to RAN4; LS answer to RP-150025 is provided (based on RP-150038) in RP-150421 by RAN4 chair

RP-150421 Response LS to ATIS_COAST_SYNC_150122_00007 = RP-150025 on ATIS COAST SYNC and 3GPP RAN timing requirements for wireless base stations (to: ATIS COAST SYNC; cc: -; contact: Nokia Networks) RAN LSout REL-12 -
reply to RP-150025 based on RP-150038
conclusion: approved (unseen)

Samsung Exhibit 1025, Page 1152 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

CTIA:

RP-150026 LS regarding CTIA MIMO OTA Test Plan Development
(CTIA_LS_150203; to: RAN4, RAN5; cc: RAN; contact: AT&T) CTIA MOSG
LSin REL-13 LTE_MIMO_OTA-Core
conclusion: LS will be treated under AI 11.2.4

RP-150027 Reply LS to RP-142316 on OTA Test Requirement Work Plan
(CTIA_LS_150202; to: RAN; cc: RAN4; contact: Spirent) CTIA OTA WG
LSin REL-13 LTE_UTRA_TRP_TRS-Core
conclusion: LS will be treated under AI 11.2.1

ITU-R WP5D:

RP-150028 LS on current implementation of 700 MHz bandplan with 3GPP specification
(ITU-R WP5D/TEMP/567; to: RAN4, RAN; cc: -; contact: ITU-R SG5 Counselor) ITU-R WP5D
LSin REL-11 LTE_DL_FDD700, LTE_APAC700
conclusion: LS will be treated under AI 7.2.2

RP-150029 LS to GCS proponents and transposing organizations on the provision of transposition references and certification C for draft revision 2 of Recommendation ITU-R M.2012
(ITU-R WP5D/TEMP/530; to: RAN, CT, SA, PCG, 3GPP2, ARIB, ATIS, CCSA, ETSI, IEEE, ITRI, TIA, TTA, TTC, WiMAX Forum; cc: -; contact: ITU-R SG5 Counsellor) ITU-R WP5D
LSin - -
conclusion: LS will be treated under AI 7.2.2

RP-150031 LS to ext. organizations and research entities engaged in "5G" development requesting an update on IMT activities
(ITU-R WP5D/TEMP/521(Rev.1); to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counselor) ITU-R WP5D
LSin - -
conclusion: LS will be treated under AI 7.2.2

RP-150040 LS on preliminary draft new Report ITU-R M.[IMT.ABOVE 6 GHz]
(ITU-R WP5D/TEMP/534(Rev.1); to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counselor) ITU-R WP5D
LSin - -
conclusion: LS will be treated under AI 7.2.2

RP-150041 LS on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT)
(ITU-R WP5D/TEMP/577; to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counselor) ITU-R WP5D
LSin - -
RAN action requested;
conclusion: LS will be treated under AI 7.2.2

6.2 TSG SA, TSG CT, TSG GERAN

related to Proximity-based Services:

RP-150021 LS on public safety discovery
(S2-150691; to: RAN1, RAN2, SA3, RAN; cc: -; contact: Qualcomm) SA2
LSin REL-13 eProSe-Ext
conclusion: LS will be treated under AI 11.3.5

Samsung Exhibit 1025, Page 1153 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

related to Mission Critical Push to Talk (MCPTT):

RP-150022 LS on support for ProSe one-to-one communication in Release 13
(S6-150076; to: RAN2; cc: SA2, RAN; contact: General Dynamics) SA6
LSin REL-13 MCPTT
conclusion: LS will be treated under AI 11.3.5

RP-150023 LS on Establishment of new working group TSG SA WG6
(SP-140884; to: OMA, ETSI TC TCCE, 3GPP TSG CT, SA2, SA6, ATIS; cc: TCCA, PCG, RAN, CT1, CT3, CT4, CT6, SA1, SA3, SA4, SA5; contact: SA6 convener) SA
LSin REL-13 MCPTT
conclusion: LS will be treated under AI 11.3.5

ITU-R WP5D:

RP-150443 CT-input to LETTER TO ITU ON 3GPP COMMENTS ON DRAFT REVISION 2 OF RECOMMENDATION ITU-R M.2012
(CP-150207; to: RAN; cc: -; contact: CT chair (Ericsson)) CT
LSin - -
received on Tue of RAN #67
conclusion: LS will be treated under AI 7.2.2

6.3 TSG RAN WG1, WG2, WG3, WG4, WG5, RAN ITU-R ad hoc

Public Safety REL-12:

RP-150037 LS on impact of optional preconfigured parameters for D2D out of Network coverage mode
(R4-151170; to: RAN1, RAN2, RAN5, SA2, RAN; cc: -; contact: Sprint) RAN4
LSin REL-12 LTE_D2D_Prox-Core
no RAN action requested;
conclusion: LS will be treated under AI 10.6.5

Public Safety REL-13:

RP-150033 Response LS to S2-150691 = RP-150021 on public safety discovery
(R1-150948; to: SA2; cc: RAN2, SA3, RAN; contact: Qualcomm) RAN1
LSin REL-13 eProSe-Ext-SA2
conclusion: LS will be treated under AI 11.3.5

RP-150035 LS reply to S6-150076 = RP-150021 on support for ProSe one-to-one communication in Release 13
(R2-150710; to: SA6; cc: SA2, RAN; contact: Intel) RAN2
LSin REL-13 MCPTT
conclusion: LS will be treated under AI 11.3.5

LTE REL-12 UE capabilities:

RP-150032 LS on LTE Rel-12 UE feature list about RAN1 responsible features
(R1-150947; to: RAN; cc: RAN2, RAN4; contact: NTT DOCOMO) RAN1
LSin REL-12 -
conclusion: LS will be treated under AI 14.

RP-150034 LS on LTE Rel-12 UE feature list about RAN2 responsible features
(R2-150703; to: RAN; cc: RAN1, RAN4; contact: NTT DOCOMO) RAN2
LSin REL-12 -
conclusion: LS will be treated under AI 14.

RP-150036 LS on LTE Rel-12 UE feature list about RAN4 responsible features
(R4-151044; to: RAN; cc: RAN1, RAN2; contact: NTT DOCOMO) RAN4
LSin REL-12 -
conclusion: LS will be treated under AI 14.

ITU related:

RP-150039 DRAFT Letter to ITU in reply to ITU-R WP5D/TEMP/567 = RP-150028 on CURRENT IMPLEMENTATION OF 700 MHz BANDPLAN WITHIN 3GPP SPECIFICATION

Samsung Exhibit 1025, Page 1154 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

(R4-151242; to: RAN; cc: -; contact: Ericsson) RAN4
LTIin REL-11 LTE_DL_FDD700, LTE_APAC700
conclusion: LS will be treated under AI 7.2.2

RP-150043 Draft letter to ITU in reply to ITU-R WP5D/TEMP/521(Rev.1) = RP-150031 and ITU-R WP5D/TEMP/577 = RP-150041 on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT)
(RT-150009; to: RAN; cc: -; contact: Telecom Italia) 3GPP ITU-R ad hoc
LTIin - -
conclusion: LS will be treated under AI 7.2.2

RP-150044 Draft letter to ITU in reply to ITU-R WP5D/TEMP/530 = RP-150029 on 3GPP comments on draft revision 2 of Recommendation ITU-R M.2012
(RT-150010; to: CT, RAN; cc: -; contact: Telecom Italia) 3GPP ITU-R ad hoc
LTIin - -
conclusion: LS will be treated under AI 7.2.2

UL 64QAM:

RP-150042 LS on the introduction of the signalling for UL 64 QAM
(R2-150733; to: RAN4; cc: RAN, RAN1; contact: Huawei) RAN2
LSin REL-12 LTE-L23, TEI12
note: 64QAM UL functionality for LTE exists in 3GPP specs since REL-8; however, signalling of a UE capability in now introduced for REL-12 (see R2-150713 in RP-150379 and R2-150715 in RP-150377) and RF requirements will be introduced via REL-13 WI LTE_UL64QAM-Core; no RAN action requested
discussion: AT&T: what was done for 256QAM?
Huawei: finally mandatory for all frequency bands
conclusion: noted, no LS answer to RAN2, RAN4 will inform RAN2 & RAN what to do with the ffs in 36.306 that is introduced with CR R2-150713 in RP-150379

Others:

RP-150030 Response LS to S2-150658 on Support of a mix of IPv4 and IPv6 eNBs and Backhauls in eMBMS
(R3-150489; to: SA2; cc: CT4, RAN, CT; contact: Alcatel-Lucent) RAN3
LSin REL-13 TEI13
LS S2-150658 was not sent to/cc RAN but just to RAN3, CT4; LS S2-150658 and included SA2 CR related to SA2 REL-13 WI MBMS_enh (started at SA #66 and target: SA #69); RP-150030 includes RAN3 endorsed CRs to 36.300, 36.444, 36.443; no RAN action requested
conclusion: noted, no LS answer
as it was not planned to introduce REL-13 specs already in March 15 (REL-12 ASN.1 freeze) RAN3 should resubmit these CRs to RAN #68 with the correct REL-13 WI code MBMS_enh (TEIx is not appropriate for inter-WG/TSG related CRs) so that they can be approved there; 36.300 CR has to be submitted via RAN2;
SA2 can continue with their work under this assumption

RP-150038 Response LS to ATIS_COAST_SYNC_150122_00007 = RP-150025 on ATIS COAST SYNC and 3GPP RAN timing requirements for wireless base stations
(R4-151239; to: RAN; cc: -; contact: NSN) RAN4
LSin REL-12 -
conclusion: LS will be treated under AI 6.1 together with LSin RP-150025

Samsung Exhibit 1025, Page 1155 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

7 ITU-R Ad hoc

7.1 Status report

RP-150004 Status Report ITU-R Ad hoc ITU-R Ad hoc Contact (Telecom Italia) Report
conclusion: noted

7.2 Submission to ITU-R

7.2.1 Submission to ITU-R WP5A

No contributions.

7.2.2 Submission to ITU-R WP5D

700 MHz band plan:

RP-150028 LS on current implementation of 700 MHz bandplan with 3GPP specification (ITU-R WP5D/TEMP/567; to: RAN4, RAN; cc: -; contact: ITU-R SG5 Counselor) ITU-R WP5D
WED
LSin REL-11 LTE_DL_FDD700, LTE_APAC700
bands in 700-800MHz range: FDD: 12, 13, 14, 17 (all 4 from REL-8 LTE-RF), 28 (REL-11 LTE_APAC700); FDD DL: 29 (REL-11 LTE_DL_FDD700); TDD: 44 (REL-11 LTE_APAC700); RAN action requested
conclusion: noted, an answer is prepared by RAN4 in RP-150039

RP-150039 DRAFT Letter to ITU in reply to ITU-R WP5D/TEMP/567 = RP-150028 on CURRENT IMPLEMENTATION OF 700 MHz BANDPLAN WITHIN 3GPP SPECIFICATION (R4-151242; to: RAN; cc: -; contact: Ericsson) RAN4
WED
LTIin REL-11 LTE_DL_FDD700, LTE_APAC700
RAN action requested; RP-150039 is a reply proposal from RAN4 to answer LSin RP-150028; corresponding REL-11 LTE_APAC700-Core CR is submitted to RAN #67 in R4-151155 (in RP-150384) to align REL-11 with REL-12;
conclusion: noted, no LS answer to RAN4;
LS answer to RP-150028 (based on RP-150039) is provided in RP-150477
Note: As this topic is only spectrum related, SA does not need to review the RAN answer and since the RAN answer will not be part of an ITU Recommendation there is no need to have a PCG review, i.e. the answer could be provided via 3GPP LS coordinator to ITU-R WP5D.

RP-150477 Reply LS to ITU-R WP5D/TEMP/567 = RP-150028 ON CURRENT IMPLEMENTATION OF 700 MHz BANDPLAN WITHIN 3GPP SPECIFICATION (to: ITU-R WP5D; cc: -; contact: Ericsson)
RAN LSout LS05 REL-11 LTE_DL_FDD700, LTE_APAC700
conclusion: approved (unseen), note: RP-150384 was approved;
LS will be sent out to ITU-R WP5D via 3GPP LS coordinator.

ITU-R M.2012:

RP-150029 LS to GCS proponents and transposing organizations on the provision of transposition references and certification C for draft revision 2 of Recommendation ITU-R M.2012
WED
(ITU-R WP5D/TEMP/530; to: RAN, CT, SA, PCG, 3GPP2, ARIB, ATIS, CCSA, ETSI, IEEE, ITRI, TIA, TTA, TTC, WiMAX Forum; cc: -; contact: ITU-R SG5 Counsellor) ITU-R WP5D
LSin - -
RAN action requested;
conclusion: noted, an answer is prepared by the 3GPP ITU-R ad hoc in RP-150044

RP-150044 Draft letter to ITU in reply to ITU-R WP5D/TEMP/530 = RP-150029 on 3GPP comments on draft revision 2 of Recommendation ITU-R M.2012
WED
(RT-150010; to: CT, RAN; cc: -; contact: Telecom Italia) 3GPP ITU-R ad hoc
LTIin - -

Samsung Exhibit 1025, Page 1156 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

3GPP ITU-R ad hoc prepared this draft answer to the LSin of ITU-R WP5D RP-150029; RAN action requested
conclusion: noted, no LS answer to 3GPP ITU-R ad hoc,
RP-150043 is used as basis for the reply to RP-150041 and RP-150031 in RP-150478 taking into account the review comments from CT
Note: The final output of RAN will pass SA and then PCG review.

RP-150443 CT-input to LETTER TO ITU ON 3GPP COMMENTS ON DRAFT REVISION 2 OF RECOMMENDATION ITU-R M.2012
(CP-150207; to: RAN; cc: -; contact: CT chair (Ericsson)) CT
LSin - -
received on Tue of RAN #67; related to ITU-R LSin RP-150029 and triggered by RP-150044; no RAN action required
conclusion: noted, no LS answer to CT

RP-150478 Draft letter to ITU in reply to ITU-R WP5D/TEMP/530 = RP-150029 on 3GPP comments on draft revision 2 of Recommendation ITU-R M.2012 (to: SA; cc: -; contact: Telecom Italia) RAN LTIout - -
conclusion: agreed (unseen); LS will be reviewed in SA and later in PCG before it will be approved in PCG and provided to ITU-R WP5D.

Above 6GHz:

RP-150040 LS on preliminary draft new Report ITU-R M.[IMT.ABOVE 6 GHz]
(ITU-R WP5D/TEMP/534(Rev.1); to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counselor) ITU-R WP5D
WED
LSin - -
no explicit RAN action requested;
conclusion: noted, no LS answer as currently there is no 3GPP activity on this

5G/IMT-2020:

RP-150041 LS on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT)
(ITU-R WP5D/TEMP/577; to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counselor) ITU-R WP5D
TUE
LSin - -
RAN action requested; provides the ITU-R WP5D workplan towards the finalization of IMT2020 technical specifications
discussion: Telecom Italia: acc. offline clarifications we need to freeze specs by Dec. 2019 for the IMT-2020 submission
Head of US delegation in ITU-R WP5D (Interdigital): TSG meetings in June 2015 and 2016 are overlapping with ITU-R WP5D meetings; asks to avoid this conflict in the future
ITU-R convener 3GPP (Telecom Italia): suggests to discuss this topic at next PCG meeting since liaison with ITU is usually going via PCG anyway
conclusion: noted, an answer is prepared by the 3GPP ITU-R ad hoc in RP-150043
finalization of 3GPP specs to be submitted to ITU must be done in December 2019

RP-150031 LS to ext. organizations and research entities engaged in "5G" development requesting an update on IMT activities
TUE
(ITU-R WP5D/TEMP/521(Rev.1); to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counselor) ITU-R WP5D
LSin - -
RAN action requested; requests information on the current status of the work and conclusions that may have been reached on "5G" and on the respective planned work programs for 2015/2016

Samsung Exhibit 1025, Page 1157 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: noted, an answer is prepared by the 3GPP ITU-R ad hoc in RP-150043

RP-150043 Draft letter to ITU in reply to ITU-R WP5D/TEMP/521(Rev.1) = RP-150031 and ITU-R WP5D/TEMP/577 = RP-150041 on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT)
(RT-150009; to: RAN; cc: -; contact: Telecom Italia) 3GPP ITU-R ad hoc
LTIin - -
3GPP ITU-R ad hoc prepared this draft answer to the LSin of ITU-R WP5D RP-150031 and RP-150041; RAN action requested
conclusion: noted, no LS answer to 3GPP ITU-R ad hoc,
RP-150043 is used as basis for the reply to RP-150041 and RP-150031 in RP-150442

RP-150442 Draft letter to ITU in reply to ITU-R WP5D/TEMP/521(Rev.1) = RP-150031 and ITU-R WP5D/TEMP/577 = RP-150041 on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT) (to: SA, cc: -; contact: Telecom Italia) RAN
conclusion: agreed, will be provided to SA for review and from there to PCG for approval

For 5G see also RP-150056 under AI 18.

ITU-R M.1457:
Note: After RAN #68, it was detected that an input to ITU-R WP5D on revision 13 of Rec. M.1457 (technical description of IMT-2000) was forgotten. An email discussion was started on 14.04.15 and LSout RP-150520 was approved on 28.04.15. See Annex D.

7.2.3 Other ITU-R submission

No contributions.

Samsung Exhibit 1025, Page 1158 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8 RAN WGs: WG Status Reports & CR Approvals up to Rel-10

Note: REL-4, REL-5, REL-6 and REL-7 were closed after RAN #65, i.e. no CRs to these releases will be considered anymore.

8.1 TSG RAN WG1

8.1.1 Report from RAN WG1 including report on actions required from the previous meeting

RP-150005 Status Report RAN WG1 RAN1 chairman (NTT DOCOMO) Report
presented by RAN 1 vice-chair Wanshi Chen (Qualcomm)
discussion: RAN1 vice-chair (ALU): slide 21: "official online time" would be more correct as there were a lot of offline sessions which were very efficient
Huawei: on time units we could reduce time units for maintenance a bit
RAN chair: will be up to RAN1 chair to handle the 1TU deficit
conclusion: noted

RP-150006 List of CRs from RAN WG1 ETSI MCC Info
conclusion: noted

8.1.2 Discussions on decisions from RAN WG1

No contributions

8.1.3 Approval of CRs to REL-8 WIs and WIs of previous releases

RP-150358 CRs to 36.213 to clarify common search reception related to MBMS RAN1 CR set REL-8 LTE-Phys, TEI11
conclusion: approved

8.1.4 Approval of CRs to Rel-9 WIs

No contributions

8.1.5 Approval of CRs to Rel-10 WIs

No contributions

8.1.6 Approval of CRs to Rel-11 WIs

RP-150359 CRs to 36.213 on TM10 CSI-IM Interference Measurements RAN1 CR set REL-11 COMP_LTE_DL-Core
conclusion: approved

8.1.7 Approval of linked CR packages led by RAN WG1

No contributions

8.2 TSG RAN WG2

8.2.1 Report from RAN WG2 including report on actions required from the previous meeting

RP-150007 Status Report RAN WG2 RAN2 chairman (Ericsson) Report

Samsung Exhibit 1025, Page 1159 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

discussion: RAN1 vice-chair (ALU): no need for RAN1 time allocation for point to multipoint as we get an LS
conclusion: noted, ASN.1 REL-12 is frozen

RP-150155 Way forward on RAN2 capacity increase LG Electronics Inc. Disc REL-13 -
moved from AI 13.1.2 to AI 8.2.1
proposals:
- *Increased capacity is no more than 4 TUs.*
- *The eD2D WI runs in parallel with other items.*
- *Keep CP/UP split for legacy topics.*
- *RAN2 allocates TUs to each WI/SI strictly following the requested TU.*
- *Announce the RAN2 time schedule in advance and fix the announced time schedule.*
- *Align the actual time and TU.*

discussion: RAN2 chair: announce RAN2 time schedule in advance is not so easy as it depends on inputs
conclusion: noted

RP-150243 Proposal to increase the RAN2 capacity Huawei, HiSilicon Disc REL-13 -
moved from AI 18. to AI 8.2.1
proposals:
Increase the RAN2 capacity for serving the increasing demand from the industry (as reflected in the number of SI/WI proposals):
- *Transform the current User Plane parallel session into a "general" parallel session, i.e. not focusing only on stage 3 User Plane aspects, but also addressing stage-2 and stage-3 Control Plane aspects.*
- *A total of 5 TUs could be added, instead of the 4 TUs previously proposed and tentatively agreed*

discussion: Huawei: proposing here 5TUs but could also consider +6TUs as suggested by some other companies
RAN2 chair: last time we said 4TUs is reasonable, now 5 TUs and even 6TUs are discussed, so a bit like a bazar, we need to be careful as it is getting tighter close to the end of the REL; also additional TUs will impact more the parallel than the main session
Telecom Italia: any impact on RAN4 needs to checked as this will otherwise become the bottleneck
Nokia Networks: supports RAN2 chair to be rather more conservative and consider 4 more time units
RAN chair: please discuss offline with RAN2 chair and experts, we will come back to it on Tue evening
conclusion: noted, see RAN2 way forward in RP-150480 (AI 13.1.2), so +4 additional time units i.e. one day of meeting time which may be used for any kind of control-plane or stage-2 session compared to what RAN2 did so far

RP-150008 List of CRs from RAN WG2 ETSI MCC Info
conclusion: noted

8.2.2 Discussions on decisions from RAN WG2

No contributions

8.2.3 Approval of CRs to REL-8 WIs and WIs of previous releases

RP-150368 RAN2 agreed CRs on various REL-8 Work Items RAN2 CR set REL-8 LTE-L23, TEI10, TEI11, RANimp-ANSS, TEI12
conclusion: approved

8.2.4 Approval of CRs to Rel-9 WIs

RP-150369 RAN2 agreed CR on Correction of GLONASS system time RAN2 CR 36.355 0126 2 F REL-9 LCS_LTE, TEI12
conclusion: approved

Samsung Exhibit 1025, Page 1160 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8.2.5 Approval of CRs to Rel-10 WIs

RP-150370 RAN2 agreed CRs on Various REL-10 Work ItemsRAN2 CR set REL-10 eICIC_LTE-Core, TEI10, TEI11, TEI12, LTE_SC_enh_dualC-Core
note: Merged REL-12 cat.A CR and REL-12 cat.F CR to LTE_SC_enh_dualC-Core included
conclusion: approved

8.2.6 Approval of CRs to Rel-11 WIs

RP-150371 RAN2 agreed CRs on Various REL-11 Work ItemsRAN2 CR set REL-11 LTE_CA_enh-Core, TEI11, TEI12
conclusion: approved

8.2.7 Approval of linked CR packages led by RAN WG2

No contributions

8.3 TSG RAN WG3

8.3.1 Report from RAN WG3 including report on actions required from the previous meeting

RP-150009 Status Report RAN WG3 RAN3 chairman (Huawei) Report
conclusion: noted

RP-150010 List of CRs from RAN WG3 ETSI MCC Info
conclusion: noted

8.3.2 Discussions on decisions from RAN WG3

No contributions

8.3.3 Approval of CRs to REL-8 WIs and WIs of previous releases

No contributions

8.3.4 Approval of CRs to Rel-9 WIs

No contributions

8.3.5 Approval of CRs to Rel-10 WIs

No contributions

8.3.6 Approval of CRs to Rel-11 WIs

RP-150347 Rel-11 CRs from RAN3 RAN3 CR set REL-11 TEI11
note: R3-150301 REL-11 CR was already submitted to RAN #66 in RP-142083 (R3-142978) with a cat.A CR, while the cat.A CR could be implemented the REL-11 CR could not be implemented as based on wrong spec version
conclusion: approved

8.3.7 Approval of linked CR packages led by RAN WG3

RP-150348 Correction of the usage of the MultibandInfoList IE RAN3 CR set REL-11 TEI11
conclusion: approved

Samsung Exhibit 1025, Page 1161 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8.4 TSG RAN WG4

8.4.1 Report from RAN WG4 including report on actions required from the previous meeting

RP-150011 Status Report RAN WG4 RAN4 chairman (Nokia Networks) Report
discussion: Ericsson: slide 49: RAN4 time budget: Tue: 1TU for CA intra-band really needed?, Wed: no band-specific for Core RF can be reduced; Thu: no real work on band (just 1 WI ongoing); maintenance could be reduced a bit
RAN4 chair: 7 TUs are for spectrum & CA, the split can still be decided
RAN chair: can discuss RAN4 TU handling offline, we will come back on Tue evening
conclusion: noted

RP-150012 List of CRs from RAN WG4 ETSI MCC Info
conclusion: noted

8.4.2 Discussions on decisions from RAN WG4

RP-150145 Pcell support requirements for LTE CA combinations Vodafone, TeliaSonera, Orange, Telecom Italia, Deutsche Telekom, NTT DOCOMO, INC., CHTTL, Dish Network Disc REL-12 LTE_CA, TEI12
proposed:
1. *At RAN4#74bis, companies shall supply:*
   a. *"Request" for existing combinations where Pcell is required to be mandatorily supported by the UE for xDL/1UL on all aggregated carriers*
   b. *"Exception information" on specific existing combinations where Pcell cannot be mandatorily supported by the UE for xDL/1UL on all aggregated carriers*
2. *For existing combinations where a "request" but no "exception info" is provided, Pcell in all aggregated carriers will be agreed as mandatorily supported for UE for Rel-12 onwards.*
3. *For combinations where a "request" and "exception info" is provided, a decision on mandatory Pcell support in all aggregated carriers will be made in time for RAN#68.*
4. *For combinations where no "request" is provided, Pcell support in the UE shall be optional for Rel-12.*
5. *For new xDL/1UL WIDs (rel-13 and onwards) it shall be described in the WID for which aggregated carriers Pcell shall be defined in the spec. Also it shall be defined in the WID the aggregated carriers for which Pcell is required to be mandatorily supported by UEs, otherwise UE support is optional for the Release in which it is added to the spec.*

discussion: Telefonica: supports the Tdoc
Qualcomm: "*cannot*" in a. unclear; in subsequent REL everything is becoming mandatory or how does it work? with more DL in a CA combination supporting UL on all will increase the testing time significantly
Vodafone: technical feasibility is the reason for exception; we tried to solve this in RAN4 but we really need to have a solution for this by RAN #68
RAN chair: suggest that interested parties discuss this topic further offline and we will come back
conclusion: noted, see way forward in RP-150476

RP-150228 Way forward on RAN4 related WI/SI NTT DOCOMO, INC. Disc REL-13 -
proposal:
RAN4 should count at least 1.1 TU for RRM/Demod part as additionally available TU.
That means that totally available TU for new WI/SI for RRM/Demod part is at least 13.1(12+1.1) TU.
Thus, TU for handling TEI would be reduced by 1.1 instead.
conclusion: noted

RP-150476 Way forward on "Mandating Pcell support in UE for all bands of LTE-CA band combinations" Vodafone Disc REL-12 LTE_CA, TEI12
proposed:
1. *At RAN4#74bis, companies shall supply:*
   a. *"Request" for existing combinations where Pcell is required to be mandatorily supported by the UE for 2-3DL/xUL on all aggregated carriers*

Samsung Exhibit 1025, Page 1162 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

b. "Exception information" on specific existing combinations where Pcell cannot be mandatorily supported by the UE for 2-3DL/xUL on all aggregated carriers

2. *For existing 2-3DL/xUL combinations where a "request" but no "exception info" is provided, Pcell in all aggregated carriers will be agreed as mandatorily supported by the UE for Rel-12 onwards.*
3. *For existing 2-3DL/xUL combinations where a "request" and "exception info" is provided, a decision on mandatory Pcell support in all aggregated carriers will be made in time for RAN#68.*
4. *For existing 2-3DL/xUL combinations where no "request" is provided, Pcell support in the UE shall be optional for (at least) Rel-12.*
5. *For new 2-3DL/xUL WIDs (Rel-13 and onwards) it shall be described in the WID for which aggregated carriers Pcell shall be defined in the spec. Also it shall be defined in the WID the aggregated carriers for which Pcell is required to be mandatorily supported by UEs, otherwise UE support is optional for (at least) the release in which it is added to the spec. If during the corresponding work item, major issues are found with specifying Pcell in every band for a combination, then this can be revisited.*
6. *For 4-5DL/xUL WIDs, RAN4 should discuss further the approach during the work item for handling this, and a decision should be made by RAN#70 (December) plenary.*

discussion: Qualcomm: way forward is ok, but impact on product availability and testing need to be taken into account
Mediatek: would like to have more time to discuss this
Vodafone: we discussed this for 3 months already
Deutsche Telekom: supports Vodafone, we need predictable UE behaviour
Telecom Italia, CMCC: supports Vodafone as well
Qualcomm: in some exceptional cases we need to bypass some of these rules otherwise there will be no product
Deutsche Telekom: reasons for exceptions have to be technical and not commercial
Orange: supports Vodafone as well
Qualcomm: 256QAM of last meeting was a discussion that was not driven by technical reasons
Qualcomm: what if multiple operators cannot agree on which case is optional or mandatory?
Vodafone: is a hypothetical case but in this case of course RAN4 can discuss this further

conclusion: noted, way forward is approved

8.4.3 Approval of CRs to REL-8 WIs and WIs of previous releases

No contributions

8.4.4 Approval of CRs to Rel-9 WIs

RP-150381 RAN4 CRs to Rel-9 WIs RAN4 CR36.101set REL-9TEI9
conclusion: approved

8.4.5 Approval of CRs to Rel-10 WIs

RP-150382 RAN4 CRs to Rel-10 WIs RAN4 CRset REL-10 eICIC_LTE-Perf, LTE_CA-Core, LTE_CA-Perf, RInImp8-UMTSLTE3500, TEI10, LTE_eDL_MIMO-Core
conclusion: approved

RP-150383 RAN4 CRs to Maximum allowed layers for multiple monitoring for CA RAN4 CR36.133set REL-10 LTE_CA-Core
discussion: MCC: company CR RP-140065 replaces R4-150040 of RP-150383 and company CR RP-150066 replaces R4-150041 of RP-150383
conclusion: R4-150040 is revised in RP-150065 and R4-150041 is revised in RP-150066

RP-150065 Maximum allowed layers for multiple monitoring for CA Alcatel-Lucent, Ericsson, Huawei, HiSilicon CR36.1332753 1 A REL-11 LTE_CA-Core
company contribution to replace cat.A CR R4-150040 submitted in RP-150383 which is a mirror of REL-10 CR R4-151105 submitted in RP-150383
conclusion: approved

RP-150066 Maximum allowed layers for multiple monitoring for CA Alcatel-Lucent, Ericsson, Huawei, HiSilicon CR36.1332754 1 A REL-12 LTE_CA-Core

Samsung Exhibit 1025, Page 1163 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

company contribution to replace cat.A CR R4-150041 submitted in RP-150383 which is a mirror of REL-10 CR R4-151105 submitted in RP-150383
conclusion: approved

8.4.6 Approval of CRs to Rel-11 WIs

RP-150059 CR to TR 36.850 v11.1.0 changing the TR into a pointer to the new TR 36.852-11 ETSI MCC CR 36.8500002 - F REL-11 TEI11
company CR: This CR is just turning TR 36.850 into a pointer to TR 36.852-11 as the TR numbering scheme was modified; TR 36.852-11 will take over the whole contents of TR 36.850 v11.1.0; future CRs have to be made to TR 36.852-11
conclusion: approved

RP-150384 RAN4 CRs to Rel-11 WIs RAN4 CRset REL-11 Cell_FACH_enh-Perf, eICIC_enh_LTE-Perf, LCS_LTE-NBPS-Perf, LTE_APAC700-Core, LTE_Interf_Rej-Perf, LTE_Relay2-Core, TEI11
conclusion: approved

8.4.7 Approval of linked CR packages led by RAN WG4

No contributions

8.5 TSG RAN WG5

8.5.1 Report from RAN WG5 including report on actions required from the previous meeting

RP-150014 Status Report RAN WG5 RAN5 Chairman (Sprint) Report
conclusion: noted

RP-150015 List of CRs from RAN WG5 ETSI MCC Info
conclusion: noted

RP-150016 Status Report MCC TF160 (for approval) ETSI MCC TF160 Leader Report
presented by RAN5 chairman
conclusion: approved

8.5.2 Discussions on decisions from RAN WG5

No contributions

8.5.3 Approval of CRs to closed WIs of REL-10 (incl. TEI10_Test) and previous releases

RP-150320 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel 99 Conformance Testing(TEI_Test) RAN5 CRset F REL-11 TEI_Test
conclusion: approved

RP-150321 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-7 Conformance Testing(TEI7_Test) RAN5 CRset F REL-11 TEI7_Test
conclusion: approved

RP-150322 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 1) RAN5 CRset F REL-8 TEI8_Test
conclusion: approved

RP-150323 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 2) RAN5 CRset F REL-8 TEI8_Test
conclusion: approved

Samsung Exhibit 1025, Page 1164 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150324 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 3) RAN5 CR set F REL-8 TEI8_Test
conclusion: approved

RP-150325 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-9 Conformance Testing(TEI9_Test) (Batch 1) RAN5 CR set F REL-9 TEI9_Test
conclusion: approved

RP-150326 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-9 Conformance Testing(TEI9_Test) (Batch 2) RAN5 CR set F REL-9 TEI9_Test
conclusion: approved

RP-150327 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 1) RAN5 CR set F REL-10 TEI10_Test
conclusion: approved

RP-150328 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 2) RAN5 CR set F REL-10 TEI10_Test
conclusion: approved

RP-150329 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 3) RAN5 CR set F REL-10 TEI10_Test
conclusion: approved

RP-150330 CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A RAN5 CR 34.123-3 3327 - F REL-11 TEI8_Test
conclusion: approved

RP-150332 CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (prose), Annex A RAN5 CR 34.229-3 0283 - F REL-10 TEI8_Test
conclusion: approved

RP-150333 CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (TTCN), Annex A RAN5 CR 34.229-3 set - F/B REL-10 TEI8_Test, TEI9_Test
TTCN batch; 29 Test Cases
conclusion: approved

RP-150334 CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (prose), Annex A RAN5 CR 36.523-3 2625 - F REL-12 TEI8_Test
conclusion: approved

RP-150336 CR to 37.751-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (prose), Annex A RAN5 CR 37.571-4 0049 - F REL-10 TEI9_Test
conclusion: approved

RP-150337 CR to 37.571-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (TTCN), Annex A RAN5 CR 37.571-4 set - F/B REL-10 TEI9_Test
TTCN batch; 2 Test Cases
conclusion: approved

8.5.4 Approval of CRs to closed WIs of REL-11 (incl. TEI11_Test)

RP-150331 CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (TTCN), Annex A RAN5 CR 34.123-3 set - F/B REL-11 TEI7_Test, TEI8_Test, TEI9_Test, TEI10_Test
TTCN batch; 28 Test Cases
conclusion: approved

RP-150335 CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (TTCN), Annex A RAN5 CR 36.523-3 set - F/B REL-11 TEI8_Test, TEI9_Test, TEI10_Test, TEI11_Test
TTCN batch; 121 Test Cases

Samsung Exhibit 1025, Page 1165 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

8.5.5 Approval of linked CR packages led by RAN WG5

No contributions

Samsung Exhibit 1025, Page 1166 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

9 Conformance Testing Work Items

9.1 Closed REL-12 work items

Note: For earlier releases see AI 8.5.

No contributions.

9.2 Open Rel-11 work items

9.2.1 UE Conformance Test Aspects for UE Over the Air (Antenna) conformance testing methodology – Laptop Mounted Equipment Free Space Test
[UEAnt_FSTest-UEConTest]

RP-150068 Status report for WI UE Conformance Test Aspects for UE Over the Air (Antenna) conformance testing methodology - Laptop Equipment Free Space Test, rapporteur: ZTE RAN5 Report REL-11 UEAnt_FSTest_UEConTest
MCC: target date changed
conclusion: noted, approved: 95%, June 16

9.2.2 UE Conformance Test Aspects – Further Enhancements to CELL-FACH
[Cell_FACH_enh-UEConTest]

RP-150132 Status report for WI on UE Conformance Test Aspects - Further Enhancements to CELL-FACH: rapporteur: Ericsson RAN5 Report REL-11 Cell_FACH_enh-UEConTest
conclusion: noted, approved: 100%, March 15; WI completed

RP-150338 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – Further Enhancements to CELL-FACH (Cell_FACH_enh-UEConTest) RAN5 CRset F REL-11 Cell_FACH_enh-UEConTest
conclusion: approved

9.2.3 UE Conformance Test Aspects - HSDPA Multiflow Data Transmission
[HSDPA_MFTX-UEConTest]

RP-150126 Status report for WI UE Conformance Test Aspects - HSDPA Multiflow Data Transmission; rapporteur: Qualcomm RAN5 Report REL-11 HSDPA_MFTX-UEConTest
conclusion: noted, approved: 100%, March 15; WI completed

RP-150339 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – HSDPA Multiflow Data Transmission (HSDPA_MFTX-UEConTest]) RAN5 CRset F REL-11 HSDPA_MFTX-UEConTest
conclusion: approved

9.2.4 UE Conformance Test Aspects - Single radio voice call continuity from UTRAN/GERAN to E-UTRAN
[rSRVCC-UEConTest]

RP-150133 Status report for WI on UE Conformance Test Aspects - Single radio voice call continuity from UTRAN/GERAN to E-UTRAN: rapporteur: Ericsson RAN5 Report REL-11 rSRVCC-UEConTest
conclusion: noted, approved: 100%, March 15; WI completed

RP-150340 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – Single radio voice call continuity from UTRAN/GERAN to E-UTRAN (rSRVCC-UEConTest) RAN5 CRset F REL-11 rSRVCC-UEConTest
conclusion: approved

9.2.5 Conformance Test Aspects: Small Technical Enhancements and Improvements for Rel-11 [TEI11_Test]

Samsung Exhibit 1025, Page 1167 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150341 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-11 Conformance Testing (TEI11_Test) RAN5 CR set F REL-11 TEI11_Test
conclusion: approved

9.3 Open Rel-12 work items

9.3.1 UE Conformance Test Aspects – Further REL-12 Configurations for LTE Advanced Carrier Aggregation [LTE_CA_Rel12-UEConTest]

RP-150076 Status report for WI UE Conformance Test Aspects for Further REL-12 Configurations for LTE Advanced Carrier Aggregation: Microsoft RAN5 Report REL-12 LTE_CA_Rel12-UEConTest
MCC: WI covers REL-12 inter-band 2DL, REL-12 intra-band contiguous 2DL and REL-12 intra-band non-contiguous 2DL WIs; are all these REL-12 CA covered?
It seems remaining combinations are intended to be moved to LTE_CA_Rel12_3DL-UEConTest, even if 2DL only? (LTE_CA_B2_B4_BWset2-Core, LTE_CA_B4_B12_BWset-Core, LTE_CA_B18_B28-Core, LTE_CA_B18_B28-Perf completed but not included);
discussion: RNA5 chair: we will discuss the handling of CA basket WIs in the next RAN5 meeting
conclusion: noted, approved: 100%, March 15; WI completed

RP-150077 Revised WID: UE Conformance Test Aspects - Further REL-12 Configurations for LTE Advanced Carrier Aggregation Microsoft Corporation WID rev RAN5 REL-12 LTE_CA_Rel12-UEConTest
last approved WID: RP-140621; removal of 2 CA configurations that are no longer in REL-12 in order to complete the WI; to be approved before the SR and completion of the WI
conclusion: approved

RP-150342 RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – Further REL-12 Configurations for LTE Advanced Carrier Aggregation (LTE_CA_Rel12-UEConTest) RAN5 CR set F REL-12 LTE_CA_Rel12-UEConTest
conclusion: approved

9.3.2 UE Conformance Test Aspects – Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL [LTE_CA_Rel12_3DL-UEConTest]

RP-150078 Status report for WI UE Conformance Test Aspects for Further REL-12 Configurations for LTE Advanced Carrier Aggregation with 3DL: Microsoft RAN5 Report REL-12 LTE_CA_Rel12_3DL-UEConTest
MCC: target date changed
conclusion: noted, approved: 12%, Dec.15

RP-150079 Revised WID: UE Conformance Test Aspects - Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL Microsoft Corporation WID rev RAN5 REL-12 LTE_CA_Rel12_3DL-UEConTest
last approved WID: RP-142231; aligning the content of CA configurations within the REL-12 scope, decided at RAN#66; addition of 2 supporting companies.
conclusion: approved

RP-150343 RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL (LTE_CA_Rel12_3DL-UEConTest) RAN5 CR set F REL-12 LTE_CA_Rel12_3DL-UEConTest
conclusion: approved

9.3.3 UE Conformance Test Aspects - BeiDou Navigation Satellite System (BDS) Positioning Support for LTE and UMTS [LCS_BDS-UEConTest]

RP-150357 Status report for SI UE Conformance Test Aspects - BeiDou Navigation Satellite System (BDS) Positioning Support for LTE and UMTS; rapporteur: CATT RAN5 Report REL-12 LCS_BDS-UEConTest
MCC: late Tdoc request/submission
conclusion: noted, approved: 90%, June 15

Samsung Exhibit 1025, Page 1168 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150344 RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects - BeiDou Navigation Satellite System (BDS) Positioning Support for LTE and UMTS (LCS_BDS-UEConTest) RAN5 CR set F REL-12 LCS_BDS-UEConTest
conclusion: approved

9.3.4 UE Conformance Test Aspects - LTE Coverage Enhancements
[Cov_Enh_LTE-UEConTest]

RP-150205 Status report for WI: UE Conformance Test Aspects - LTE Coverage Enhancements, rapporteur: China Telecom RAN5 Report REL-12 Cov_Enh_LTE-UEConTest
conclusion: noted, approved: 5%, Sep.15

9.3.5 UE Conformance Test Aspects – WLAN/3GPP Radio Interworking
[**New:** UTRA_LTE_WLAN_interw-UEConTest

RP-150092 Status report for UE Conformance Test Aspects - WLAN/3GPP Radio Interworking; rapporteur: Intel RAN5 Report REL-12 UTRA_LTE_WLAN_interw-UEConTest
conclusion: withdrawn

RP-150097 Status report for UE Conformance Test Aspects - WLAN/3GPP Radio Interworking, rapporteur: Intel RAN5 Report REL-12 UTRA_LTE_WLAN_interw-UEConTest
conclusion: withdrawn

RP-150098 Status report for UE Conformance Test Aspects - WLAN/3GPP Radio Interworking, rapporteur: Intel RAN5 Report REL-12 UTRA_LTE_WLAN_interw-UEConTest
conclusion: noted, approved: 5%, Dec.15

9.3.6 Conformance Test Aspects: Small Technical Enhancements and Improvements for Rel-12 [TEI12_Test]

RP-150345 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-12 Conformance Testing (TEI12_Test) RAN5 CR set F REL-12 TEI12_Test
conclusion: approved

RP-150398 CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (TTCN), Annex A RAN5 CR 36.523-3 set - F/B REL-12 TEI12_Test TTCN batch; 3 Test Cases
conclusion: approved

9.4 Open Rel-13 work items

9.4.1 UE Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom
[LTE_UTRA_TRP_TRS-UEConTest]

RP-150069 Status report for WI UE Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom, rapporteur: ZTE RAN5 Report REL-13 LTE_UTRA_TRP_TRS-UEConTest
MCC: target date changed
conclusion: noted, approved: 20%, June 16

RP-150070 Revised WID: UE Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom ZTE WID rev RAN5 REL-13 LTE_UTRA_TRP_TRS-UEConTest
last approved WID: RP-140090; revised to align with RAN4 Core part WI in RP-141966
conclusion: approved

Samsung Exhibit 1025, Page 1169 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10 Work Items with target Rel-12 (not related to conformance testing)

NOTE: RAN #66 granted 3 REL-12 Core part WIs a second 3 months exception to complete the WI in REL-12 by March 2015.

10.1 Closed UTRA only related WIs

RAN1:

RP-150360 CR to 25.214 to clarify UMTS Heterogeneous Network Enhancements RAN1 CR25.2140735 1 F REL-12 UTRA_HetNet_enh-Core
conclusion: approved

RAN2:

RP-150372 RAN2 agreed CRs on Core part: Further Enhanced Uplink (EUL) enhancements RAN2 CR set REL-12 EDCH_enh-Core
conclusion: approved

RAN3:

RP-150349 Further EUL enhancements RAN3 CR set REL-12 EDCH_enh-Core
conclusion: approved

RAN4:

RP-150385 RAN4 CRs to Closed UTRA only related Wis RAN4 CR set REL-12 EDCH_enh-Core, UTRA_hetnet_enh-Core, TEI12
conclusion: approved; Note: By mistake also TEI12 CRs were packed in RP-150387 although they should have been submitted to AI 10.8.

10.2 Closed UTRA & LTE related WIs

RAN3:

RP-150350 Add missing new SIB for IncMon RAN3 CR25.4231861 1 F REL-12 LTE_UTRA_IncMon-Core
conclusion: approved

RAN4:

RP-150386 RAN4 CRs to Closed UTRA & LTE related Wis RAN4 CR set REL-12 LTE_UTRA_Incmon-Core
conclusion: approved

10.3 Closed LTE only related WIs

RAN1:

RP-150363 CR to 36.213 on correction for TDD-FDD CA RAN1 CR36.2130494 1 F REL-12 LTE_CA_TDD_FDD-Core
conclusion: approved

RP-150364 CRs to 36.211 & 36.213 on corrections for Small Cell enhancements RAN1 CR set REL-12 LTE_SC_enh_L1-Core
conclusion: approved

RP-150365 CR to 36.213 on corrections for Dual Connectivity feature RAN1 CR36.2130504 1 F REL-12 LTE_SC_enh_dualC-Core
conclusion: approved

RAN2:

Samsung Exhibit 1025, Page 1170 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150373 RAN2 agreed CRs on Closed LTE REL-12 Work Items RAN2 CR set REL-12 UTRA_LTE_WLAN_interw-Core, LTE_SC_enh_dualC-Core, LTE_UTRA_IncMon-Core, LC_MTC_LTE-Core, LTE_NAICS-Core
Note: The CRs in R2-150722, R2-150723 and R2-150724 were originally from RAN3
conclusion: approved

RAN3:

RP-150351 Dual Connectivity for LTE CRs RAN3 CR set REL-12 LTE_SC_enh_dualC-Core
conclusion: approved

RP-150352 Correction of reloading PWS alerts RAN3 CR 36.413 1285 1 F REL-12 REP_WMD-RFR_PWS-Core
conclusion: approved

RAN4:

RP-150387 RAN4 CRs to Closed LTE only related Wis RAN4 CR set REL-12 LC_MTC_LTE-Core, LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A5-Core, LTE_CA_NC_2UL-Core, LTE_CA_2UL-A1-Perf, LTE_CA_2UL-A2-Perf, LTE_CA_2UL-A3-Perf, LTE_CA_2UL-A4-Perf, LTE_CA_2UL-A5-Perf, LTE_D2D_Prox-Core, LTE_SC_enh_dualC-Core, MBMS_LTE_OS-Core, TEI12
conclusion: approved
Note 1: By mistake also TEI12 CRs were packed in RP-150387 although they should have been submitted to AI 10.8.
Note 2: R4-150502 and R4-150503 list "LTE_CA_2UL-intra-Perf" and R4-150504 lists "LTE_CA_2UL-intra-Core". Both WI codes do not exist.
R4-150504 lists "LTE_CA_2UL-intra-Core" which does not exist. All 3 CRs should list "LTE_CA_NC_2UL-Core" instead.

RP-150388 RAN4 CRs to Closed LTE carrier aggregation only related WIs RAN4 CR set REL-12 LTE_CA_B1_B19_B21-Core, LTE_CA_B1_B3_B20-Core, LTE_CA_B1_B3_B5-Core, LTE_CA_B1_B3_B8-Core, LTE_CA_B1_B42_B42-Core, LTE_CA_B1_B5_B7-Core, LTE_CA_B1_B7_B20-Core, LTE_CA_B19_B42_B42-Core, LTE_CA_B2_B12_B12-Core, LTE_CA_B2_B12_B30-Core, LTE_CA_B2_B2_B13-Core, LTE_CA_B2_B29_B30-Core, LTE_CA_B2_B4_B12-Core, LTE_CA_B2_B4_B13-Core, LTE_CA_B2_B4_B5-Core, LTE_CA_B2_B5_B12-Core, LTE_CA_B2_B5_B30-Core, LTE_CA_B3_B3_B7-Core, LTE_CA_B3_B42_B42-Core, LTE_CA_B3_B7_B20-Core, LTE_CA_B3_B7_B7-Core, LTE_CA_B4_B12_B12-Core, LTE_CA_B4_B12_B30-Core, LTE_CA_B4_B29_B30-Core, LTE_CA_B4_B4_B13-Core, LTE_CA_B4_B5_B12-Core, LTE_CA_B4_B5_B30-Core, LTE_CA_B7_B8_B20-Core, LTE_CA_C_B40_3DL_BW-Core, LTE_CA_C_B41_3DL-Core, LTE_CA_NC_B41_3DL-Core, LTE_CA_B2_B4_B4-Core, LTE_CA_B2_B2_B5-Core, LTE_CA_B2_B2_B29-Core, LTE_CA_B4_B4_B5-Core, LTE_CA_B4_B4_B12-Core, LTE_CA_B39_B39_B41-Core, LTE_CA_B18_B28-Core, LTE_CA_B25_B41_B41-Core, LTE_CA_B3_B42_B42-Core, LTE_CA_B3_B42_B42-Perf, LTE_CA_B4_B12_B30-Core, LTE_CA_C_B41_3DL-Core, LTE_CA_C_B42-Core, LTE_CA_TDD_FDD-Core
conclusion: approved

RP-150053 Correction to the implementation of CR 2471r3 (Clarification for ACK/NACK feedback of CGI measurement) ETSI MCC CR 36.133 2824 - F REL-12 LTE_TDD_eIMTA-Core
company CR: The modification to the note in Table 8.1.2.3.7.1-1 proposed by CR 2471r3 (RP-141700 or RAN #65) was missed in the implementation of the CR by MCC. This CR corrects this error.
conclusion: approved

RP-150072 Approval of TR 36.852-12 v2.0.0: E-UTRA inter-band Carrier Aggregation Ericsson TR 36.852-12 RAN4 REL-12 LTE_CA_B1_B8-Core
RAN4 TR 36.852-12 is provided for approval; note: TR 36.851 was provided to RAN #66 for information (RP-142015), then TR number was changed to TR 36.852-12; all TPs from Rel-12 WIs are implemented in this TR
conclusion: was at first intended to be approved but then revised in RP-150498 (covering a number of late editorial review comments coming from a check by ETSI Edithelp)

RP-150498 Approval of TR 36.852-12 v2.0.1: E-UTRA inter-band Carrier Aggregation Ericsson TR 36.852-12 RAN4 REL-12 LTE_CA_B1_B8-Core
conclusion: approved as TR 36.852-12 v12.0.0

Samsung Exhibit 1025, Page 1171 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.4 Open UTRA only related WIs

10.4.1 Perf. part: Further EUL enhancements [EDCH_enh-Perf]

RP-150062 Status report for WI Perf. part: Further EUL Enhancements, rapporteur: Ericsson RAN4 Report REL-12 EDCH_enh-Perf
conclusion: noted, approved: 100%, March 15; WI completed

RP-150389 RAN4 CRs to Open UTRA only related Wis - Perf part RAN4 CR25.1331398 - F REL-12 EDCH_enh-Perf
conclusion: approved

10.5 Open UTRA & LTE only related WIs

10.5.1 Perf. part: Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA [LTE_UTRA_IncMon-Perf]

RP-150063 Status report for WI Perf. part: Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA; rapporteur: Ericsson RAN4 Report REL-12 LTE_UTRA_IncMon-Perf
conclusion: noted, approved: 40%, June 15

10.6 Open LTE only related WIs (non-spectrum related)

10.6.1 Perf. part: Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation [LTE_TDD_eIMTA-Perf]

RP-150154 Status report for WI Perf Part: Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation; rapporteur: CATT RAN4 Report REL-12 LTE_TDD_eIMTA-Perf
conclusion: noted, approved: 55%, June 15

RP-150396 RAN4 CRs to Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation: Perf. Part RAN4 CRset REL-12 LTE_TDD_eIMTA-Perf
conclusion: approved

10.6.2 Perf. part: Low cost & enhanced coverage MTC UE for LTE [LC_MTC_LTE-Perf]

RP-150149 Status Report: Perf. part: Low cost & enhanced coverage MTC UE for LTE; rapporteur: Vodafone RAN4 Report REL-12 LC_MTC_LTE-Perf
Core part was completed at RAN #66
MCC: target date changed
conclusion: noted, approved: 90%, June 15

RP-150390 RAN4 CRs to Low cost & enhanced coverage MTC UE for LTE: Perf. Part RAN4 CR36.101set REL-12 LC_MTC_LTE-Perf
conclusion: approved

10.6.3 Perf. part: E-UTRA Small cell enhancements - Physical layer aspects [LTE_SC_enh_L1-Perf]

RP-150173 Status report for WI Perf. part: E-UTRA Small cell enhancements - Physical layer aspects, rapporteur: Huawei RAN4 Report REL-12 LTE_SC_enh_L1_Perf
MCC: target date changed
conclusion: noted, approved: 80%, June 15

RP-150394 RAN4 CRs to E-UTRA Small cell enhancements - Physical layer aspects: Perf. Part RAN4 CRset REL-12 LTE_SC_enh_L1-Perf
conclusion: approved

10.6.4 Perf. part: Dual Connectivity for LTE [LTE_SC_enh_dualC]

Samsung Exhibit 1025, Page 1172 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150160 Status Report for WI Perf Part.: Dual Connectivity for LTE; rapporteur: RAN4 Report REL-12 LTE_SC_enh_dualC
conclusion: noted, approved: 45%, June 15

RP-150393 RAN4 CRs to Dual Connectivity for LTE: Perf. Part RAN4 CRset REL-12 LTE_SC_enh_dualC-Perf
conclusion: approved

10.6.5 LTE Device to Device Proximity Services [LTE_D2D_Prox] 2nd exception: RP-141916

RP-150037 LS on impact of optional preconfigured parameters for D2D out of Network coverage mode (R4-151170; to: RAN1, RAN2, RAN5, SA2, RAN; cc: -; contact: Sprint) RAN4 LSin REL-12 LTE_D2D_Prox-Core
no RAN action requested;
discussion: ZTE: will RAN4 solve the ffs in REL-12?
Sprint: REL-12 ProSe work is closed
Orange: action is now for SA2 to limit the scenario
Qualcomm: there is no requested action
ZTE: RAN2 refers to CT1
RAN2 chair: CT1 would need to change their spec as they allow the use case that RAN4 discard in the LS; RAN4 overruled RAN2/CT1 scenario
US Dep.of C.: with preconfigured data in the UE it could still work
RAN chair: some more offline discussion is needed
conclusion: noted, no LS answer

RP-150488 Draft LS regarding D2D off network operation (to: CT1; cc: SA2; contact: Sprint) Sprint LSout REL-12 LTE_D2D_Prox-Core
related to LSin RP-150037
discussion: ZTE: RAN1/2/4/5 should be informed as well
conclusion: revised in RP-150516

RP-150516 LS regarding D2D off network operation (to: CT1; cc: SA2, RAN1, RAN2, RAN4, RAN5; contact: Sprint) RAN LSout REL-12 LTE_D2D_Prox-Core
conclusion: approved

RP-150094 Status report for WI: LTE Device to Device Proximity Services; rapporteur: Qualcomm RAN1 Report REL-12 LTE_D2D_Prox
conclusion: noted, approved: Core: 100%, March 15, Perf.: 25%, Sep.15; Core part WI completed

RP-150366 CRs to 36.201, 36.211, 36.212, 36.213 & 36.214 to introduce D2D feature RAN1 CRset REL-12 LTE_D2D_Prox-Core
conclusion: approved

RP-150374 RAN2 agreed CRs on LTE Device to Device Proximity Services RAN2 CRset REL-12 LTE_D2D_Prox-Core
conclusion: approved

RP-150353 ProSe CRs RAN3 CRset REL-12 LTE_D2D_Prox-Core
conclusion: approved

RP-150093 TR 36.877 v2.0.0 LTE Device to Device Proximity Services: User Equipment (UE) radio transmission and reception Qualcomm TR36.877RAN4 REL-12 LTE_D2D_Prox-Core
RAN4 TR 36.877 is submitted for approval; v1.0.0 was noted at RAN #66 in RP-141897
conclusion: approved as TR 36.877 v12.0.0

Note: By mistake the 36.101 RAN4 CR R4-151273 and 36.133 RAN4 CR R4-151126 to LTE_D2D_Prox-Core were packed in RP-150387 (see AI 10.3).

10.6.6 Perf. part: Network-Assisted Interference Cancellation and Suppression for LTE [LTE_NAICS-Perf]

RP-150179 Status Report for WI: Perf. part: Network Assisted Interference Cancellation and Suppression for LTE; rapporteur: MediaTek RAN4 Report REL-12 LTE_NAICS-Perf

Samsung Exhibit 1025, Page 1173 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: noted, approved: 50%, June 15

10.6.7 Perf. part: Performance requirements of interference cancellation and suppression receiver for SU-MIMO [LTE_SUMIMO_RX-Perf]

RP-150229 Status report for WI Perf Part.: Performance requirements of interference cancellation and suppression receiver for SU-MIMO, rapporteur: Huawei RAN4 Report REL-12 LTE_SUMIMO_RX-Perf
conclusion: noted, approved: 100%, March 15; Perf. part WI completed

RP-150395 RAN4 CRs to Performance requirements of interference cancellation and suppression receiver for SU-MIMO: Perf. Part RAN4 CR36.101set REL-12 LTE_SUMIMO_RX-Perf
conclusion: approved

10.6.8 Core part: Group Call eMBMS congestion management for LTE

[GCSE_LTE-MBMS_CM-Core] 2nd exception: RP-141864

RP-150081 Status report for WI Core part: Group Call eMBMS congestion management for LTE, rapporteur: Alcatel-Lucent RAN3 Report REL-12 GCSE_LTE-MBMS_CM-Core
MCC: 2 alternative CRs in RP-150354 and RP-150355
conclusion: noted, approved: 100%, March 15; Core part WI completed

RP-150082 Selection of M2AP solution for suspension notification Alcatel-Lucent Disc REL-12 GCSE_LTE-MBMS_CM-Core
discussion: RAN3 chair: there was an offline agreement to go the RP-150355 solution
conclusion: noted

RP-150354 Support for eMBMS congestion management, via new procdure RAN3 CR36.4430102 - B REL-12 GCSE_LTE-MBMS_CM-Core
MCC: Technically endorsed by RAN3. Alternative solution to CR0101r1 to complete the WI
conclusion: rejected

RP-150355 Support for eMBMS congestion management, via MBMS scheduling information procedure RAN3 CR 36.4430101 1 B REL-12 GCSE_LTE-MBMS_CM-Core
MCC: Technically endorsed by RAN3. Alternative solution to CR0102 to complete the WI
conclusion: approved

RP-150375 RAN2 agreed CRs on Introduction of MBMS congestion management for Public Safety Group Call RAN2 CRset REL-12 GCSE_LTE-MBMS_CM-Core
conclusion: approved

10.7 Open LTE only related WIs (spectrum; CA related)

NOTE: For the WIs under agenda item 10.7 (except 10.7.4) and 11.4 no separate status reports per WI will be provided but a Tdoc will be submitted to agenda item 10.7 by RAN4 with a collection of all % complete and target dates for each WI.

RP-150013 Status Report of RAN4 CA WIs RAN4 chairman (Nokia Networks) Report
MCC: Instead of separate SRs for each CA WI, RAN4 provides a single spreadsheet for REL-12/REL-13 CA WIs tracking completion level, target date and any other essential information.
conclusion: noted, % complete and target dates are approved as in RP-150013 unless modified in the table below in red

RAN #67 agenda	UID	Acronym	REL	target after RAN #67	% complete	rapporteur	Open issues / Other notes
10.7.1.1	640130	LTE_CA_B3_B42_B42-Core	REL-12	March 15	100	NTT DOCOMO	No open issues/CRs for TS 36.101(R4-150441) and 36.104(R4-150438) agreed at RAN4 #74.
10.7.1.1	640230	LTE_CA_B3_B42_B42-Perf	REL-12	March 15	100	NTT DOCOMO	No open issues/CRs for TS 36.141(R4-150439) agreed at RAN4 #74.
10.7.2.1	610222	LTE_CA_C_B41_3DL-Perf	REL-12	March 15	100	Alcatel-Lucent	Newly agreed proposals in R4-151108 and R4-150450. CRs already agreed in RP-141560.

Samsung Exhibit 1025, Page 1174 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #67 agenda	UID	Acronym	REL	target after RAN #67	% complete	rapporteur	Open issues / Other notes
10.7.3.1	620238	LTE_CA_NC_B41_3DL-Perf	REL-12	March 15	100	Alcatel-Lucent	Newly agreed proposals in R4-151108 and R4-150450. CRs already agreed in RP-141561.
11.4.1.01	650141	LTE_CA_B1_B40-Core	REL-13	June 15	80	KT	CR will be submitted to RAN #74Bis
11.4.1.01	650241	LTE_CA_B1_B40-Perf	REL-13	June 15	80	KT	CR will be submitted to RAN #74Bis
11.4.1.02	650138	LTE_CA_B2_B28-Core	REL-13	June 15	99	Huawei	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.1.02	650238	LTE_CA_B2_B28-Perf	REL-13	June 15	99	Huawei	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.1.03	650144	LTE_CA_B3_B31-Core	REL-13	June 15	75	Huawei	MSD due to harmonic issue
11.4.1.03	650244	LTE_CA_B3_B31-Perf	REL-13	June 15	0	Huawei	CRs to be agreed
11.4.1.04	650137	LTE_CA_B3_B38-Core	REL-13	June 15	90	Nokia Networks	Agreement on TIB and RIB
11.4.1.04	650237	LTE_CA_B3_B38-Perf	REL-13	June 15	90	Nokia Networks	Agreement on TIB and RIB
11.4.1.05	650142	LTE_CA_B3_B40-Core	REL-13	June 15	80	KT	CR will be submitted to RAN #74Bis
11.4.1.05	650242	LTE_CA_B3_B40-Perf	REL-13	June 15	80	KT	CR will be submitted to RAN #74Bis
11.4.1.06	660182	LTE_CA_B3_B41-Core	REL-13	Sep. 15	20	China Telecom	CR will be submitted to RAN #74Bis
11.4.1.06	660282	LTE_CA_B3_B41-Perf	REL-13	Sep. 15	20	China Telecom	CR will be submitted to RAN #74Bis
11.4.1.07	650139	LTE_CA_B4_B28-Core	REL-13	June 15	99	Huawei	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.1.07	650239	LTE_CA_B4_B28-Perf	REL-13	June 15	99	Huawei	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.1.08	650145	LTE_CA_B5_B40-Core	REL-13	June 15	80	SK Telecom	CRs will be submitted to RAN #75
11.4.1.08	650245	LTE_CA_B5_B40-Perf	REL-13	June 15	80	SK Telecom	CRs will be submitted to RAN #75
11.4.1.09	630133	LTE_CA_B7_B22-Core	REL-13	June 15	10	Ericsson	UE REFSENS, MOP relaxation. Chair: No activity for a long time
11.4.1.09	630233	LTE_CA_B7_B22-Perf	REL-13	June 15	0	Ericsson	Chair: No activity for a long time
11.4.1.10	620123	LTE_CA_B8_B27-Core	REL-13	June 15	15	KT	Quardplexer implementation and its performance
11.4.1.10	620223	LTE_CA_B8_B27-Perf	REL-13	June 15	15	KT	Quardplexer implementation and its performance
11.4.1.11	650143	LTE_CA_B20_B31-Core	REL-13	June 15	99	Huawei	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.1.11	650243	LTE_CA_B20_B31-Perf	REL-13	June 15	99	Huawei	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.1.12	650140	LTE_CA_B20_B40-Core	REL-13	June 15	70	Ericsson	MSD for low band has not been decided yet. This is one of the combinations with harmonic mixing problem. The plan is that, CRs will be submitted to RAN #68 provided that we can complete the work by RAN4#75.
11.4.1.12	650240	LTE_CA_B20_B40-Perf	REL-13	June 15	0	Ericsson	CRs will be submitted to RAN #68
11.4.1.13	660181	LTE_CA_B25_B26-Core	REL-13	June 15	95	Sprint	The work for this WI is completed and related CRs were endorsed in RAN4-74 however an updated WID with additional bandwidth combination sets was presented to RAN4-74 for information and will be submitted to RAN-67 for approval. The BW combination sets will require a Text Proposal to add the sets to the TR for RAN4-74b and incorporated into the CRs that will be provided for agreement in RAN4-75 and for approval in RAN-68.

Samsung Exhibit 1025, Page 1175 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #67 agenda	UID	Acronym	REL	target after RAN #67	% complete	rapporteur	Open issues / Other notes
11.4.1.13	660281	LTE_CA_B25_B26-Perf	REL-13	June 15	95	Sprint	The work for this WI is completed and related CRs were endorsed in RAN4-74 however an updated WID with additional bandwidth combination sets was presented to RAN4-74 for information and will be submitted to RAN-67 for approval. The BW combination sets will require a Text Proposal to add the sets to the TR for RAN4-74b and incorporated into the CRs that will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.01	660183	LTE_CA_B1_B3_B3-Core	REL-13	June 15	50	China Unicom	MSD issues
11.4.2.01	660283	LTE_CA_B1_B3_B3-Perf	REL-13	June 15	0	China Unicom	Performance issues
11.4.2.02	660190	LTE_CA_B1_B3_B40-Core	REL-13	Sep. 15	10	KT	Pentaplexer consideration and related UE architecture
11.4.2.02	660290	LTE_CA_B1_B3_B40-Perf	REL-13	Sep. 15	10	KT	Pentaplexer consideration and related UE architecture
11.4.2.03	660187	LTE_CA_B1_B8_B28-Core	REL-13	Sep. 15	20	Softbank Mobile	Sub CA (B1+B40) WI completetion
11.4.2.03	660287	LTE_CA_B1_B8_B28-Perf	REL-13	Sep. 15	20	Softbank Mobile	Sub CA (B1+B40) WI completetion
11.4.2.04	660191	LTE_CA_B1_B8_B40-Core	REL-13	Sep. 15	10	KT	Sub CA (B1+B40) WI completetion
11.4.2.04	660291	LTE_CA_B1_B8_B40-Perf	REL-13	Sep. 15	10	KT	Sub CA (B1+B40) WI completetion
11.4.2.05	660184	LTE_CA_B1_B19_B28-Core	REL-13	June 15	50	NTT DOCOMO	1. If relaxations due to harmonic filter are applied to B19 and B28 Tx/Rx or not. 2. MSD values on B28 due to the noise B19 Tx origin. 3. DTIB and DRIB for B19 and B28 associated with the above.
11.4.2.05	660284	LTE_CA_B1_B19_B28-Perf	REL-13	June 15	0	NTT DOCOMO	No technical issues. CRs for TS36.307/TS36.141 will be submitted at the same time as the completion of Core part.
11.4.2.06	660194	LTE_CA_B1_B3_B28-Core	REL-13	June 15	99	Nokia Networks	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.06	660294	LTE_CA_B1_B3_B28-Perf	REL-13	June 15	99	Nokia Networks	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.07	660199	LTE_CA_B1_B7_B28-Core	REL-13	June 15	50	Huawei	CRs to be agreed
11.4.2.07	660299	LTE_CA_B1_B7_B28-Perf	REL-13	June 15	0	Huawei	CRs to be agreed
11.4.2.08	661100	LTE_CA_B1_B3_B7-Core	REL-13	June 15	30	Huawei	Agreement on TIB and RIB
11.4.2.08	661200	LTE_CA_B1_B3_B7-Perf	REL-13	June 15	0	Huawei	CRs to be agreed
11.4.2.09	640122	LTE_CA_B2_B2_B12-Core	REL-13	June 15	99	U.S. Cellular	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.09	640222	LTE_CA_B2_B2_B12-Perf	REL-13	June 15	99	U.S. Cellular	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.10	650153	LTE_CA_B2_B5_B29-Core	REL-13	June 15	99	Huawei	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.10	650253	LTE_CA_B2_B5_B29-Perf	REL-13	June 15	99	Huawei	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.11	661101	LTE_CA_B3_B3_B5-Core	REL-13	Sep. 15	10	Intel	Harmonic and intermodulation study; Define dRIB and CRs; REFSENS relaxation for RAN4 spec
11.4.2.11	661201	LTE_CA_B3_B3_B5-Perf	REL-13	Sep. 15	0	Intel	CRs for RAN4 spec and Release indpendent CRs
11.4.2.12	640125	LTE_CA_B3_B3_B8-Core	REL-13	June 15	99	CHTTL	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.

Samsung Exhibit 1025, Page 1176 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #67 agenda	UID	Acronym	REL	target after RAN #67	% complete	rapporteur	Open issues / Other notes
11.4.2.12	640225	LTE_CA_B3_B3_B8-Perf	REL-13	June 15	99	CHTTL	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.13	660188	LTE_CA_B3_B7_B7_BWset-Core	REL-13	June 15	99	Ericsson	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.13	660288	LTE_CA_B3_B7_B7_BWset-Perf	REL-13	June 15	99	Ericsson	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.14	660193	LTE_CA_B3_B7_B8-Core	REL-13	June 15	95	Ericsson	The band combination is included in the related CR endorsed in RAN4-74 (CRs will be provided for agreement in RAN4-75 and for approval in RAN-68). However, the additional bandwidth combination set for CA_3A-8A, subset 'Set 3' in RP-142013, was not implemented in the CR. Therefore, the completion level is set to 95% (the performance part not affected).
11.4.2.14	660293	LTE_CA_B3_B7_B8-Perf	REL-13	June 15	99	Ericsson	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.15	661102	LTE_CA_B3_B7_B28-Core	REL-13	June 15	99	Ericsson	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.15	661202	LTE_CA_B3_B7_B28-Perf	REL-13	June 15	99	Ericsson	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.16	620132	LTE_CA_B3_B8_B27-Core	REL-13	June 15	30	KT	Sub CA (B8+B27) WI completetion
11.4.2.16	620232	LTE_CA_B3_B8_B27-Perf	REL-13	June 15	30	KT	Sub CA (B8+B27) WI completetion
11.4.2.17	660195	LTE_CA_B3_B8_B28-Core	REL-13	Sep. 15	20	Softbank Mobile	Sub CA (B3+B40) WI completetion
11.4.2.17	660295	LTE_CA_B3_B8_B28-Perf	REL-13	Sep. 15	20	Softbank Mobile	Sub CA (B3+B40) WI completetion
11.4.2.18	660192	LTE_CA_B3_B8_B40-Core	REL-13	Sep. 15	10	KT	Sub CA (B3+B40) WI completetion
11.4.2.18	660292	LTE_CA_B3_B8_B40-Perf	REL-13	Sep. 15	10	KT	Sub CA (B3+B40) WI completetion
11.4.2.19	660198	LTE_CA_B3_B40_B40-Core	REL-13	June 15	50	Huawei	MSD for 3+40+40
11.4.2.19	660298	LTE_CA_B3_B40_B40-Perf	REL-13	June 15	0	Huawei	
11.4.2.20	660189	LTE_CA_B7_B7_B28-Core	REL-13	June 15	99	Ericsson	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.20	660289	LTE_CA_B7_B7_B28-Perf	REL-13	June 15	99	Ericsson	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.21	660186	LTE_CA_B7_B40_B40-Core	REL-13	June 15	40	ZTE	Deffine dTib, dRiB and CR will be submitted
11.4.2.21	660286	LTE_CA_B7_B40_B40-Perf	REL-13	June 15	40	ZTE	CRs will be submitted
11.4.2.22	650149	LTE_CA_B8_B41_B41-Core	REL-13	June 15	99	CMCC	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.22	650249	LTE_CA_B8_B41_B41-Perf	REL-13	June 15	99	CMCC	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.2.23	660196	LTE_CA_B8_B42_B42-Core	REL-13	June 15	20	Softbank Mobile	BS Co-ex Study, Actual Relaxation Values and Relevant CRs
11.4.2.23	660296	LTE_CA_B8_B42_B42-Perf	REL-13	June 15	20	Softbank Mobile	Release indpendent CRs
11.4.2.24	660185	LTE_CA_B21_B42_B42-Core	REL-13	June 15	90	NTT DOCOMO	CR for TS36.101/TS36.104 (No technical issues)
11.4.2.24	660285	LTE_CA_B21_B42_B42-Perf	REL-13	June 15	0	NTT DOCOMO	CR for TS36.307/TS36.141 (No technical issues)
11.4.2.25	660197	LTE_CA_B28_B40_B40-Core	REL-13	June 15	30	Huawei	Tib/Rib and MSD for 28+40, Tib/Rib and MSD for 28+40+40
11.4.2.25	660297	LTE_CA_B28_B40_B40-Perf	REL-13	June 15	0	Huawei	
11.4.2.26	650151	LTE_CA_B38_B40_B40-Core	REL-13	June 15	70	Samsung	Define dRIB and CRs for RAN4 spec

Samsung Exhibit 1025, Page 1177 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #67 agenda	UID	Acronym	REL	target after RAN #67	% complete	rapporteur	Open issues / Other notes
11.4.2.26	650251	LTE_CA_B38_B40_B40-Perf	REL-13	June 15	70	Samsung	CRs for RAN4 spec and Release indpendent CRs
11.4.2.27	640132	LTE_CA_B41_B42_B42-Core	REL-13	June 15	60	Huawei	Delta Tib and Rib values and/or MSD for the constituent bands. CRs for RAN4 spec.
11.4.2.27	640232	LTE_CA_B41_B42_B42-Perf	REL-13	June 15	60	Huawei	CRs for RAN4 spec including release indpendent CRs
11.4.3.1	661104	LTE_CA_B2_B2_B5_B30-Core	REL-13	Dec. 15 => Sep.15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.1	661204	LTE_CA_B2_B2_B5_B30-Perf	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.2	661103	LTE_CA_B2_B2_B12_B30-Core	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.2	661203	LTE_CA_B2_B2_B12_B30-Perf	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.3	661105	LTE_CA_B2_B2_B29_B30-Core	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.3	661205	LTE_CA_B2_B2_B29_B30-Perf	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.4	661107	LTE_CA_B2_B4_B5_B30-Core	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.4	661207	LTE_CA_B2_B4_B5_B30-Perf	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.5	661106	LTE_CA_B2_B4_B12_B30-Core	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.5	661206	LTE_CA_B2_B4_B12_B30-Perf	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.6	661108	LTE_CA_B2_B4_B29_B30-Core	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.6	661208	LTE_CA_B2_B4_B29_B30-Perf	REL-13	Dec. 15	50	AT&T	CRs submitted for information at RAN #74
11.4.3.7	661109	LTE_CA_B25_B41_B41_B41-Core	REL-13	Sep. 15	50	Alcatel-Lucent	UE test configurations and RRM requirements to be finalized.
11.4.3.7	661209	LTE_CA_B25_B41_B41_B41-Perf	REL-13	Dec. 15	25	Alcatel-Lucent	UE release independent requirements and RRM tests to be specified.
11.4.4.1	661110	LTE_CA_2UL_R13-A1-Core	REL-13	Dec. 15	40	Huawei	Harmonic and intermodulation study; Delta Tib and Rib values; CRs for RAN4 spec
11.4.4.1	661210	LTE_CA_2UL_R13-A1-Perf	REL-13	Dec. 15	40	Huawei	CRs for RAN4 spec and Release indpendent CRs
11.4.4.2	661111	LTE_CA_2UL_R13-A2-Core	REL-13	Dec. 15	50	Qualcomm	Core specifications for CA_1A-28A combination were endorsed as part of the large CR in R4-151269. The work item is held open at 50% completion to allow for the addition of new 2UL A2 combinations in the Rel-13 timeframe.
11.4.4.2	661211	LTE_CA_2UL_R13-A2-Perf	REL-13	Dec. 15	50	Qualcomm	Release independent specifications for CA_1A-28A combination were endorsed in R4-150243, R4-150244, and R4-150245. The work item is held open at 50% completion level to allow for the addition of new 2UL A2 combinations in the Rel-13 timeframe.
11.4.4.3	661112	LTE_CA_2UL_R13-A3-Core	REL-13	Dec. 15	25	Ericsson	CA_18A-28A (only combination in WID after RAN#66) completed and included in endorsed Draft CR (R4-151269). Completion level still set at 25% anticipating that additional band combinations will be proposed for Rel-13. Open issue: GNSS protection.
11.4.4.3	661212	LTE_CA_2UL_R13-A3-Perf	REL-13	Dec. 15	25	Ericsson	CA_18A-28A (only combination in WID after RAN#66) completed and included in endorsed Draft CR (R4-150243). Completion level still set at 25% anticipating that additional band combinations will be proposed for Rel-13.
11.4.5.1	650147	LTE_CA_C_B42_3DL-Core	REL-13	June 15	99	CATT	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.

Samsung Exhibit 1025, Page 1178 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #67 agenda	UID	Acronym	REL	target after RAN #67	% complete	rapporteur	Open issues / Other notes
11.4.5.1	650247	LTE_CA_C_B42_3DL-Perf	REL-13	June 15	99	CATT	The work for this WI is completed and related CRs were endorsed in RAN4-74. CRs will be provided for agreement in RAN4-75 and for approval in RAN-68.
11.4.6.1	661113	LTE_CA_NC_B41_4DL-Core	REL-13	Dec. 15	10	Alcatel-Lucent	UE RF and RRM requirements to be specified.
11.4.6.1	661213	LTE_CA_NC_B41_4DL-Perf	REL-13	Dec. 15	10	Alcatel-Lucent	UE release independent requirements and RRM test to be specified.

RP-150058 Way forward on LTE Carrier Aggregation WI handling ETSI MCC Disc - -

As corresponding email discussion on the RAN_DRAFTS reflector was not able to conclude, this is an attempt to summarize the situation and to propose a way forward

Questions:

a. Is it intended to consider pure 3DL/2UL intra-band combinations in this WI?
If yes, then a 2nd intra-band TR must be considered in this WI (or a 2nd WI for intra-band).

b. Do we allow CRs/TPs only when all pairings specified in the WID for a certain 3DL/2UL combination are completed? Or is one pairing enough?

c. Do we want to make the inclusion of all 10 fallback modes for 4DL/1UL WIs and all 25 fallback modes for 5DL/1UL WIs mandatory? Or do we just limit the WIDs to the 4DL/1UL and 5DL/1UL case(s) and for fallback modes separate WIs have to be considered?

d. Is it a correct understanding that for 6DL/1UL to 32DL/1UL we will not mandate to cover all fallback permutations in the same WI?

e. Is there consensus that even if a fallback mode can be optional for a UE, it must be covered in the fallback mode permutations of the corresponding WI (otherwise no UE will have this option)?

Proposals:

A. The CR cover sheets for this WI have to explicitly list in the summary for change all 3DL/2UL combinations with their pairings that are covered by this CR. Otherwise it will be intransparent what is covered and we should rather approve one complete CR set at the end of the WI instead of allowing to complete different 3DL/2UL combinations separately.

B. Define in TS 36.101 clause 3.1 what is a fallback mode and how its order is characterized otherwise remove corresponding terms from the spec.

C. A defintion of "bandwidth combination set (BCS)" is required in TS 36.101 clause 3.1 and BCS must be defined as a property of a CA combination and not as permutations of BCS of parts of the CA combination.

D. The recursive definition of CA combinations for intra-band and mixed intra-/inter-band cases has to be avoided, i.e. for each CA combination the bandwidths supported on each CC are listed but there is no pointering to parts of other CA combinations which may split in further BCSs.

E. The way bandwidth combinations are defined for intra-band CA will follow the same approach as for inter-band CA i.e. a YES/NO for each bandwidth that is possible for a CC, in addition it is possible to restrict the number of possible bandwidth combinations within a BCS via minimum and maximum aggregated bandwidth indications.

discussion: Nokia: too detailed proposal and better to handle this in RAN4
Qualcomm: supports the table format and going back to RAN4 would mean moving in circles
Nokia: email discussion on RAN4 reflector is more appropriate
RAN4 chair: we need to make sure that table format change does not impact ongoing CRs
RAN vice-chair (Fujitsu): RAN needs to discuss this topic also from project management point of view
ALU: prefers another quarter for further RAN4 discussion before taking the decision
DISH: table need be future proof, also take into account that table format also has impact on BS specs
MCC: the proposed table is designed to be future-proof
RAN4 chair: impact on harmonized standards need to be taken into account

conclusion: noted, MCC will trigger an email discussion on the RAN4 reflector in order to come to a decision by RAN #68

10.7.1 3 Band Carrier Aggregation (3DL/1UL)

10.7.1.1 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 42 and Band 42

[LTE_CA_B3_B42_B42] 2nd exception: RP-141779

Samsung Exhibit 1025, Page 1179 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.7.1.1	640130	LTE_CA_B3_B42_B42-Core	REL-12	March 15	100	NTT DOCOMO	No open issues/CRs for TS 36.101(R4-150441) and 36.104(R4-150438) agreed at RAN4 #74.
10.7.1.1	640230	LTE_CA_B3_B42_B42-Perf	REL-12	March 15	100	NTT DOCOMO	No open issues/CRs for TS 36.141(R4-150439) agreed at RAN4 #74.

RP-150391 RAN4 CRs to LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 42 and Band 42 RAN4 CR set REL-12 LTE_CA_B3_B42_B42-Core, LTE_CA_B3_B42_B42-Perf
conclusion: approved

Core and Perf. part WIs are completed.

10.7.2 Intra-band CA related WIs (contiguous 3DL)

10.7.2.1 Perf. part: LTE Advanced intra-band contiguous Carrier Aggregation in Band 41 for 3DL [LTE_CA_C_B41_3DL-Perf]

10.7.2.1	610222	LTE_CA_C_B41_3DL-Perf	REL-12	March 15	100	Alcatel-Lucent	Newly agreed proposals in R4-151108 and R4-150450. CRs already agreed in RP-141560.

RP-150116 TR 36.833-5-41 v2.0.0 on LTE-Advanced intra-band contiguous Carrier Aggregation (CA) in Band 41 for 3 downlinks (3DL) Alcatel-Lucent TR 36.833-5-41 RAN4 REL-12 LTE_CA_C_B41_3DL-Perf
RAN4 TR 36.833-5-41 is provided for approval; v1.0.0 was noted at RAN #65 in RP-141426; wrong Tdoc request by Sprint
conclusion: TR 36.833-5-41 is approved as v12.0.0

Perf. part WI completed

Note: RP-141560 of RAN #65 included 4 CRs to "LTE_CA_C_B40_3DL_BW-Core": 1 CR to 36.101 and 3 CRs to 36.307.
RAN4 agreed that no change is required in TS 36.104 and 36.141 as Band 41 C CA is already defined for 2 DL, and BS spec (unlike UE spec) are agnostic to the number of contiguous carriers in one band.
But CRs are required in 36.101 (Core) and 36.307 (Perf) which were included in RP-141561.
So in conclusion RP-141560 had errors in the WI codes on the CR covers of the 36.307 CRs (which should have indicated Perf. and not Core part) and it was forgotten to update WID RP-142017 to indicate this Perf. part impact.

10.7.3 Intra-band CA related WIs (non-contiguous 3DL)

10.7.3.1 Perf. part: LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 41 for 3 DL [LTE_CA_NC_B41_3DL-Perf]

10.7.3.1	620238	LTE_CA_NC_B41_3DL-Perf	REL-12	March 15	100	Alcatel-Lucent	Newly agreed proposals in R4-151108 and R4-150450. CRs already agreed in RP-141561.

RP-150117 TR 36.833-6-41 v2.0.0 on LTE-Advanced intra-band non-contiguous Carrier Aggregation (CA) in Band 41 for 3 downlinks (3DL) Alcatel-Lucent TR 36.833-6-41 RAN4 REL-12 LTE_CA_NC_B41_3DL-Perf
RAN4 TR 36.833-6-41 is provided for approval; v1.0.0 was noted at RAN #65 in RP-141427; wrong Tdoc request by Sprint
conclusion: TR 36.833-6-41 is approved as v12.0.0

Perf. part WI completed

Note: RP-141561 of RAN #65 included 3 CRs: 2 CRs to "LTE_CA_NC_B41_3DL-Perf" for 36.307 and 1 CR to "LTE_CA_NC_B41_3DL-Core" for 36.101.
The WID RP-140101 indicates that 36.307 is impacted by the Core part (which is wrong, it is impacted by the Perf. part).
The WID RP-140101 indicates as well that 36.141 is impacted by the Perf. part. However, RAN4 agreed that no change is required in TS 36.141 as Band 41 C CA is already defined for 2 DL, and BS spec (unlike UE spec) are

Samsung Exhibit 1025, Page 1180 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

agnostic to the number of contiguous carriers in one band.
Both aspects were unfortunately not clarified in a revision of the WID RP-140101.

10.7.4 Other CA related WIs (for WIs of 10.7.4 a separate status report is required)

10.7.4.1 Perf. part: E-UTRA UE performance requirements for multiple Carrier Aggregation configurations [LTE_CA_Mult-Perf]

RP-150188 Status Report for WI Perf Part: E-UTRA UE demodulation/CSI performance requirements for multiple Carrier Aggregation configurations; rapporteur: CMCC RAN4 Report REL-12 LTE_CA_Mult-Perf
conclusion: noted, approved: 100%, March 15; WI is completed

RP-150392 RAN4 CRs to E-UTRA UE performance requirements for multiple Carrier Aggregation configurations: Perf. Part RAN4 CRset REL-12 LTE_CA_Mult-Perf
conclusion: approved

10.8 Small Technical Enhancements and Improvements for Rel-12 [TEI12]

RAN1:
RP-150361 CRs to 25.215, 25.225 & 36.214 on new E-UTRA RSRQ measurement definition RAN1 CRset REL-12 TEI12
conclusion: approved

RAN2:
RP-150376 RAN2 agreed CRs on Small Technical Enhancements and Improvements for Rel-12 RAN2 CRset REL-12 TEI12
conclusion: approved

RP-150377 RAN2 agreed CRs on ASN.1 corrections RAN2 CRset REL-12 TEI12
conclusion: approved

RAN3:
RP-150356 TEI12 CRs RAN3 CRset REL-12 TEI12
conclusion: approved

RAN4:
Note: By mistake the TEI12 RAN4 CRs were packed into RP-150385 (AI 10.1) and RP-150387 (AI 10.3).

Samsung Exhibit 1025, Page 1181 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11 Work Items with target Rel-13 (not related to conformance testing)

11.1 Open UTRA related WIs (spectrum related)

11.1.1 HSPA Dual-Band UL carrier aggregation [**New WI:** HSUPA_DB_MC]

RP-150127 Status report for WI HSPA Dual-Band UL carrier aggregation; rapporteur: Qualcomm RAN4 Report REL-13 HSUPA_DB_MC
conclusion: noted, approved: Core: 10%, Dec.15; Perf.: 0%, March 16

RP-150129 Revised WID: HSPA Dual-Band UL carrier aggregation Qualcomm Incorporated WID rev RAN4 REL-13 HSUPA_DB_MC
last approved WID: RP-142237; revised to add RRM aspects/specs
discussion: Nokia: would like to have clarification why we need additional RRM requirements here
conclusion: approved

11.1.2 Core part: Support of EVS over UTRAN CS [**New WI:** EVSoCS_UTRAN-Core]

RP-150128 Status report for WI Support of EVS over UTRAN CS; rapporteur: Qualcomm RAN2 Report REL-13 EVSoCS_UTRAN-Core
conclusion: noted, approved: Core: 10%, Sep.15

11.2 Open UTRA & LTE related WIs (non-spectrum related)

11.2.1 Core part: LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Requirements [LTE_UTRA_TRP_TRS-Core] (WI was shifted from REL-12 to REL-13)

TRP = total radiated power, TRS = total radiated sensitivity

RP-150027 Reply LS to RP-142316 on OTA Test Requirement Work Plan (CTIA_LS_150202; to: RAN; cc: RAN4; contact: Spirent) CTIA OTA WG LSin REL-13 LTE_MIMO_OTA-Core
CTIA = Cellular Telecommunications & Internet Association; no RAN action requested
conclusion: noted, no LS answer

RP-150104 Status report for WI Core part: LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Requirements, rapporteur: Nokia Corporation RAN4 Report REL-13 LTE_UTRA_TRP_TRS-Core
conclusion: noted, approved: Core: 40%, Dec.15

11.2.2 Base Station (BS) RF requirements for Active Antenna System (AAS) [AAS_BS_LTE_UTRA] (WIs were shifted from REL-12 to REL-13)

RP-150231 Status report for WI: Base Station (BS) RF requirements for Active Antenna System (AAS), rapporteur: Huawei RAN4 Report REL-13 AAS_BS_LTE_UTRA
conclusion: noted, approved: Core: 75%, Dec.15; Perf.: 20%, June 16

11.2.3 Core part: SON for AAS-based deployments [UTRA_LTE_SON_AAS-Core]

RP-150110 Status report for WI Core part: SON for AAS-based deployments, rapporteur: Nokia Networks RAN3 Report REL-13 UTRA_LTE_SON_AAS-Core
conclusion: noted, approved: Core: 25%, June.15

11.2.4 Core part: Radiated requirements for the verification of multi-antenna reception performance of UEs [**New WI:** UTRA_LTE_MIMO_OTA-Core]

RP-150026 LS regarding CTIA MIMO OTA Test Plan Development (CTIA_LS_150203; to: RAN4, RAN5; cc: RAN; contact: AT&T) CTIA MOSG LSin REL-13 LTE_MIMO_OTA-Core

Samsung Exhibit 1025, Page 1182 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

CTIA = Cellular Telecommunications & Internet Association; no RAN action requested
Tdoc will be presented by CTIA OTA Working Group Vice-Chair (Spirent)
conclusion: noted, no LS answer

RP-150260 Status report for WI Core Part: Radiated requirements for the verification of multi-antenna reception performance of UEs; rapporteur: Intel RAN4 Report REL-13 UTRA_LTE_MIMO_OTA-Core
conclusion: noted, approved: Core: 5%, Dec.15

RP-150261 Revised WID: Radiated requirements for the verification of multi-antenna reception performance of UEs Intel Corporation WID rev RAN4 REL-13 UTRA_LTE_MIMO_OTA-Core
last approved WID: RP-142221; updated WI acronym.
conclusion: approved

11.3 Open LTE only related WIs (non-spectrum related)

11.3.1 Core part: Enhanced Signalling for Inter-eNB Coordinated Multi-Point (CoMP) for LTE [COMP_LTE_IeNB_sig-Core]

RP-150162 Status report for Core part: Enhanced signalling for inter-eNB CoMP for LTE; rapporteur: Samsung RAN3 Report REL-13 COMP_LTE_IeNB_sig-Core
conclusion: noted, Core: 30%, June 15

11.3.2 Further LTE Physical Layer Enhancements for MTC [LTE_MTCe2_L1]

RP-150100 Status report for WI Further LTE Physical Layer Enhancements for MTC: rapporteur: Ericsson RAN1 Report REL-13 LTE_MTCe2_L1
discussion: Huawei: The Q4 2015 RAN1 TU budget can be discussed in a later RAN meeting when we have a more complete picture of what is needed to complete all REL-13 items.
conclusion: revised in RP-150495

RP-150495 Status report for WI Further LTE Physical Layer Enhancements for MTC: rapporteur: Ericsson RAN1 Report REL-13 LTE_MTCe2_L1
conclusion: noted, approved: Core: 25%, Dec.15; Perf.: 0%, June 16

RP-150102 Motivation for Revised WID Further LTE Physical Layer Enhancements for MTC Ericsson Disc (motiv) REL-13 LTE_MTCe2_L1
conclusion: noted

RP-150101 Revised WID: Further LTE Physical Layer Enhancements for MTC Ericsson WID rev RAN1 REL-13 LTE_MTCe2_L1
last approved WID: RP-141865
discussion: Huawei: 1st change: is too early to describe this here; 2nd change: should br rephrased
Mediatek: discussion on RAN drafts reflector happened and there seems to be quite wide consensus there
NTT DOCOMO: is fine with the update
ALU, AT&T, Microsoft, NEC, Fujitsu: support the revised WID
CATT: if we accept the change, can RAN1 still discuss 1.4MHz?
Intel: proposals will save some discussion in RAN1, so supports revised WID
Huawei: does not accept the revised WID, discussion should be left to WG
AT&T: it says "should" and it is a reasonable goal
RAN chair: please discuss further offline
conclusion: revised in RP-150492

RP-150492 Revised WID: Further LTE Physical Layer Enhancements for MTC Ericsson WID rev RAN1 REL-13 LTE_MTCe2_L1
conclusion: approved

11.3.3 Core part: RAN Aspects of RAN Sharing Enhancements for LTE [RSE-RAN_LTE-Core]

RP-150289 Status report for WI Core Part: RAN Aspects of RAN Sharing Enhancements for LTE; rapporteur: NEC RAN3 Report REL-13 RSE-LTE_RAN-Core
conclusion: noted, approved: Core: 20%, Sep.15

11.3.4 LTE Carrier Aggregation Enhancement Beyond 5 Carriers [**New WI:** LTE_CA_enh_b5C]

Samsung Exhibit 1025, Page 1183 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150272 Status report for LTE Carrier Aggregation Enhancement Beyond 5 Carriers, rapporteur: Nokia Corporation RAN1 Report REL-13 LTE_CA_enh_b5C
conclusion: noted, Core: 10%, Dec.15; Perf.: 0%, June 16

RP-150203 Revised Work Plan for LTE Carrier Aggregation Enhancement Beyond 5 Carriers NTT DOCOMO, INC., Nokia Corporation, Nokia Networks Disc REL-13 LTE_CA_enh_b5C
revised work plan for WI: LTE_CA_enh_b5C; revision of RP-141997
conclusion: noted

RP-150275 Motivation for WID Revision: LTE Carrier Aggregation Enhancement Beyond 5 Carriers Nokia Corporation, NTT DoCoMo Inc., Nokia Networks Disc (motiv) REL-13 LTE_CA_enh_b5C
conclusion: noted

RP-150277 Revised WID: LTE Carrier Aggregation Enhancement Beyond 5 Carriers Nokia Corporation, NTT DoCoMo Inc., Nokia Networks WID revRAN1 REL-13 LTE_CA_enh_b5C
last approved WID: RP-142286
discussion: Ericsson: what about time units for Perf. part?
RAN chair: time units should be discussed in status report
CATT: TUs were already changed with status report RP-150272
conclusion: approved

11.3.5 Enhanced LTE Device to Device Proximity Services [**New WI:** LTE_eD2D_Prox]

Proximity-based Services:

RP-150021 LS on public safety discovery
(S2-150691; to: RAN1, RAN2, SA3, RAN; cc: -; contact: Qualcomm) SA2
LSin REL-13 eProSe-Ext
no explicit RAN action requested
conclusion: noted, no LS answer

RP-150033 Response LS to S2-150691 = RP-150021 on public safety discovery
(R1-150948; to: SA2; cc: RAN2, SA3, RAN; contact: Qualcomm) RAN1
LSin REL-13 eProSe-Ext-SA2
no RAN action requested;
discussion: SA2 chair (Samsung): related MCPTT work needs to be taken into account
conclusion: noted, no LS answer

Mission Critical Push to Talk (MCPTT):

see also RP-150380 under AI 15.

RP-150022 LS on support for ProSe one-to-one communication in Release 13
(S6-150076; to: RAN2; cc: SA2, RAN; contact: General Dynamics) SA6
LSin REL-13 MCPTT
conclusion: LS will be treated under AI 11.3.5
no RAN action requested
conclusion: noted, no LS answer

RP-150023 LS on Establishment of new working group TSG SA WG6
(SP-140884; to: OMA, ETSI TC TCCE, 3GPP TSG CT, SA2, SA6, ATIS; cc: TCCA, PCG, RAN, CT1, CT3, CT4, CT6, SA1, SA3, SA4, SA5; contact: SA6 convener) SA
LSin REL-13 MCPTT
TCCE = TETRA and Critical Communications Evolution; TCCA = TETRA + Critical Communications Association; no RAN action requested
conclusion: noted, no LS answer

RP-150035 LS reply to S6-150076 = RP-150021 on support for ProSe one-to-one communication in Release 13
(R2-150710; to: SA6; cc: SA2, RAN; contact: Intel) RAN2
LSin REL-13 MCPTT
no RAN action requested;
conclusion: noted, no LS answe

Status:

Samsung Exhibit 1025, Page 1184 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150095 Status report for WI: Enhanced LTE Device to Device Proximity Services; rapporteur: Qualcomm RAN2 Report REL-13 LTE_eD2D_Prox
conclusion: noted, approve: Core: 0%, Dec.15; Perf.: 0%, June 16

Revised WID:

RP-150441 Revised WID: Enhanced LTE Device to Device Proximity Services Qualcomm WID rev RAN2 REL-13 LTE_eD2D_Prox
last approved WID: RP-142311
conclusion: approved

11.3.6 Core part: UE core requirements for uplink 64 QAM [**New WI:** LTE_UL64QAM-Core]

RP-150232 Status report for WI: Core part: UE core requirements for uplink 64 QAM, rapporteur: Huawei RAN4 Report REL-13 LTE_UL64QAM-Core
conclusion: noted, approve: Core: 10%, Sep.15

11.3.7 Perf. part: Performance requirements of MMSE-IRC receiver for LTE BS [**New WI:** LTE_MMSE_IRC_BS-Perf]

RP-150204 Status report for WI Perf. Part: Performance requirements of MMSE-IRC receiver for LTE BS; rapporteur: China Telecom RAN4 Report REL-13 LTE_MMSE_IRC_BS-Perf
conclusion: noted, approve: Perf: 10%, June 16

RP-150206 Revised WID: Performance requirements of MMSE-IRC receiver for LTE BS China Telecom WID rev RAN4 REL-13 LTE_MMSE_IRC_BS-Perf
last approved WID: RP-142223; a new TR is added
conclusion: approved

11.3.8 Perf. part: CRS Interference Mitigation for LTE Homogenous Deployments [**New WI:** LTE_CRSIM-Perf]

RP-150061 Status report for WI Perf. part: CRS Interference Mitigation for LTE Homogenous Deployments; rapporteur: Ericsson RAN4 Report REL-13 LTE_CRSIM-Perf
discussion: MCC: target date change (from June 15 to March 16), error in status report history
conclusion: noted, approved: Perf.: 10%, March 16

11.4 Open LTE only related WIs (spectrum; CA related)

NOTE: See RP-150013 under agenda item 10.7 for the status of WIs of agenda item 11.4.

11.4.1 Inter-band CA related WIs (2DL/1UL)

11.4.1.1 LTE Advanced inter-band Carrier Aggregation of Band 1 and Band 40 [LTE_CA_B1_B40]

No contributions

11.4.1.2 LTE Advanced inter-band Carrier Aggregation of Band 2 and Band 28 [LTE_CA_B2_B28]

No contributions

11.4.1.3 LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 31 [LTE_CA_B3_B31]

RP-150318 Revised WID proposal: LTE Advanced Carrier Aggregation of Band 3 and Band 31 Orange; Huawei WID rev RAN4 s (2DL/1UL) REL-13 LTE_CA_B3_B31
last approved WID RP-141337
discussion: Orange: addition of a reference and extension of completion date
conclusion: approved
Note: It was detected after RAN #67 that the revised WID RP-150318 (target date for Core part is Dec.15) is in contradiction with the status report provided in RP-150013 (target date for Core part is June 15). The rapporteur clarified that June 15 is correct.

11.4.1.4 LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 38 [LTE_CA_B3_B38]

No contributions

Samsung Exhibit 1025, Page 1185 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.1.5 LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 40 [LTE_CA_B3_B40]

No contributions

11.4.1.6 LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 41

[**New WI:** LTE_CA_B3_B41]

No contributions

11.4.1.7 LTE Advanced inter-band Carrier Aggregation of Band 4 and Band 28 [LTE_CA_B4_B28]

No contributions

11.4.1.8 LTE Advanced inter-band Carrier Aggregation of Band 5 and Band 40 [LTE_CA_B5_B40]

RP-150285 Revised WID: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 5 and Band 40 Samsung WID rev RAN4 s (2DL/1UL) REL-13 LTE_CA_B5_B40
last approved WID: RP-141888; revised to add new bandwidth combination set
conclusion: approved

11.4.1.9 LTE Advanced inter-band Carrier Aggregation of Band 7 and Band 22 [LTE_CA_B7_B22]

No contributions

11.4.1.10 LTE Advanced inter-band Carrier Aggregation of Band 8 and Band 27 [LTE_CA_B8_B27]

No contributions

11.4.1.11 LTE Advanced inter-band Carrier Aggregation of Band 20 and Band 31 [LTE_CA_B20_B31]

No contributions

11.4.1.12 LTE Advanced inter-band Carrier Aggregation of Band 20 and Band 40 [LTE_CA_B20_B40]

No contributions

11.4.1.13 LTE Advanced inter-band Carrier Aggregation of Band 25 and Band 26

[**New WI:** LTE_CA_B25_B26]

RP-150115 Revised WID: LTE Advanced inter-band Carrier Aggregation of Band 25 and Band 26 Sprint WID rev RAN4 s (2DL/1UL) REL-13 LTE_CA_B25_B26
last approved WID: RP-142020; revised to add 2 bandwidth combination sets; both of the added bandwidth combination sets are subsets of bandwidth combination set 0
conclusion: approved
Note: It was detected after RAN #67 that the revised WID RP-150115 (target date for Core and Perf. part is Dec.15) is in contradiction with the status report provided in RP-150013 (target date for Core and Perf. part is June 15). The rapporteur clarified that June 15 is correct.

11.4.2 3 Band Carrier Aggregation (3DL/1UL)

11.4.2.1 LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 1, Band 3 and Band 3

[**New WI:** LTE_CA_B1_B3_B3]

No contributions

11.4.2.2 LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 1, Band 3 and Band 40

[**New WI:** LTE_CA_B1_B3_B40]

No contributions

11.4.2.3 LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 1, Band 8 and Band 28

[**New WI:** LTE_CA_B1_B8_B28]

RP-150067 Revised Work Item Proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 8 and Band 28 SoftBank Mobile WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B1_B8_B28
last approved WID: RP-141826; to change TRs from new specs to affected specs
conclusion: revised in RP-150447

RP-150447 Revised Work Item Proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 8 and Band 28 SoftBank Mobile WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B1_B8_B28

Samsung Exhibit 1025, Page 1186 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

11.4.2.4 LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 1, Band 8 and Band 40
[**New WI:** LTE_CA_B1_B8_B40]

No contributions

11.4.2.5 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 19 and Band 28
[**New WI:** LTE_CA_B1_B19_B28]

No contributions

11.4.2.6 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 3 and Band 28
[**New WI:** LTE_CA_B1_B3_B28]

No contributions

11.4.2.7 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 7 and Band 28
[**New WI:** LTE_CA_B1_B7_B28]

RP-150234 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 7 and Band 28, rapporteur: Huawei Huawei WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B1_B7_B28
last approved WID: RP-142208; correction of the Maximum aggregated bandwidth for LTE_CA_B1_B7_B28; revised WID was also submitted to RAN4 #74
conclusion: approved
Note: It was detected after RAN #67 that the revised WID RP-150234 (target date for Core part is Dec.15) is in contradiction with the status report provided in RP-150013 (target date for Core part is June 15). The rapporteur clarified that June 15 is correct.

11.4.2.8 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 3 and Band 7
[**New WI:** LTE_CA_B1_B3_B7]

No contributions

11.4.2.9 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 2 and Band 12
[LTE_CA_B2_B2_B12]

RP-150413 Clean-up of 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 2 and Band 12 RAN4 CR 36.853-12 0003 - F REL-12 LTE_CA_B2_B2_B12-Core
LTE_CA_B2_B2_B13 is a REL-13 WI. By accident TP(s) with coexistence studies of harmonics and intermodulation products for TE_CA_B2_B2_B12 were included in the Rel-12 TR 36.853 (now called TR 36.853-12) before approving it at RAN #66; this CR removes this REL-13 material from the REL-12 TR
conclusion: approved

11.4.2.10 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 5, and Band 29
[LTE_CA_B2_B5_B29]

No contributions

11.4.2.11 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 3 and Band 5
[**New WI:** LTE_CA_B3_B3_B5]

No contributions

11.4.2.12 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) for Band 3, Band 3 and Band 8
[LTE_CA_B3_B3_B8]

No contributions

11.4.2.13 Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 7 and Band 7 [**New WI:** LTE_CA_B3_B7_B7_BWset]

No contributions

11.4.2.14 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 7 and Band 8
[**New WI:** LTE_CA_B3_B7_B8]

No contributions

Samsung Exhibit 1025, Page 1187 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.2.15 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 7 and Band 28 [**New WI:** LTE_CA_B3_B7_B28]

No contributions

11.4.2.16 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) for Band 3, Band 8 and Band 27 [LTE_CA_B3_B8_B27]

No contributions

11.4.2.17 LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 3, Band 8 and Band 2 [**New WI:** LTE_CA_B3_B8_B28]

No contributions

11.4.2.18 LTE Advanced 3 band Carrier Aggregation (3DL/1UL) of Band 3, Band 8 and Band 40 [**New WI:** LTE_CA_B3_B8_B40]

No contributions

11.4.2.19 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 40 and Band 40 [**New WI:** LTE_CA_B3_B40_B40-Core]

No contributions

11.4.2.20 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 7, Band 7 and Band 28 [**New WI:** LTE_CA_B7_B7_B28]

No contributions

11.4.2.21 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 7, Band 40 and Band 40 [**New WI:** LTE_CA_B7_B40_B40]

No contributions

11.4.2.22 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 8, Band 41 and Band 41 [LTE_CA_B8_B41_B41]

RP-150269 TR 36.853-13 v0.3.0: Rel-13 Inter-band Carrier Aggregation (3DL/1UL) ZTE TR 36.853-13 RAN4 REL-13 LTE_CA_B8_B41_B41-Core

Tdoc was withdrawn as it is too early to submit this RAN4 TR and TR should be in v1.0.0.

conclusion: withdrawn

11.4.2.23 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 8, Band 42 and Band 42 [**New WI:** LTE_CA_B8_B42_B42]

No contributions

11.4.2.24 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 21, Band 42 and Band 42 [**New WI:** LTE_CA_B21_B42_B42]

No contributions

11.4.2.25 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 28, Band 40 and Band 40 [**New WI:** LTE_CA_B28_B40_B40]

RP-150233 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 28, Band 40 and Band 40, rapporteur: HuaweiHuawei WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B28_B40_B40

last approved WID: RP-142206; correction of the Maximum aggregated bandwidth for LTE_CA_B28_B40_B40; revised WID was also submitted to RAN4 #74

conclusion: approved

Note: It was detected after RAN #67 that the revised WID RP-150233 (target date for Core part is Dec.15) is in contradiction with the status report provided in RP-150013 (target date for Core part is June 15). The rapporteur clarified that June 15 is correct.

11.4.2.26 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 38, Band 40 and Band 40 [LTE_CA_B38_B40_B40]

No contributions

Samsung Exhibit 1025, Page 1188 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.2.27 LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 41, Band 42 and Band 42 [LTE_CA_B41_B42_B42]

No contributions

11.4.3 4 Band Carrier Aggregation (4DL/1UL)

11.4.3.1 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 5 and Band 30 [New WI: LTE_CA_B2_B2_B5_B30]

RP-150086 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 5 and Band 30 AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B2_B5_B30
last approved WID: RP-142199
discussion: MCC: WI code can not be modified after allocation
conclusion: revised in RP-150448 (use allocated WI code, correct UID, use TR 36.854-13 instead of TR 36.8xx in section 10; clarify which spec is impacted by Core/Perf. part; check whether TR 36.853-13 or TR 36.852-13 are affected as well)

RP-150448 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 5 and Band 30 AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B2_B5_B30
conclusion: approved (unseen)
Note: It was detected after RAN #67 that revised WID does not indicate that TR 36.854-13 is affected by Core part and that its target (Sep.15) is in contradiction with the status report RP-150013 to RAN #67 which indicates Core part target is Dec.15. The rapporteur clarified that the Core part target is Sep.15.

11.4.3.2 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 12 and Band 30 [New WI: LTE_CA_B2_B2_B12_B30]

RP-150087 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 12 and Band 30 AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B2_B12_B30
last approved WID: RP-142198
conclusion: revised in RP-150449 (use allocated WI code, correct UID, use TR 36.854-13 instead of TR 36.8xx in section 10 and move it to affected specs; clarify which spec is impacted by Core/Perf. part; check whether TR 36.853-13 or TR 36.852-13 are affected as well)

RP-150449 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 12 and Band 30 AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B2_B12_B30
conclusion: approved (unseen)

11.4.3.3 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 29 and Band 30 [New WI: LTE_CA_B2_B2_B29_B30]

RP-150088 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 29 and Band 30 AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B2_B29_B30
last approved WID: RP-142200
conclusion: revised in RP-150450 (use allocated WI code, correct UID, use TR 36.854-13 instead of TR 36.8xx in section 10 and move it to affected specs; clarify which spec is impacted by Core/Perf. part; check whether TR 36.853-13 or TR 36.852-13 are affected as well)

RP-150450 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 29 and Band 30 AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B2_B29_B30
conclusion: approved (unseen)

11.4.3.4 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 5 and Band 30 [New WI: LTE_CA_B2_B4_B5_B30]

RP-150089 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 5 and Band 30 AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B4_B5_B30
last approved WID: RP-142202
conclusion: revised in RP-150451 (use allocated WI code, correct UID, use TR 36.854-13 instead of TR 36.8xx in section 10 and move it to affected specs; clarify which spec is impacted by Core/Perf. part; check whether TR 36.853-13 or TR 36.852-13 are affected as well)

RP-150451 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 5 and Band 30 AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B4_B5_B30
conclusion: approved (unseen)

Samsung Exhibit 1025, Page 1189 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.3.5 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 12 and Band 30 [New WI: LTE_CA_B2_B4_B12_B30]

RP-150090 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 12 and Band 30
AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B4_B12_B30
last approved WID: RP-142201
conclusion: revised in RP-150452 (use allocated WI code, correct UID, use TR 36.854-13 instead of TR 36.8xx in section 10 and move it to affected specs; clarify which spec is impacted by Core/Perf. part; check whether TR 36.853-13 or TR 36.852-13 are affected as well)

RP-150452 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 12 and Band 30
AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B4_B12_B30
conclusion: approved (unseen)
Note: It turned out after RAN #67 that the target date was not updated in the revised WID RP-150452 (which indicates Dec.14). The Core and Perf. part have the target Dec.15 as in status report RP-150013.

11.4.3.6 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30 [New WI: LTE_CA_B2_B4_B29_B30]

RP-150091 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30
AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B4_B29_B30
last approved WID: RP-142203; note: CA_B2_B4_B29 is already specified in a REL-12 WI; CA_B2_B4_B30 already covered in RP-150090;
conclusion: revised in RP-150419

RP-150419 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30
AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B4_B29_B30
last approved WID: RP-142203
conclusion: revised in RP-150453 (use allocated WI code, correct UID, use TR 36.854-13 instead of TR 36.8xx in section 10 and move it to affected specs; clarify which spec is impacted by Core/Perf. part; check whether TR 36.853-13 or TR 36.852-13 are affected as well)

RP-150453 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30
AT&T WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B4_B29_B30
conclusion: approved (unseen)

11.4.3.7 LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 25, Band 41, Band 41 and Band 41 [New WI: LTE_CA_B25_B41_B41_B41]

No contributions

11.4.4 Inter-band CA related WIs (2UL)

11.4.4.1 LTE Advanced dual uplink inter-band Carrier Aggregation Class A1 in REL-13 [New WI: LTE_CA_2UL_R13-A1]

RP-150235 Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A1 in REL-13, rapporteur: Huawei Huawei WID rev RAN4 s (2UL) REL-13 LTE_CA_2UL_R13-A1
last approved WID: RP-141935; adding CA_2A-12A and deleting CA_1A-26A
conclusion: revised in RP-140407

RP-150407 Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A1 in REL-13, rapporteur: Huawei Huawei WID rev RAN4 s (2UL) REL-13 LTE_CA_2UL_R13-A1
last approved WID: RP-141935; revision of RP-150235 adding also TDD-TDD;
conclusion: revised in RP-150411 as multiple versions of RP-150407 exist

RP-150411 Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A1 in REL-13, rapporteur: Huawei Huawei WID rev RAN4 s (2UL) REL-13 LTE_CA_2UL_R13-A1
last approved WID: RP-141935; revision of RP-150407
discussion: RAN4 chair: includes also FDD-FDD and TDD-TDD limitation
conclusion: approved

11.4.4.2 LTE Advanced dual uplink inter-band Carrier Aggregation Class A2 in REL-13 [New WI: LTE_CA_2UL_R13-A2]

RP-150408 Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A2 in REL-13
Qualcomm WID rev RAN4 s (2UL) REL-13 LTE_CA_2UL_R13-A2
last approved WID: RP-141975; adding TDD-TDD

Samsung Exhibit 1025, Page 1190 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

11.4.4.3 LTE Advanced dual uplink inter-band Carrier Aggregation Class A3 in REL-13
[**New WI:** LTE_CA_2UL_R13-A3]

RP-150409 Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A3 in REL-13 Ericsson WID rev RAN4 s (2UL) REL-13 LTE_CA_2UL_R13-A3
last approved WID: RP-142010; adding TDD-TDD
conclusion: approved

11.4.5 Intra-band CA related WIs (contiguous 3DL)

11.4.5.1 LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 3DL
[LTE_CA_C_B42_3DL]

RP-150118 TR 36.833-5-42 v1.0.0: LTE Advanced Carrier Aggregation in Band 42 for 3DL CATT TR 36.833-5-42 RAN4 REL-13 LTE_CA_C_B42_3DL-Core
RAN4 TR 36.833-5-42 is provided for information
conclusion: noted

RP-150319 Revised WID for LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 3DL CATT WID rev RAN4 s (C 3DL) REL-13 LTE_CA_C_B42_3DL
last approved WID: RP-141677
conclusion: approved

11.4.6 Intra-band CA related WIs (non-contiguous 4DL)

11.4.6.1 LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 41 for 4 DL
[**New WI:** LTE_CA_NC_B41_4DL]

No contributions

11.5 Open LTE only related WIs (spectrum; not CA related)

11.5.1 2GHz FDD LTE Band for Region 1 (1980-2010MHz and 2170-2200MHz Bands)
[LTE_1980_2170_REG1]

RP-150106 Status Report for WI 2GHz FDD LTE Band for Region 1; rapporteur: DISH Network RAN4 Report REL-13 LTE_1980_2170_REG1
conclusion: noted, approved: Core: 35%, June 15; Perf.: 0%, June 15

RP-150107 Revised WID: 2GHz FDD LTE Band for Region 1DISH Network WID rev RAN4 s REL-13 LTE_1980_2170_REG1
last approved WID: RP-141710; captures the recent RAN4 agreement on the band plan and updates rapporteurship (only co-rapporteur modified)
conclusion: revised in RP-150424 (adding some more affected specs)

RP-150424 Revised WID: 2GHz FDD LTE Band for Region 1DISH Network WID rev RAN4 s REL-13 LTE_1980_2170_REG1 revision of RP-150107; last approved WID: RP-141710;
conclusion: approved

Samsung Exhibit 1025, Page 1191 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

12 Study Items

12.1 Closed study items

RP-150362 CR to 36.873 to reduce O-to-I XPR Geometric Variance for the 3D Channel Model RAN1 CR 36.873 0003 - F REL-12 FS_LTE_3D_channel
conclusion: approved

RP-150420 CR for Corrections and Clarifications of UE specifications in TR 36.844 RAN4 CR 36.844 0010 - F Rel-13 FS_LTE_FDD_1670_US
discussion: MCC: late submission; note: FS_LTE_FDD_1670_US was a REL-13 SI
conclusion: approved

12.2 Open UTRA related SIs

12.2.1 REL-13 Study on Downlink Enhancements for UMTS [FS_UTRA_EDL]

RP-150223 Status report for SI: Downlink Enhancements for UMTS, rapporteur: Huawei RAN2 Report REL-13 FS_UTRA_EDL
conclusion: noted, approved: 80%, June 15

RP-150224 Revised SID: Downlink Enhancements for UMTS, rapporteur: Huawei Huawei SID rev RAN2 REL-13 FS_UTRA_EDL
last approved SID: RP-141901; target date corrected to June 2015 (RAN #68) and TR information added
conclusion: approved

RP-150225 TR 25.706 v1.0.0 on Downlink Enhancements for UMTS, for information Huawei TR 25.706 RAN2 REL-13 FS_UTRA_EDL
RAN2 TR 25.706 is submitted for information
conclusion: noted

12.2.2 REL-13 Study on small data transmission enhancement for UMTS [FS_UTRA_SDATA]

RP-150196 Status report for SI Study on Small Data Transmission Enhancements for UMTS, rapporteur: Ericsson RAN1 Report REL-13 FS_UTRA_SDATA
discussion: MCC: why does a SI have a Core part completion level?
conclusion: noted, approved: 55%, June 15

RP-150197 TR 25.705 v1.0.0 on Study on Small Data Transmission Enhancements for UMTS, for information Ericsson TR 25.705 RAN1 REL-13 FS_UTRA_SDATA
RAN1 TR 25.705 is submitted for information
conclusion: noted

12.2.3 REL-13 Study on Network-Assisted Interference Cancellation and Suppression for UMTS [**New SI:** FS_UTRA_NAICS]

Note: Tdoc numbers of status report and revised SID were swapped to be in line with Tdocs.

RP-150175 Status report for SI: Study on Network-Assisted Interference Cancellation and Suppression for UMTS, rapporteur: Huawei RAN1 Report REL-13 FS_UTRA_NAICS
conclusion: noted, approved: 20%, Sep. 15

RP-150174 Revised SID: Study on Network-Assisted Interference Cancellation and Suppression for UMTS, rapporteur: Huawei Huawei, HiSilicon SID rev RAN1 REL-13 FS_UTRA_NAICS
last approved SID: RP-142250; TR will be submitted for information at RAN #68 and for approval at RAN #69; TR number is added
conclusion: approved

Samsung Exhibit 1025, Page 1192 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

12.2.4 REL-13 Study on RAN sharing enhancements for UMTS [**New SI:** FS_RSE_UTRA_GUSH]

RP-150227 Status report for SI: Study on RAN sharing enhancements for UMTS, rapporteur: Huawei RAN3 Report REL-13 FS_RSE_UTRA_GUSH
conclusion: noted, approved: 10%, June 15

12.3 Open UTRA & LTE related SIs

12.3.1 REL-13 Study on Multi-RAT Joint coordination [FS_MultiRAT_JC]

RP-150187 Status Report for SI: Study on Multi-RAT Joint Coordination; rapporteur: CMCC RAN3 Report REL-13 FS_MultiRAT_JC
conclusion: noted, approved: 85%, June 15

RP-150189 Revised SID: Study on Multi-RAT Joint Coordination CMCC SID rev RAN3 REL-13 FS_MultiRAT_JC
last approved SID: RP-132086;
conclusion: revised in RP-150417

RP-150417 Revised SID: Study on Multi-RAT Joint Coordination CMCC SID rev RAN3 REL-13 FS_MultiRAT_JC
last approved SID: RP-132086
discussion: RAN3 chair: why do we need to specify when we start work?
AT&T: is the time budget enough to finish the SI?
RAN3 chair: SI is overlapping with the WI
SI is on control plane only while WI is on control and user plane
conclusion: rejected, can discuss at RAN #68 how to address user plane part in the WI

RP-150264 TR 37.870 v1.0.0 on Study on Multi-RAT Joint Coordination, for information CMCC TR 37.870 RAN3 REL-13 FS_MultiRAT_JC
RAN3 TR 37.870 is submitted for information
conclusion: noted

12.3.2 REL-13 Study on Indoor Positioning Enhancements for UTRA and LTE [FS_UTRA_LTE_iPos_enh]

RP-150080 Status report for SI on Study on Indoor Positioning Enhancements for UTRA and LTE; rapporteur: NextNavRAN1 Report REL-13 FS_UTRA_LTE_iPos_enh
conclusion: noted, approved: 30%, Sep.15

12.4 Open LTE only related SIs

12.4.1 REL-13 Study on LTE FDD in the bands 1980-2010 MHz and 2170-2200 MHz [FS_LTE_1980_2170_Korea]

RP-150120 Status Report of SI on Study on LTE FDD in the bands 1980-2010 MHz and 2170-2200 MHz; rapporteur: KT RAN4 Report 36.861 REL-13 FS_LTE_1980_2170_Korea
discussion: MCC: target date changed to RAN#68
conclusion: noted, approved: 90%, June 15

RP-150119 Revised SID: Study on LTE FDD in the bands 1980-2010MHz and 2170-2200MHz KT SID rev RAN4 REL-13 FS_LTE_1980_2170_Korea
last approved SID: RP-141154; target date is changed to RAN #68
conclusion: approved

12.4.2 REL-13 Study on Elevation Beamforming/Full-Dimension (FD) MIMO for LTE [FS_LTE_EBF_FDMIMO]

RP-150346 Status report for SI Study on Elevation Beamforming/Full-Dimension (FD) MIMO for LTE; rapporteur: Nokia Networks RAN1 Report REL-13 FS_LTE_EBF_FDMIMO
discussion: MCC: late Tdoc request
conclusion: noted, approved: 45%, June 15

12.4.3 REL-13 Study on Licensed-Assisted Access using LTE [**New SI:** FS_LTE_LAA]

Samsung Exhibit 1025, Page 1193 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150024 LS regarding coexistence of Licensed Assisted Access (LAA) and IEEE 802 (IEEE_802_LMSC_150202; to: RAN; cc: RAN1, IEEE 802, IEEE 802.19; contact: Chairman IEEE 802 LMSC) IEEE 802 LMSC
LSin REL-13 FS_LTE_LAA
LMSC = Local and Metropolitan Area Network Standards Committee; RAN #66 received LSin RP-141747; RAN chair presented RP-150055 (see AI 5.3) at IEEE 802 Interim Session on 13.01.2015 in Atlanta, USA; no explicit RAN action requested
presented by Alcatel-Lucent
conclusion: noted, LS answer drafted by Ericsson in RP-150444

Note: Tdoc numbers of RP-150444 and RP-150445 were swapped to be in line with Tdocs.

RP-150444 Draft Response LS to IEEE_802_LMSC_150202 = RP-150024 regarding Coexistence of Licensed Assisted Access (LAA) and IEEE 802 (to: IEEE 802 LMSC; cc: -; contact: Ericsson) Ericsson, Huawei
LSout REL-13 FS_LTE_LAA
discussion: Blackberry: should see RP-150317 first
conclusion: revised in RP-150454 to provide the final version

RP-150454 Response LS to IEEE_802_LMSC_150202 = RP-150024 regarding Coexistence of Licensed Assisted Access (LAA) and IEEE 802 (to: IEEE 802 LMSC; cc: -; contact: Ericsson) RAN LSout LS01 REL-13 FS_LTE_LAA
conclusion: approved (sent out on Wed of RAN #67)

RP-150317 LAA Use CasesBlackBerry UK Limited Disc REL-13 FS_LTE_LAA
proposed that RAN provide the following guidance to RAN1:
- *RAN1 are requested to verify that the parameters currently assumed for LAA coexistence evaluations are representative of at least one high-density real world use case*
- *If any adjustment to existing simulation assumptions is deemed necessary, these should aim at minimizing impact to study item timescales*

discussion: Ericsson: something missing for use cases?
Blackberry: co-existence aspects are essential for this feature
Ericsson: we are using full buffer scenario
Blackberry: details can be discussed in RAN1
Qualcomm: no objections were raised when this was discussed in RAN1; single channel case is not a realistic scenario
Blackberry: there was no discussion about density
RAN chair: suggests that companies contribute in RAN1
Blackberry: we are suggesting that RAN1 should look into the scenarios mentioned by IEEE
conclusion: noted

RP-150271 Status report for SI Study on Licensed-Assisted Access using LTE; rapporteur: Ericsson RAN1 Report REL-13 FS_LTE_LAA
conclusion: revised in RP-150414

RP-150414 Status report for SI Study on Licensed-Assisted Access using LTE; rapporteur: Ericsson RAN1 Report REL-13 FS_LTE_LAA
revision of RP-150271; MCC: late submission
conclusion: noted, approved: 40%, June 15

RP-150278 [DRAFT] LS on Licensed-Assisted Access (to: ETSI BRAN; cc: -; contact: Ericsson) Ericsson LSout REL-13 FS_LTE_LAA
conclusion: revised in RP-150444

RP-150445 [DRAFT] LS on Licensed-Assisted Access (to: ETSI BRAN; cc: -; contact: Ericsson) Ericsson, Huawei LSout REL-13 FS_LTE_LAA
Note: Tdoc numbers of RP-150444 and RP-150445 were swapped to be in line with Tdocs.
conclusion: revised in RP-150455

RP-150455 [DRAFT] LS on Licensed-Assisted Access (to: ETSI BRAN; cc: -; contact: Ericsson) Ericsson, Huawei LSout REL-13 FS_LTE_LAA
conclusion: revised in RP-150505

RP-150505 LS on Licensed-Assisted Access (to: ETSI BRAN; cc: -; contact: Ericsson) RAN LSout REL-13 FS_LTE_LAA
conclusion: approved

Samsung Exhibit 1025, Page 1194 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

12.4.4 REL-13 Study on possible additional configuration for LTE TDD

[**New SI:** FS_LTE_TDD_add_config]

12.4.4.1 Main session

RP-150151 Status report for SI on Study on possible additional configuration for LTE TDD, rapporteur: NTT DOCOMO, INC. RAN Report REL-13 FS_LTE_TDD_add_config
note: This is a RAN SI
conclusion: noted, approved: 5%, Sep.15

Revised SID:

RP-150153 Revised SID: Study on possible additional configuration for LTE TDD CATT, CATR, NTT DoCoMo SID revRAN REL-13 FS_LTE_TDD_add_config
last approved SID: RP-142248
conclusion: not treated (should be resubmitted to RAN #68)

Results of the ad hoc:

RP-150405 Report of ad hoc on REL-13 Study on possible additional configuration for LTE TDD Nokia Networks (ad hoc convener) Report REL-13 FS_LTE_TDD_add_config
for RAN approval
discussion: CATT: email discussion should be extended by 1 week (due to LAA discussion)
Orange: seems to become the biggest topic of REL-13 so we need to reduce the effort
Ericsson: suggests to avoid offline and email discussions and have just shared discussion
conclusion: approved, email discussion (topics see RP-150486) will be extended by 1 week

Note: TR RP-150152 was agreed during the ad hoc and then revised in RP-150487 (see below).
TP RP-150147 was actually revised/split into 2 TPs RP-150399 and RP-150401.
RP-150484 was not approved but revised in RP-150486 which was approved.

RP-150406 Void - - - -
conclusion: withdrawn

RP-150487 TR 36.825 v0.1.0 for Feasibility study on possible additional configuration for LTE TDD CATT TR 36.825 RAN REL-13 FS_LTE_TDD_add_config
summarizing the results of RAN #67 with revision marks compared to v0.0.1 in RP-150152
discussion: CATT: there is a minor typo
RAN chair: can be fixed in next version
conclusion: RP-150487 was agreed during RAN #67 but revised in RP-150519 to carry out some editorial corrections to align with the 3GPP drafting rules (differences between RP-150487 and RP-150519 are shown in a version with revision marks in RP-150519)

RP-150519 TR 36.825 v0.1.1 for Feasibility study on possible additional configuration for LTE TDD CATT, ETSI MCC TR 36.825 RAN REL-13 FS_LTE_TDD_add_config
conclusion: agreed; this TR version shall be used for TPs to TR 36.825 submitted to RAN #68

12.4.4.2 Ad hoc session

NOTE: The documents of this agenda item were handled in separate RAN ad hoc sessions.
The report of this ad hoc is provided in RP-150405 (see AI 12.4.4.1).

Technical Report:

RP-150152 TR skeleton 36.825 v0.0.1 for Study on possible additional configuration for LTE TDD CATT TR 36.825 RAN REL-13 FS_LTE_TDD_add_config
RAN TR is provided for agreement; includes TR skeleton

Scenarios and evaluation guidelines:

RP-150185 Consideration on possible additional configuration for LTE TDD CMCC Disc REL-13 FS_LTE_TDD_add_config
proposes to study possible scenarios when introducing additional TDD configuration, e.g., downlink only configuration. And further investigation of such configuration shall be considered by taking all possibilities into account. Additional impacts to these deployment scenarios and use cases shall also be further investigated from deployment perspective, e.g., impact on inter-operator coexistence

Samsung Exhibit 1025, Page 1195 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

in the same TDD band, limit of Non-standalone deployment in network operation, benefits of synchronized network not achievable and etc.

RP-150147 Scenarios, use cases and frequency bands for additional TD-LTE configuration Vodafone TP 36.825 REL-13 FS_LTE_TDD_add_config

RP-150208 Deployment scenarios on additional TDD configurations NTT DOCOMO, INC. TP 36.825 REL-13 FS_LTE_TDD_add_config

RP-150300 Considerations on TDD allocations in CEPT region and the need for a new TDD DL only configuration Orange TP 36.825REL-13 FS_LTE_TDD_add_config

text proposals:

- *Add Band 33, 34, 38 and 40 to section 4.2 of the TR 36.8XX on "Feasibility study on possible additional configuration for LTE TDD". These bands are intended to be aggregated with FDD bands including 7, 20, 3, 1, 8, 28 and 22*
- *Add the text from paragraph 3 above to the section 4.3 (Use cases) of the same TR.*

RP-150255 Methods of utilizing unused TDD spectrum CATT Disc REL-13 FS_LTE_TDD_add_config

3 methods of utilizing unused TDD spectrum

initial discussion on the possible methods of utilizing the unused TDD spectrum, i.e. adopting new TDD configurations, converting the TDD spectrum to FDD SDL, and using existing TDD configurations;

unclear that the possible new TDD configuration or converting the TDD spectrum to FDD SDL is an efficient way to utilize the unused TDD spectrum

RP-150252 General discussion on possible new TDD configurations CATT Disc REL-13 FS_LTE_TDD_add_config

Proposal 1: Document the following in TR36.825

- *At least one standalone FDD or TDD carrier must be used together with the non-standalone TDD carrier.*
- *Inter-band carrier aggregation is a pre-requisite for a UE to receive data from a non-standalone TDD carrier.*

Proposal 2: Conclude in RAN#67 the intended deployments (i.e. scenarios, frequency bands, and use cases) for non-standalone TDD carriers.

Proposal 3: For inter-operator co-existence study, the standalone TDD carrier adjacent to the non-standalone TDD carrier shall at least include the macro deployment with seamless coverage, while all basestations for the standalone and non-standalone TDD carriers are outdoor.

Proposal 4: For inter-operator co-existence study, focus on the case in which victim is the standalone TDD carrier and aggressor is the non-standalone TDD carrier.

Proposal 5: The conventional RAN4 methodologies (i.e. the deterministic approach and the Monte Carlo simulation approach) for co-existence study shall be adopted in this study item.

Proposal 6: Initiate email discussion after RAN#67 to agree on the co-existence evaluation assumptions.

Proposal 7: Initiate email discussion after RAN#67 to agree on the performance evaluation assumptions.

Proposal 8: If new TDD configurations are to be introduced, as a minimum to maintain healthy TDD eco-system, the 3GPP core specification shall mandate that UEs supporting the new TDD configurations shall also support the existing TDD configuration, and corresponding testing in RAN5 and GCF shall be ensured.

Proposal 9: Consider further mechanisms to ensure healthy TDD eco-system.

Proposal 10: Methods other than the option of possible new TDD configurations and the option of converting the TDD spectrum into FDD SDL to utilize the unused TDD spectrum shall be discussed in the study item.

RP-150140 Considerations of introducing possible additional TDD configuration(s) NEC Disc REL-13 FS_LTE_TDD_add_config

Proposal 1: CA scenario# 4 should be the main deployment scenario for the 10:0:0/9:1:0 configuration. SCE scenario 2a specified in TS36.872 can be reused. The additional TDD UL-DL 10:0:0/9:1:0 configuration can be configured as a Secondary Cell which is used to improve the downlink throughput.

Proposal 2: Different operators in the same band without guard band should be highly prioritized for additional TDD configuration(s) study.

Samsung Exhibit 1025, Page 1196 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Proposal 3: Baseline evaluation is that all operators uses TDD UL-DL configuration #5 (8:1:1) as the Secondary cell. Ideal synchronization is assumed.
Proposal 4: The impact of introduction of 10:0:0/9:1:0 configuration of small cell on both the macro cell and the small cell of other operators should be evaluated in the co-existence study.
Proposal 5: Small cell simulation assumption could be reused in the evaluation. The detailed parameters could be decided by email discussion.

RP-150292 TP for TR36.825: Use Case: FDD-TDD Carrier Aggregation KTTP 36.825 REL-13 FS_LTE_TDD_add_config
a use case is provided when LTE TDD carrier is used as secondary carrier in FDD-TDD Carrier Aggregation

RP-150218 Scenarios and evaluation assumption for DL-only TDD NTT DOCOMO, INC. Disc REL-13 FS_LTE_TDD_add_config
Proposal 1: Reuse scenario 2a defined in TR36.872 for performance evaluation.
Proposal 2: Use the aggregated DL throughput to access the potential benefits and drawbacks of new TDD configurations assuming carrier aggregation.
Proposal 3: If the channel reciprocity is not assumed to be available, compare new configurations of 10:0:0, 9:1:0 (DL:Sp:UL) and TDD UL/DL configuration 5.
Proposal 4: If the channel reciprocity is assumed to be available, compare a new configuration of 9:1:0 (DL:Sp:UL) and TDD UL/DL configuration 5.
Proposal 5: Assume 10 small cells per macro cell and higher resource utilization of 60~70% for the highest loaded cell when applying TDD UL/DL configuration as the baseline parameters.

Evaluation methodology details:

RP-150210 Evaluation methodology for possible additional TDD configuration(s) Huawei, HiSilicon Disc REL-13 FS_LTE_TDD_add_config
discussed the performance-related potential benefits and drawbacks of the additional TDD configuration. A proposed evaluation methodology for potential benefits is also provided

RP-150254 Evaluation on the benefits and drawbacks for possible additional LTE TDD configuration CATT Disc REL-13 FS_LTE_TDD_add_config
Proposal 1: At least the following performance metrics shall be studied
- *Cell average and cell edge downlink packet throughput*
- *PUCCH load on the accompanied standalone carrier*

Proposal 2: Performance of the following two systems shall be compared:
- *Target system: standalone carrier X + non-standalone TDD carrier Y with 10:0:0 (DL:Sp:UL)*
- *Reference system: standalone carrier X + standalone TDD carrier Y with 8:1:1 (DL:Sp:UL)) and special subframe configuration 4 with normal CP in downlink*

Proposal 3: The evaluation shall assume a certain percentage of non-CA capable UEs in the system.
Proposal 4: The evaluation shall focus on the high traffic load case.

Coexistence:

RP-150253 RAN4 methodologies for co-existence study CATT Disc REL-13 FS_LTE_TDD_add_config
provides some general introduction on the conventional RAN4 methodologies for co-existence study. These methodologies can be used for the study on the possible additional TDD configuration

RP-150251 Co-existence Considerations for Additional Configuration for LTE TDD Nokia Corporation, Nokia Networks Disc REL-13 FS_LTE_TDD_add_config
proposal: to encourage 3GPP RAN to investigate and develop technical solutions for avoiding any co-existence issues between LTE TDD DL/UL and DL only operations and configurations in any deployment situations, frequency bands, frequencies and geographical areas
propose to capture the example method for co-existence solution presented in section 2 in the TR

RP-150230 Consideration of unsynchronized operation for TD-LTE NTT DOCOMO, INC. Disc REL-13 FS_LTE_TDD_add_config
Impact of unsynchronization on spectrum efficiency is discussed
Conclusion 1:
Time synchronization and/or the same UL/DL configuration usage between operators are essential for TD-LTE operation. Otherwise, the spectrum efficiency is significantly lost.
Conclusion 2:

Samsung Exhibit 1025, Page 1197 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

When DL only carrier (SCell) is operated with 5 MHz offset from the adjacent operators whose configuration is not DL only configuration, the DL only configuration carrier would suffer from significant interference from the adjacent operators UEs. Note that at the same time, the adjacent operators' eNB would suffer from eNB using DL only configuration according to the distance.

Conclusion 3:

From conclusion 1 and 2, witout achieving time synchronization and/or the same UL/DL configuraions inlcuding DL only configuraion between operators, all operators become unhappier compared to the cases it is achieved.

RP-150247 Solutions to mitigate raised concerns on DL only configuration NTT DOCOMO, INC. Disc REL-13 FS_LTE_TDD_add_config

Proposal 1:

In the same way as any other TDD UL/DL configuration, 3GPP should ensure that the operation of the "Downlink only LTE TDD" (10:0:0 or 9:1:0) configuration is supported for all frequency bands specified for TDD mode of operation in RAN4 specifications, when paired with another frequency band used as an anchor carrier. Furthermore, 3GPP should ensure that ALL UEs that support the CA configuration for "Downlink only LTE TDD" also support other TDD UL/DL configurations for the Downlink only LTE TDD usage TD-LTE bands.

Proposal 2:

Guideline for usage of "Downlink only TDD configurationfor TD-LTE(10:0:0) is specified in the standard (as in the Annex section).

Simulations:

RP-150168 Coexistence and simulation methodology on additional configuration for LTE TDD ZTE Disc REL-13 FS_LTE_TDD_add_config

Proposal 1:

The cost for both SDL and TDD system should be carefully evaluated when deployed in adjacent carriers. The potential cost includes the additional Guard Band, BS complexity and throughput loses by site restriction.

For a new configuration, at least the system level simulation should be further performed. The exact band, number of carriers, carrier bandwidths etc. should be determined for the simulation study.

Proposal 2:

The simulation assumption can refer study from both eIMTA and Small cell. The performance impact of interference should be taken into account in the system level simulation. The simulation assumption can reuse parameters from eIMTA for interference modeling.

RP-150301 Simulation Assumptions for Evaluating Additional Configurations for LTE TDD Ericsson Disc REL-13 FS_LTE_TDD_add_config

proposals:

- *Adjacent channel evaluations are done where all cells on the same carrier use the same UL-DL TDD configuration but where the configuration maybe different between the carriers*
- *Use the following deployment scenarios: Femto-Femto, Femto-Macro, Pico-Pico, Pico-Macro, and Macro-Macro*
- *System level simulations are conducted using non-full buffer traffic models*
- *Detailed simulation assumptions for the scenarios are adopted from TR 36.828*

Ecosystem considerations:

RP-150287 Views on the eco-system impact of possible additional TDD configuration(s) CATR Disc REL-13 FS_LTE_TDD_add_config

- TD-LTE with legacy configurations has widely deployed and develops fast, with a large penetration ratio of the LTE FDD/TDD dual mode devices, which are already very mature due to the widely on-field test.

- The introduction of any new configuration(s) in TD-LTE will cause eco-system problem, esp. the downlink only configuration will bring the risk of different UE designs and fragment TD-LTE market.

- Any new configuration will cause the additional complexity, esp. in UE side. It needs to justify whether there is any potential benefit worth such an impact on the eco-system.

RP-150146 Benefits/drawbacks and ecosystem aspects for additional TD-LTE configuration Vodafone TP 36.825 REL-13 FS_LTE_TDD_add_config

RP-150099 Void NTT DOCOMO, INC. Report REL-13 FS_LTE_TDD_add_config

Samsung Exhibit 1025, Page 1198 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: withdrawn

12.4.5 REL-13 Study on Enhanced Multiuser Transmissions and Network Assisted Interference Cancellation for LTE [**New SI:** FS_LTE_MUTX_NAIC]

RP-150213 Status report for SI Study on Enhanced Multiuser Transmissions and Network Assisted Interference Cancellation for LTE; rapporteur: MediaTek RAN1 Report REL-13 FS_LTE_MUTX_NAIC
conclusion: noted, approved: 0%, Dec.15; SI is stopped and instead a new SI with modified scope and title is considered in RP-150456;
TR 36.891 of SI FS_LTE_MUTX_NAIC will be withdrawn and the new SI will have a new TR

RP-150186 Scope of Study on Enhanced Multiuser Transmissions and Network Assisted Interference Cancellation for LTE Alcatel-Lucent SID rev RAN1 REL-13 FS_LTE_MUTX_NAIC
last approved SID: RP-142315, note: rapporteur of this SI is Mediatek, compare RP-140214
proposing title change to "Study on Downlink Multiuser Superposition Transmission for LTE"
discussion: MCC: we cannot modify the title & WI code so then we rather close the current SI and open a new SI (it shows that we need to be more careful before approving a WI/SI
AT&T: would like to be removed from supporting companies as scope changed
CMCC: would like to be removed as well
conclusion: rejected

RP-150214 Revised SID: Study on Enhanced Multiuser Transmissions and Network Assisted Interference Cancellation for LTE Mediatek SID rev RAN1 REL-13 FS_LTE_MUTX_NAIC
last approved SID: RP-142315; wrong title in Tdoc request (note: It is not possible to modify the title of approved SIs), compare RP-140186
discussion: Mediatek: changed the supporting companies and includes ALU version RP-150186 already; suggest to change second last version
Nokia: would like to remove the precoder aspect
Huawei, Ericsson: would like to keep the precoder aspect
conclusion: rejected, a new SID will be drafted in RP-150456 based on RP-150214 version

RP-150456 New SI proposal: Study on Downlink Multiuser Superposition Transmission for LTE Mediatek SID (new) REL-13 -
new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_MUST; note: The scope and title of SI FS_LTE_MUTX_NAIC has changed significantly, therefore it was decided to stop SI FS_LTE_MUTX_NAIC and to open instead this new SI with corresponding new scope and title;
discussion: CATT: is it allowed in the SI that 2 users are using different precoding vectors?
NTT DOCOMO: can be discussed in RAN1
Nokia: in offline discussion it was clarified that such a multiplexing can be discussed in RAN1
Ericsson: we understand that they have to use same precoding vector
CATT: discussion of last meeting and email discussion considered same precoding vector also unclear: "same" applies also to TX diversity schemes?
Mediatek: 2 UE using same precoding vector is covered
Huawei: either same precoding vector or same TX diversity scheme is considered, and same precoding vector must be possible
conclusion: revised in RP-150496

RP-150496 New SI proposal: Study on Downlink Multiuser Superposition Transmission for LTE Mediatek SID new REL-13 -
conclusion: approved
Note: The rapporteur clarified after RAN #67 that a new TR 36.8xx is intended.

RP-150215 Proposed Work Plan for Enhanced Multiuser Transmissions and Network Assisted Interference CancellationMediatek Disc REL-13 FS_LTE_MUTX_NAIC
conclusion: noted

12.4.6 REL-13 Study on Support of single-cell point-to-multipoint transmission in LTE [**New SI:** FS_LTE_SC_PTM]

RP-150176 Status report for SI: Study on Support of single-cell point-to-multipoint transmission in LTE, rapporteur: Huawei RAN2 Report REL-13 FS_LTE_SC_PTM

Samsung Exhibit 1025, Page 1199 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: noted, approved: 25%, June 15

RP-150177 Revised SID: Study on Support of single-cell point-to-multipoint transmission in LTE, rapporteur: Huawei Huawei, HiSilicon SID rev RAN2 REL-13 FS_LTE_SC_PTM
last approved SID: RP-142205; editorial corrections
conclusion: approved

12.4.7 REL-13 Study on Extension of Dual Connectivity in E-UTRAN [New SI: FS_LTE_dualC_ext]

RP-150163 Status report for SI Study on Extension of Dual Connectivity in E-UTRAN; rapporteur: Samsung RAN3 Report REL-13 FS_LTE_dualC_ext
discussion: MCC: target date change
conclusion: noted, approved: 85%, June 15

RP-150170 Revised SID: Study on Extension of Dual Connectivity in E-UTRAN Samsung SID rev RAN3 REL-13 FS_LTE_dualC_ext
last approved SID: RP-142257; revised to change the title and WI code, correct some format and typo
conclusion: approved

RP-150216 TR 36.875 v1.0.0 on Extension of Dual Connectivity in E-UTRAN Samsung TR 36.875 RAN3 REL-13 FS_LTE_dualC_ext
RAN3 TR 36.875 is provided for information
conclusion: noted

12.4.8 REL-13 Study on further enhancements of small cell higher layer aspects for LTE [New SI: FS_LTE_SC_enh2_hilayer]

RP-150226 Status report for SI: Study on further enhancements of small cell higher layer aspects for LTE, rapporteur: Huawei RAN3 Report REL-13 FS_LTE_SC_enh2_hilayer
discussion: Huawei: time unit change
conclusion: noted, approved: 10%, Sep.15

12.4.9 REL-13 Study on LTE DL 4 Rx antenna ports [New SI: FS_LTE_4Rx_AP_DL]

RP-150138 Status report for SI LTE DL 4 Rx antenna ports, rapporteur: Ericsson RAN4 Report REL-13 FS_LTE_4Rx_AP_DL
discussion: MCC: TR has to be approved before completing the SI
conclusion: noted, approved: 100%, March 15; SI is completed

RP-150139 Revised SID: Study on LTE DL 4 Rx antenna ports Ericsson SID rev RAN4 REL-13 FS_LTE_4Rx_AP_DL
last approved SID: RP-142299; revised to add TR name and completion date
conclusion: Specifications Manager: allocated TR number is TR 36.867
revised in RP-150457 to add TR number

RP-150457 Revised SID: Study on LTE DL 4 Rx antenna ports Ericsson SID rev RAN4 REL-13 FS_LTE_4Rx_AP_DL
conclusion: approved

RP-150141 TR 36.867 v1.0.0, Study on LTE DL 4 Rx antenna ports Ericsson TR 36.867 RAN4 REL-13 FS_LTE_4Rx_AP_DL
RAN4 TR is provided for 1-step approval; note: SI was started in Dec.14 (forgetting to indicate the TR in the SID), so TR number needs to be allocated during RAN #67
conclusion: TR 36.867 is approved as v13.0.0

12.4.10 REL-13 Study on performance enhancements for high speed scenario in LTE [New SI: FS_LTE_high_speed]

RP-150158 Status Report for SI: Study on performance enhancements for high speed scenario in LTE RAN4 Report REL-13 FS_LTE_high_speed
discussion: MCC: a SI has no Core part
conclusion: revised in RP-150517

RP-150517 Status Report for SI: Study on performance enhancements for high speed scenario in LTE RAN4 Report REL-13 FS_LTE_high_speed
conclusion: noted, approved: 5%, Sep.15

Samsung Exhibit 1025, Page 1200 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150159 Revised SID: Study on performance enhancements for high speed scenario in LTE NTT DOCOMO, INC., Huawei, HiSilicon SID rev RAN4 REL-13 FS_LTE_high_speed
last approved SID: RP-142307
conclusion: approved

Samsung Exhibit 1025, Page 1201 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

13 New Work Items/Study Items

NOTE: No further REL-12 WIs can be proposed as REL-12 was frozen in Sep.14.
As the REL-12 ASN.1 freeze is planned for March 2015, new REL-13 WIs/SIs have lower priority than the completion of REL-12 WIs.

Time budgets:
RAN #66 endorsed as outcome of the meeting: RP-142318.

RP-150048 Status of time budgets for RAN1/2/3/4 REL-12 & REL-13 WIs/SIs after RAN #67 RAN1/RAN2/RAN3/RAN4 chairmen Report REL-12 -
note: The status after RAN #66 was endorsed in RP-142318.
conclusion: revised in RP-150518

check on Tue evening regarding RAN2/RAN4 capacity discussion:
RAN2 chair: we will go for extra 4TUs
RAN4 chair: 4RX and measurement gap and something from RAN2 could be agreed

RP-150518 Status of time budgets for RAN1/2/3/4 REL-12 & REL-13 WIs/SIs after RAN #67 RAN1/RAN2/RAN3/RAN4 chairmen Report REL-12 -
conclusion: endorsed
Note: It was detected after RAN #67 that the new approved WI "Multiflow Enhancements for UTRA" (RP-150288, HSDPA_MFTX_enh) requested 0.5 TU for RAN3 #88 in May 2015 which was not reflected in RP-150518. However, the 0.5TU will be used.
Note: It was detected after RAN #67 that the new approved WI "Multicarrier Load Distribution of UEs in LTE" (RP-150491, LTE_MC_load) requested 0.5 TU for RAN4 #76 for R4RD Core in Aug. 2015 which was not reflected in RP-150518. However, the 0.5TU will be used.

13.1 New core functions

Air to Ground Communication:
RP-150315 Mission Critical Air Ground Air Communications: Summary of discussions Orange Report REL-13 -
report of email discussion on the RAN reflector between RAN #66 and RAN #67
Proposal :
Based on the above elements we propose to issue an open letter from 3GPP RAN in RAN#67 to officially answer to the questions asked by the French Ministry of Interior and the UK Home office on the feasibility of A2G communications.
discussion: Vodafone: range by public safety services is quite large so a problem for base station configuration
Ericsson: sending LS to Individual Members?
RAN chair: we can approve a Tdoc that summarizes the status (then we do not need an LS)
conclusion: noted;
Orange will draft RP-150423 to answer the questions in a summary document

RP-150423 3GPP TSG RAN views regarding Mission Critical Air Ground Air Communications Orange Disc REL-13 -
based on RP-150315
discussion: Vodafone: can accept this; is a bit over-simplifying and hopefully there will be no bigger issues
conclusion: revised in RP-150506 to have source: RAN
RP-150506 3GPP TSG RAN views regarding Mission Critical Air Ground Air Communications RAN Disc REL-13 -
conclusion: approved

Flexible Duplex:
RP-150199 Discussion on regulatory aspects in using LTE uplink spectrum in Korea TTA Disc REL-13 -

Samsung Exhibit 1025, Page 1202 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

In recent RAN meetings, there were some discussions on the regulatory aspects of using LTE UL spectrum for flexible duplex, i.e., network sends DL traffic to UEs via UL spectrum. This contribution provides some observations and discussions on Korean regulations related to the flexible duplex operations; shifted from AI 13.1.1 to AI 13.1
conclusion: noted

RP-150250 Further discussion on regulatory aspects related to flexible duplex operation for E-UTRAN LG Electronics, China Telecom, Huawei, HiSilicon, IAESI Disc REL-13 -
conclusion: noted

RP-150249 Motivation for new SID: Study on regulatory aspects for flexible duplex for E-UTRAN LG Electronics, China Telecom, Huawei, HiSilicon Disc motiv REL-13 -
discussion:
conclusion: noted

RP-150248 New SID: Study on regulatory aspects for flexible duplex for E-UTRANLG Electronics SID new RAN REL-13 -
new SI for LTE only; leading WG: RAN; WI code to be used: FS_LTE_flex_duplex_reg; SI was postponed at RAN #66 in RP-142278
discussion: Ericsson: first part of SI description unclear: intention as on slide 4 of motivation paper?
Ericsson: last time we said we look at regulatory aspects and not on technologies
LG: will be difficult to leave out technologies completely
Huawei: at first scenarios need to be considered
RAN1 vice-chai (ALU): prefers to do it the other way around and look at what is possible first from regulatory aspect
RAN vice-chair (AT&T): D2D set a precedence case that should be taken into account
Ericsson: do we want to look at regulatory aspects? which group is having the experts? TSG RAN? the group that is closest to regulatory aspects is RAN4
Orange:question to China Telecom: in which band do you see this sort operation?
China Telecom: if we solve co-existence issues we may see a band in the future
RAN chair: so use cases without touching technologies can be discussed in RAN; suggests to discuss regulatory aspects via email (so that regulatory experts can be involved)
conclusion: revised in RP-150470

RP-150470 New SID: Study on regulatory aspects for flexible duplex for E-UTRANLG Electronics SID new RAN REL-13 -
discussion: Sprint: not possible in the US, concerned how this can be handled at RAN
RAN chair: we will study this and most of it will anyway done via email reflector
Telecom Italia: what if not possible in some regions?
RAN chair: we will see this when the SI is done
Telecom Italia: concerned that RAN is doing regulatory work and work is moved to RAN because of lack of resources in RAN4
RAN chair: treatment at RAN is not motivated by lack of resources in RAN4
Telecom Italia: suggests an LS to regional regulatory bodies
conclusion: approved, Telecom Italia will draft an LS in RP-150482

RP-150482 Draft LSout to regulatory bodies on flexible duplexTelecom Italia LSout REL-13 FS_LTE_flex_duplex_reg
Alt 1: 3GPP would appreciate any useful information related to objectives of the study in the attachment.
Alt 2: 3GPP would like to ask the regulator whether the utilization of UL allocations for network to UE transmissions is possible with the current regulation and under which tehnical conditions (Tx Power, Modulation, etc)
Alt 3: 3GPP TSG RAN would like to inform Regional Regulatory bodies 3GPP started this activity.
discussion: Microsoft: supports the LS
Huawei: Alt3 preferred option
RAN chair: what about going for Alt1?
Orange: Alt1 is not a clear question and subject to interpretation
Orange: we only ask regulators what is in the current regulation so no extra work is required for them
Microsoft: what is "useful information"?
ALU: we have a SI approved so work can go on there, Alt2 is not acceptable for us
RAN chair: ask regulators whether .... is possible?

Samsung Exhibit 1025, Page 1203 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

China Unicom: does not expect a quick reply from regulators
Huawei: why did we approve a SI if we send an LS now?
Lightsquared: we will certainly not get a simple yes/no answer when we ask whether it is possible
Ericsson: if we send SID to regulators and the SID is not clear then we need to work on the SID
Huawei: we do not want to preempt our own SI by an LS
RAN chair: if we get input from regulators is parallel this would just help
Orange: the sooner we send the LS the better
TeliaSonera: if scope of SI is not clear then we should not approve the SI, we should send as detailed questions to the regulators as possible
RAN chair: we could ask "3GPP would like to ask for regulators feedback on "utilizing UL spectrum for transmission from the network to UEs, including aspects such as Tx power levels, modulation schemes, type of transmitting nodes, etc."
Orange: we need to clarify what feedback we expect
Orange: we do not preempt the SI and the SI will continue until Sep.
Vodafone: we should mention "FDD"
Orange: do we indicate "current regulation"?
ALU: supports Orange
LG: would like to include also "otential regional/band-specific regulatory possibilities/constraints for the use cases of "
RAN chair: To whom do we send the LS? To: ECC PT1, RRA, ARIB, FCC, CCSA, TTA, TAICS, TSDSI; cc: ITU-R WP5D
Fujitsu: also to ITU?
AT&T: should not be sent to ITU-R WP5D
RAN chair: agrees that we rather seem to have OPs than regulators
RAN chair: so just to ECC PT1, FCC, other regulators of China, Japan, Korea, Taiwan, India
Ericsson: it seems the regions need to identify the regulators

conclusion: revised in RP-150507

RP-150507 Draft LSout to regulatory bodies on flexible duplex Telecom Italia LSout REL-13 FS_LTE_flex_duplex_reg

conclusion: Telecom Italia will identify the regulators
for 2 weeks email discussion to identify the regulators and corresponding contacts,
final LS will be in RP-150509,
so RP-150507 is revised in RP-150509

RP-150509 LS on 3GPP RAN Study on regulatory aspects for flexible duplex for E-UTRAN (to: ECC PT1, FCC, RRA, National Communications Commission (TW), ARIB, CCSA, Wireless Adviser to the Government of India; cc: -; contact: Telecom Italia) RAN LSout REL-13 FS_LTE_flex_duplex_reg

conclusion: RP-150509 was approved by (2 weeks) email discussion after RAN #67.
This email discussion was kicked off by Telecom Italia on 12.03.2015 and the approved RP-150509 was sent out on 27.03.2015.

13.1.1 WIs/SIs led by RAN1

RAN1 chair indicated that there is no room in RAN1 for new LTE items in the next quarter. So new RAN1-led proposals will be considered for information. As such we will not treat them on Monday. If time allows we may come back to them in the second part of the week.

RP-150502 Way forward on new RAN1-led WI proposal on LTE bandwidth flexibility enhancements Huawei, China Unicom, AT&T, CHTTL, DISH NETWORKS, LightSquared, Rogers, Telefonica, Telus, T-Mobile USA, Vodafone, CATR, HiSilicon, Potevio, ASUSTeK, Lenovo, III, CoolPad, TD-Tech Disc REL-13 -

discussion: RAN chair: does RAN1 have available capacity?
RAN1 chair: no extra capacity
NEC: supporting companies of the way forward and companies of the WI are alsmost matching
RAN chair: yes, way forward should have a bigger consensus
Nokia: was not aware that we will come back , should it study without RF requirements?
Microsoft: has a similar concern, we should study this
Ericsson: should rather be a RAN4 SI and not a RAN1 WI

Samsung Exhibit 1025, Page 1204 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN4 chair: sees the proposal for the first time
Vodafone: has interest in this topic, can maybe discussed by email
TeliaSonera: should be a SI, not happy to see now request for RAN1 capacity although we said there is no RAN1 capacity
RAN chair: you are free to use the RAN DRAFTS reflector asking for feedback or discuss offline
Qualcomm: we would contribute but do not think that we could solve RAN4 issues by email
Samsung: is rather a RAN4 SI but not happy to have unofficial discussions over the reflector; so get approval first
NTT DOCOMO: suggests to discuss this topic at RAN #68
Huawei: we should recognise the large interest of operators in this proposal and the need by the industry to agree this work item for Rel13
RAN chair: if the proposal has high priority for the industry then it should have no problems to be approved against other items once there is some new capacity available in RAN1

conclusion: noted, way forward was not agreed, no official RAN email discussion on this
(but as for all proposals: proponents are free to initiate email discussions on the RAN_DRAFTS reflector and come back next meeting with a proposal)

But the following HSPA related proposal could be presented:

semi-static spectrum refarming (SSR):

RP-150266 Motivation for New SI Interference coordination for SSR between UMTS and LTE China Unicom Disc motiv REL-13 -
conclusion: not treated

RP-150263 New SID Proposal: study on interference coordination for semi-static spectrum refarming between UMTS and LTE China Unicom SID new RAN1 REL-13 -
new SI for UTRA & LTE; leading WG: RAN1; WI code to be used: FS_UTRA_LTE_ICSSR
conclusion: revised in RP-150468

RP-150468 New SID Proposal: study on interference coordination for semi-static spectrum refarming between UMTS and LTE China Unicom SID new RAN1 REL-13 -
conclusion: revised in RP-150503

RP-150503 New SID Proposal: study on interference coordination for semi-static spectrum refarming between UMTS and LTE China Unicom SID new RAN1 REL-13 -
discussion: RAN chair: can this be done in UMTS session of RAN1 alone?
RAN1 chair: UMTS session has time but LTE has no time; could be done in UMTS only
Ericsson: if overlap with LTE session can be avoided
ALU: not a very clean approach to have it just in UTRA although UTRA & LTE is affected
Nokia: refarming involves usually also RAN4
Ericsson: also TU allocation is not enough
Qualcomm: prefers to postpone the topic due to impact on LTE experts
Samsung: not clear whether it should be handled by RAN1 or RAN4
Huawei: LTE to UMTS interference will be considered in the SI so not big impact on LTE
conclusion: postponed

will be treated only if time allows:

V2X for LTE:

RP-150164 Motivation of Feasibility Study on LTE-based V2X Services LG Electronics Inc. Disc motiv REL-13 -
conclusion: not treated

RP-150165 New SI proposal: Feasibility Study on LTE-based V2X Services LG Electronics Inc. SID new RAN1 REL-13 -
new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_V2X
conclusion: revised in RP-150499

RP-150499 New SI proposal: Feasibility Study on LTE-based V2X Services LG Electronics Inc. SID new RAN1 REL-13 -
conclusion: not treated

Samsung Exhibit 1025, Page 1205 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Enhanced UL for LTE:

RP-150190 Motivation for New SI: Uplink Enhancements for LTE CMCC Disc motiv REL-13 -
conclusion: not treated

RP-150293 Motivation for Uplink Enhancements for Heterogeneous and Small Cell Networks Huawei, HiSilicon Disc motiv REL-13 -
Further analysis of potential gains of LTE uplink enhancements for HetNet; revision of RP-142004; related to SI RP-150191
conclusion: not treated

RP-150191 New SID Proposal: Study on Uplink Enhancements for LTE CMCC SID new RAN1 REL-13 -
new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_EUL; SI was postponed at RAN #66 in RP-141843
conclusion: not treated

LTE bandwidth flexibility:

RP-150237 Motivation for new work item on LTE bandwidth flexibility enhancements Huawei, China Unicom, HiSilicon Disc motiv REL-13 -
conclusion: not treated

RP-150236 New Work Item proposal: LTE bandwidth flexibility enhancements Huawei, China Unicom, HiSilicon WID new RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_flex_BW; WI was postponed at RAN #66 in RP-141911
conclusion: revised in RP-150513

RP-150513 New Work Item proposal: LTE bandwidth flexibility enhancements Huawei, China Unicom, HiSilicon WID new RAN1 REL-13 -
conclusion: postponed

Coordinated Scheduling for LTE:

RP-150279 Motivation for Study on Physical Layer Enhancements of Coordinated Scheduling for LTE large CoMP clusters Ericsson Disc motiv REL-13 -
conclusion: not treated

RP-150280 New SI: Study on Physical Layer Enhancements of Coordinated Scheduling for LTE large CoMP clusters Ericsson SID new RAN1 REL-13 -
new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_CSched_COMP; SI was not treated at RAN #66 in RP-141819
conclusion: not treated

eMBMS for LTE:

RP-150302 Future eMBMS enhancements for LTE Ericsson Disc REL-13 -
discusses the most urgent areas of future MTC enhancements
conclusion: not treated

RP-150303 New WI proposal: eMBMS enhancements for LTE Ericsson WID new RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; WI code not yet allocated as if related to MTC then why is this missing in the title?; note: MBMS_LTE_enh was a REL-10 WI
conclusion: withdrawn

Self-backhaul nodes:

RP-150169 Discussion on Self-backhaul Nodes for Dense Cell Deployment ZTE Disc REL-13 -
no related SI/WI proposal? for LTE only; LPN = low power node
conclusion: not treated

CSI-RS in DwPTS:

RP-150256 New work item proposal on support of CSI-RS in DwPTS CATT WID new RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_CSIRS_DwPTS; no motivation paper; WI was postponed at RAN #66 in RP-141953
conclusion: not treated

Samsung Exhibit 1025, Page 1206 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

will be treated under AI 18:

Above 6GHz:
Note: These Tdocs will be handled in connection with 5G under AI 18.

RP-150219 New SID Proposal: Study on channel model for frequency spectrum above 6 GHz Samsung SID new RAN1 REL-13 -
new SI for LTE only; leading WG: RAN1 (?); WI code to be used: FS_LTE_b6GHz_channel_model; no motivation paper; compare WI proposal RP-150308
conclusion: not treated

RP-150221 Motivation for study on further evolution beyond LTE-Advanced using frequency spectrum above 6 GHz Samsung Disc motiv REL-13 -
conclusion: not treated

RP-150220 New SID Proposal: Study on further evolution beyond LTE-Advanced using frequency spectrum above 6 GHz Samsung SID new RAN1 REL-13 -
new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_b6GHz; SI was postponed at RAN #66 in RP-142196
conclusion: not treated

RP-150308 New WI: Channel modelling for frequency bands 6-100 GHz Nokia Networks WID new RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_6_100GHz_channel_model; compare SI proposal RP-150219; no motivation paper; for information?
conclusion: not treated

13.1.2 WIs/SIs led by RAN2

LTE-WLAN:
RP-150180 Motivation for new SI proposal: LTE-WLAN Radio Level Integration Qualcomm Incorporated Disc motiv REL-13 -
conclusion: noted

RP-150262 New SI proposal: Study on LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation, China Telecom, Qualcomm Incorporated SID new RAN2 REL-13 -
new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_WLAN_radio; SI was rejected at RAN#66 in RP-142280
discussion: Huawei: good that we merged the 2 solutions in one; spreading the TU allocation in time and reducing the TU in first quarter would be our suggestion
RAN vice-chair: we can take the TU discussion at a later stage
Fujitsu: 3 rapporteurs? one would be better
Broadcom: what is to be done by RAN3 in the first meeting?
RAN3 chair: has the same question, we have an ongoing SI looking at control plane aspects; on user plane aspects we would need input from RAN2
Qualcomm: RAN3 would have to look at feasibility of the architecture and they did already similar work
Orange: thanks Intel & Qualcomm for focussing the objectives; spreading the topic over several meetings would not be useful
SA chair (Nokia Networks): good to involve SA early but also to understand the scope for SA would be useful
Ericsson: we need to talk more about the scope of the SI
LG: agrees with Ericsson that scope of the SI is important, supporting 1A
conclusion: revised in RP-150481

RP-150481 New WI proposal: LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation, China Telecom, Qualcomm Incorporated WID new RAN2 REL-13 -
revision of RP-150262 (but now a WI instead of a SI); new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_WLAN_radio;
conclusion: revised in RP-150504

Samsung Exhibit 1025, Page 1207 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150504 New WI proposal: LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation, China Telecom, Qualcomm Incorporated WID new RAN2 REL-13 -
discussion: AT&T: would like to discuss considered scenarios for 1 of the 3 hours in RAN2
RAN2 chair: is ok
RAN3 chair: work should not start in next quarter in RAN3
RAN4 chair: Perf. spec to be added and RAN4 as sec. resp. group
conclusion: revised in RP-150510; RAN3 will not work on this topic in Q2/2015

RP-150510 New WI proposal: LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation, China Telecom, Qualcomm Incorporated WID new RAN2 REL-13 -
conclusion: approved

RP-150307 Architecture Options for LTE-WLAN Radio Level Integration Ericsson Disc REL-13 -
conclusion: noted

RP-150397 Consideration on LTE-WLAN interworking architecture Qualcomm Incorporated Disc REL-13 -
conclusion: noted

MDT:

RP-150192 Motivation for New SI: Consideration on MDT Further Enhancements CMCC Disc motiv REL-13 -
conclusion: noted

RP-150193 New SID Proposal: Study on further Enhancements of Minimization of Drive Tests for E-UTRAN CMCC SID new RAN2 REL-13 -
new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_eMDT2; SI was rejected at RAN #66 in RP-142242
discussion: CMCC: no change compared to proposal from RAN #66
conclusion: revised in RP-150472

RP-150472 New SID Proposal: Study on further Enhancements of Minimization of Drive Tests for E-UTRAN CMCC SID new RAN2 REL-13 -
conclusion: approved

Multicarrier Load Distribution of UEs in LTE:

RP-150201 Motivation paper for New WI: Multicarrier Load distribution of UEs in LTE Verizon, China Telecom, NTT DOCOMO, Inc, ZTE, Alcatel-Lucent Disc motiv REL-13 -
conclusion: noted

RP-150200 New WI Proposal: Multicarrier Load Distribution of UEs in LTE Verizon, China Telecom, NTT DOCOMO, Inc, ZTE, Alcatel-Lucent WID new RAN2 REL-13 -
new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_MC_load; WI was rejected at RAN #66 in RP-142279
discussion: Verizon: no contents change, about 40 supporters now
Nokia: interesting area to look at, but since RAN2 has not really concluded a SI would be more appropriate than a WI
Verizon: prefers to have a study phase in the WI
Nokia: specs not listed, WG not as secondary resp., RAN1 should be involved
Verizon: topic was discussed online and offline in RAN2 for a while
Fujitsu: lack of clarity of the impact of this work as WID is not filled out properly (Core/Perf part not ticked, no impact whatsoever in section 9 & 10)
conclusion: revised in RP-150446

RP-150446 New WI Proposal: Multicarrier Load Distribution of UEs in LTE Verizon, China Telecom, NTT DOCOMO, Inc, ZTE, Alcatel-Lucent WID new RAN2 REL-13 -
conclusion: revised in RP-150491

RP-150491 New WI Proposal: Multicarrier Load Distribution of UEs in LTE Verizon, China Telecom, NTT DOCOMO, Inc, ZTE, Alcatel-Lucent WID new RAN2
conclusion: approved
Note: It was detected after RAN #67 that RP-150491 does not specify which spec is affected by the Core part WI and which spec is affected by the Perf. part WI. The rapporteur clarified 36.300, 36.214, 36.304, 36.331, 36.133 are affected by Core part and 36.133 is affected by Perf. part.

Dual connectivity:

Samsung Exhibit 1025, Page 1208 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150211 Motivation for New WI: Dual Connectivity enhancements for LTE NTT DOCOMO, INC. Disc motiv REL-13 -
related to new WI RP-150156; revision of RP-141780
Nokia Networks presenting on behalf of NTT DOCOMO
conclusion: noted

RP-150157 Work Plan for LTE Dual Connectivity enhancement NTT DOCOMO, INC. Disc REL-13 -
Nokia Networks presenting on behalf of NTT DOCOMO
discussion: LG: RAN2 TU is too small, UL bearer split was discussed a lot but we could not decide anything in the past; leading WG should rather be RAN4 (as most objectives are for RAN4)
Nokia Networks: thought RAN2 is more appropriate
CATT: some time also in other groups could be considered (measurement definition)
NTT DOCOMO: RAN2 leadership more reasonable as previous WI was also led by RAN2
RAN2 vice-chair (LG): still thinks 1 TU is too optimistic; most objectives related to RAN4
Qualcomm: even if the WI is not approved some work for it will be needed in RAN4
conclusion: noted

RP-150156 New WI proposal: Dual Connectivity enhancements for LTE NTT DOCOMO, INC. WID new RAN2 REL-13 -
new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_dualC_enh; follow-up WI of REL-12 WI LTE_SC_enh_dualC; revised in RP-150415
conclusion: revised in RP-150415

RP-150415 New WI proposal: Dual Connectivity enhancements for LTE NTT DOCOMO, INC. WID new RAN2 REL-13 -
revision of RP-150156; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_dualC_enh; follow-up WI of REL-12 WI LTE_SC_enh_dualC
discussion: Nokia Networks: has a few more supporting companies now
conclusion: revised in RP-150490

RP-150490 New WI proposal: Dual Connectivity enhancements for LTE NTT DOCOMO, INC. WID new RAN2 REL-13 -
revision of RP-150415; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_dualC_enh; follow-up WI of REL-12 WI LTE_SC_enh_dualC
conclusion: approved

DRX for LTE:

RP-150181 Motivation for new WI proposal: RAN enhancements for extended DRX in LTE Qualcomm Incorporated Disc motiv REL-13 -
discussion: LG: ongoing RAN2 WI on MTC so having 2 WIs at the same time is not beneficial; SI more appropriate to estimate gain of extended DRX
Qualcomm: we do not want to limit this to MTC only
Mediatek: topic is not addressed in the low cost MTC WI
Orange: also thinks this has been studied in REL-12 and does not see an overlap with the low cost MTC
AT&T: supports Orange; would help MTC a lot and we should not delay it by further studies
conclusion: noted

RP-150281 Motivation for new WI: eDRX for LTE Mediatek Inc Disc motiv REL-13 -
discussion: Mediatek: on top of DRX in idle mode we also see benefits to enhance DRX in connected mode
MCC: is this motivation also covered in RP-150182?
Mediatek: yes
conclusion: noted

RP-150182 New WI proposal: RAN enhancements for extended DRX in LTE Qualcomm Incorporated WID new RAN2 REL-13 -
new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_extDRX; WI was rejected at RAN #66 in RP-142277
discussion: Qualcomm: Samsung is also supporting this WI
Nokia Networks: will SA2 also have a WI on this? RAN4 Core requirements completed in 1 meeting is too optimistic
Qualcomm: thought changing of value for DRX cycle will not take long

Samsung Exhibit 1025, Page 1209 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Ericsson: support Nokia Networks view that 1 meeting in RAN4 is not enough
conclusion: revised in RP-150493

RP-150493 New WI proposal: RAN enhancements for extended DRX in LTE Qualcomm Incorporated WID new RAN2 REL-13 -
conclusion: approved

Latency reduction for LTE:

RP-150310 Motivation for new SI: Study on Latency reduction techniques for LTE Ericsson Disc motiv REL-13 -
conclusion: noted

RP-150238 Motivation for a Rel-13 study on latency reduction in LTEHuawei, HiSilicon Disc motiv REL-13 -
discussion: Huawei: RP-150238 is also supporting RP-150309
conclusion: noted

RP-150309 New SI proposal: Study on Latency reduction techniques for LTEEricsson SID new RAN2 REL-13 -
new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_LATRED; SI was postponed at RAN #66 in RP-142025; note: REL-10 WI LTE_LATRED-Core was terminated in RP-091449 at RAN #50
discussion: LG: how can backwards compatibility be kept with reduced subframe
Ericsson: will have to be studied in RAN1 (time multiplex)
LG: also processing times would need to be shortened to see real gains
Ericsson: can be studied in RAN1
CATT: TTI shortening will need quite some time in RAN1, should RAN1 not be the leading WG for this SI?
Ericsson: protocol enhancement and TTI shortening is both important; could consider a WI in REL-14
ALU: supports CATT view as majority of work is done in RAN1
Orange: we agree that latency reduction is important, but it is an end-to-end performance so we need to see where we lose performance (so tackling just the RAN part may not be sufficient); prefers to focus on items that could be standardized in REL-13
Nokia: RAN1 is the right group for this and should be the leading WG
Panasonic: supports to have a SI first
LG: we have several solutions for capacity enhancements so we also need to study solutions for latency reductions
Ericsson: the end-to-end latency consideration is speaking for having RAN2 as leading WG
conclusion: revised in RP-150465 (multiple versions of RP-150309 existed)

RP-150465 New SI proposal: Study on Latency reduction techniques for LTEEricsson SID new RAN2 REL-13 -
discussion: NEC: suggests to check SI in RAN1 first
conclusion: approved

Application specific Congestion control for Data Communication (ACDC):

RP-150166 Motivation of RAN aspects of Application specific Congestion control for Data Communication LG Electronics Inc. Disc motiv REL-13 -
conclusion: noted

RP-150167 New WI Proposal: RAN aspects of Application specific Congestion control for Data CommunicationLG Electronics Inc. WID new RAN2 REL-13 -
new WI for; leading WG: RAN2; WI code to be used: ACDC-RAN; note: ACDC is a REL-13 WI in SA
conclusion: revised in RP-150422

RP-150422 New WI Proposal: RAN aspects of Application specific Congestion control for Data CommunicationLG Electronics Inc. WID new RAN2 REL-13 -
conclusion: revised in RP-150466

RP-150466 New WI Proposal: RAN aspects of Application specific Congestion control for Data CommunicationLG Electronics Inc. WID new RAN2 REL-13 -
conclusion: at first approved but then revised in RP-150512 as time budget for UMTS in RAN2 was not indicated

RP-150512 New WI Proposal: RAN aspects of Application specific Congestion control for Data CommunicationLG Electronics Inc. WID new RAN2 REL-13 -

Samsung Exhibit 1025, Page 1210 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved
Note: This WI has only a Core and no Perf. part. It was detected after RAN #67 that the corresponding Core part box is not ticked in the WID.

Signalling reduction in LTE:

RP-150312 Motivation for new WI: Signalling Reduction for Idle-Active Transitions in LTE Ericsson Disc motiv REL-13 -
conclusion: noted

RP-150311 New WID proposal: Signalling Reduction for Idle-Active Transitions in LTE Ericsson, Intel Corporation WID new RAN2 REL-13 -
new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_SigRed_Trans; WI was not treated at RAN #66 in RP-142030
discussion: Mediatek: UE has to come back from idle mode
Ericsson: one solution is to keep UE in connected mode but this comes with some cost; so keeping UEs in idle has some benefits if we optimize the signalling
conclusion: revised in RP-150426

RP-150426 New WID proposal: Signalling Reduction for Idle-Active Transitions in LTE Ericsson, Intel Corporation WID new RAN2 REL-13 -
conclusion: postponed

DL/UL PCell separation:

RP-150257 Motivation for DL/UL PCell separation CATT Disc motiv REL-13 -
conclusion: noted

RP-150258 New study item proposal: Study on DL/UL PCell separation in LTE CATT SID new RAN2 REL-13-
new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_PCell_sep; SI was not treated at RAN #66 in RP-141952
discussion: AT&T: this applies to FDD & TDD?
CATT: yes
conclusion: postponed

Synchronous LTE networks:

RP-150297 Motivation for new WI: Improved Mobility via Synchronous Handovers in LTE NetworksNokia Networks, Nokia Corporation Disc motiv REL-13 -
conclusion: noted

RP-150296 New WI: Improved Mobility for Synchronous LTE Networks (MobSync) Nokia Networks, Nokia Corporation WID new RAN2 REL-13 -
new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_mob_sync_netw; WI was not treated at RAN #66 in RP-142215
conclusion: postponed

HSDPA multiflow enhancements:

RP-150288 New WI proposal: Multiflow Enhancements for UTRA Nokia Networks, Nokia Corporation, Huawei, HiSilicon, China Unicom WID new RAN2 REL-13 -
new WI for UTRA only; leading WG: RAN2; WI code to be used: HSDPA_MFTX_enh; WI was postponed at RAN #66 in RP-142219; no motivation paper
conclusion: approved

Way forward on RAN2 led WIs:

RP-150480 Way forward on new RAN2-led Rel-13 Work and Study Items Ericsson, Huawei, HiSilicon, Qualcomm, Softbank Mobile, Sony, TeliaSonera, US Cellular, Inter Digital, Sierra Wireless, Telefonica, Light Squared, KDDI, Panasonic, Sprint, Verizon, Mediatek, T Mobile US, ZTE, Asustek, Motorola, US Dept of Commerce, China Telecom, Dish Network, SouthernLink, Telus, Elektrobit, Deutsche Telekom, Orange, Nokia Networks, III, ITRI, CoolPad, Telecom Italia Disc REL-13 -
Proposal:
Approve the following items with corresponding modifications to content and time budget
- *WI: WLAN / LTE Integration (RP-15xxxx); Time: spread TUs in Rel-13: (1.5, 1.5, 1.5, 1.5, 1.5)*
- *WI: Multicarrier Load Distribution (RP-15xxxx); Time: (1, 1, 1, 1, 0)*
- *SI: Low Latency (RP-15xxxx); RAN2 time: (0, 1, 1, 1, 1)*

Samsung Exhibit 1025, Page 1211 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN1 time: Start only in Q4, aim to complete in 2016. Budget 2015: (0, 0, 0, 0, 1), 2016 (2,2,2,0,0,0).
RAN2 content: Remove idle-to-connected mode latency study

- *SI: MDT (RP-150193)*
  RAN2 time (0.5, 0.5, 0.5, 0, 0)
  Content: Focus on MDT enhancements for VoLTE packet delay measurements. SNR measurements are to be discussed in RP-150200.
- *WI: Dual Connectivity enh. (RP-150156)*
  RAN2 Time: (0, 0, 0, 0.25, 0.25)
  Stage-3 UP aspects starting in April
- *WI: ACDC (RP-150182)*
  Approved for May but will be treated only if sufficient input is provided by CT1: (0, 0.25, 0.25, 0.25, 0)
  (and 0.25 additional time units in UMTS session for handling UMTS stage-3 aspects)
- *WI: RAN enhancements for extended DRX in LTE (RP-150182)*
  RAN2 time: (0, 1, 1, 1, 1)

discussion: RAN2 chair: 4,5 TU instead of original 4TUs is ok
Samsung: 1TU for low latency in RAN1 should be in [ ] as critical
AT&T: how can WLAN / LTE Integration be a WI? It should rather be a SI. Apart from this, we support the way forward
Broadcom: WLAN/LTE integration: should study the use cases first
RAN2 chair: agrees that with this there will not be time for more WIs/SIs
Orange: knows that a number of concerns were raised if we open it up again the consensus will break
Nokia Networks: 12 WIs/SIs in RAN2 with a short REL
NTT DOCOMO: why was latency increased to 2,2,2?
CMCC: low latency is going into REL-14?
Ericsson: starting in REL-13 and then going in REL-14
NEC: why is there urgency then to do low latency in REL-13?
CATT: would be useful to have the proposals available; clarify that low latency is for FDD/TDD
RAN chair: we are not discussing 5G here, so low latency for LTE is meant
NEC: has problem to endorse this way forward if WIDs are not yet available
MCC: Dual connectivity enh. 0TU in April and stage 3 UP starting in April is not a contradication?
RAN2 chair: UP aspects not included in the time budget

conclusion: noted, way forward is endorsed, WIDs/SIDs to be considered on Thu of RAN #67

less than 4 supporters, will be treated only if time allows:

Multi-profile UE capability in LTE:

RP-150183 Motivation for new WI proposal: Multi-Profile UE E-UTRA capability Qualcomm Incorporated Disc motiv REL-13 -
conclusion: not treated

RP-150184 New WI proposal: Multi-Profile UE E-UTRA capability Qualcomm Incorporated WID new RAN2 REL-13 -
new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_multi_UEcap; WI was withdrawn at RAN #66 in RP-141996
conclusion: not treated

Partial control of Cell Management for UEs in LTE (PaCMan):

RP-150295 Motivation for New SI on Partial control of Cell Management for UEs in LTE (PaCMan)" Nokia Networks, Nokia Corporation Disc motiv REL-13 -
conclusion: not treated

RP-150294 New SI: Study on Partial control of Cell Management for UEs in LTE (PaCMan) Nokia Networks, Nokia Corporation SID new RAN2 REL-13 -
new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_PaCMan; SI was not treated at RAN #66 in RP-142005
conclusion: not treated

Samsung Exhibit 1025, Page 1212 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Mobility enhancements LTE:

RP-150314 Motivation for new SI: Study on Mobility Enhancements for LTEEricsson Disc motiv REL-13 -
conclusion: not treated

RP-150313 New SI proposal: Study on Mobility Enhancements for LTE Ericsson SID new RAN2 REL-13 -
new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_mob_enh; SI was postponed at RAN #66 in RP-142036; compare RP-150283
conclusion: not treated

RP-150284 Motivation for New WI: Mobility Enhancements for LTE Mediatek Inc Disc motiv REL-13 LTE_mob_enh
conclusion: not treated

RP-150283 New WI proposal: Mobility Enhancements for LTE Mediatek Inc WID new RAN2 REL-13 -
new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_mob_enh; WI was not treated at RAN #66 in RP-142047; compare RP-150313
conclusion: not treated

13.1.3 WIs/SIs led by RAN3

HSPA and LTE Joint Operation:

RP-150273 Motivation for New SI: HSPA and LTE Joint Operation China Unicom Disc motiv REL-13 -
discussion: AT&T: no RAN1 impact?
China Unicom: no RAN1 impact
conclusion: noted

RP-150268 New SID Proposal: Study on HSPA and LTE Joint Operation China Unicom SID new RAN3 REL-13 -
new SI for UTRA & LTE; leading WG: RAN3; WI code to be used: FS_UTRA_LTE_JOP; SI was rejected at RAN #66 in RP-141889
discussion: ALU: bigger RAN2 impact needs to be taken into account
conclusion: revised in RP-150471

RP-150471 New SID Proposal: Study on HSPA and LTE Joint Operation China Unicom SID new RAN3 REL-13 -
discussion: Ericsson: some important work to be done in RAN2 so strange that we start work in RAN3 without knowing when RAN2 can be done
RAN chair: only discussion in RAN3 intended?
China Unicom: yes, RAN2 can be considered after RAN3 has considered the feasibility
RAN3 chair: same problem as UPCON, something cannot start in RAN3 because of bottleneck in RAN2
ALU: has similar concerns as Ericsson that we may start work in RAN3 but RAN2 has no possibility to look at this topic
RAN chair: we will not add later RAN2 objectives here but just consider the SI in RAN3, is this possible?
RAN3 chair: so we discuss the scenarios?
RAN chair: yes, because feasibility cannot be studied without RAN2
RAN3 chair: so we should then reduce the scope and the lenght of the SI to one quarter
Qualcomm: is not a clean approach to only consider RAN3 aspects
RAN chair: other alternative: RAN can give an action to RAN3 to identify scenarios for this and to capture this in a RAN3 internal TR
RAN3 chair: so we would have an agenda item in RAN3
NEC: also network architecture?
RAN chair: no, otherwise we enter into a feasibility study
AT&T: supports to give a task to RAN3
Fujitsu: so it will have low priority
Qualcomm, Ericsson: do not like this approach
Ericsson: it seems we bypass the process of time budget planning by SIs at RAN and now with an ACTION
ALU: not supporting to set a precendence case, so does not want to see a TR for this

Samsung Exhibit 1025, Page 1213 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Vodafone: RAN3 only work, UE operating in both RATs, will RAN2 then have to work on this?
RAN chair: not intended
conclusion: postponed

User Plane Congestion management (UPCON) for UTRA & LTE:

RP-150290 Motivation for Proposed SI: RAN Aspects of Downlink Traffic Differentiation for UPCON NEC Disc motiv REL-13 -
conclusion: noted

RP-150291 Proposed SI: Study on RAN Aspects of Downlink Traffic Differentiation for UPCON NEC SID new RAN3 REL-13 -
new SI for UTRA & LTE; leading WG: RAN3; WI code to be used: FS_UTRA_LTE_UPCON; UPCON = User Plane Congestion management (is an SA REL-13 WI)
discussion: Nokia Networks: key objectives make more sense to start in RAN2 and not in RAN3
NEC: if not feasible is decided in RAN3 then we are done already, but agrees if feasible then RAN2 will have to work on it
Ericsson: 2TUs changed to 1TU but no change in objectives?
NEC: needs to check
AT&T: 1-2 TUs enough for RAN3?
RAN2 chair: will consume more than 1 meeting and more than 1 TU in RAN2
conclusion: postponed

RP-150497 Draft LS on Reporting to SA and SA2 on consequences for UPCON of RAN WI prioritisation NEC LSout REL-13 -
related to new SI proposal for UPCON in RP-150291
discussion: NEC: starting RAN3 only part would not be useful but we need to report back to SA2 that RAN cannot work on this
NEC: printing error: "when RAN can NOT" (NOT is missing)
ALU: why "before June 15"?
NEC: because this is the current deadline for stage 2 in REL-13
conclusion: revised in RP-150501

RP-150501 Draft LS on Reporting to SA and SA2 on consequences for UPCON of RAN WI prioritisation NEC LSout REL-13 -
conclusion: revised in RP-150514

RP-150514 LS on Consequence of RAN WI prioritisation for UPCON work in SA2 (to: SA2; cc: SA, RAN2, RAN3; contact: NEC) RAN LSout REL-13 UPCON
conclusion: approved

CS/PS coordination in UTRAN Shared Network:

RP-150306 Motivation for New WI: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network Ericsson Disc motiv REL-13 -
conclusion: noted

RP-150304 New WI: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network Ericsson WID new RAN3 REL-13 -
new WI for UTRA only; leading WG: RAN3; WI code to be used: CSPS_Coord-UTRA; note: CSPS_Coord is an SA2 REL-13 WI
discussion: RAN vice-chair: how many supporting companies?
Ericsson: so far only 3 but hopes for more
Huawei: agrees we need more supporting companies
RAN3 chair: GUSH work ongoing and relation to be checked
conclusion: revised in RP-150500

RP-150500 New WI: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network Ericsson WID new RAN3 REL-13 -
discussion: China Unicom: we have a SI so no WI needed
Ericsson: similar proposal in GERAN to finalize stage 3
TeliaSonera: this has nothing to do with a SI
RAN3 chair: GUSH SI is following SA1 WI and this one following an SA2 WI
conclusion: approved

Samsung Exhibit 1025, Page 1214 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN vice-chair: RAN3 chair was confirming that we have time budget in RAN3 for new WIs/SIs, nevertheless we have to take into account the impact on all WGs.

less than 4 supporters, will be treated only if time allows:

Licensed Shared Access (LSA) in LTE:

Note: There is also an incoming LS on this topic in RP-150020 (see AI 6.1).

RP-150108 Motivation for New SI: E-UTRAN support for Licensed Shared Access (LSA) Nokia Networks Disc motiv REL-13 -
conclusion: not treated

RP-150109 New SI proposal for information: Study on E-UTRAN support for Licensed Shared Access (LSA) Nokia Networks SID new RAN3 REL-13 -
new SI for LTE only; leading WG: RAN3; WI code to be used: FS_LTE_LSA; SI RP-141857 was not treated at RAN #66; for information?
conclusion: not treated

13.1.4 WIs/SIs led by RAN4

Interference mitigation for downlink control channels of LTE:

RP-150265 Motivation for new WI: Interference mitigation for downlink control channels of LTE Intel Corporation, ZTE Disc motiv REL-13 -
conclusion: noted

RP-150267 New WI: Interference mitigation for downlink control channels of LTE Intel Corporation, ZTE WID new RAN4 REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_IM_DLCCH; SI was rejected at RAN #66 in RP-142314 where it was proposed to be a RAN1-led SI, now proposed to be a RAN4-led WI
discussion: NTT DOCOMO: would this feature work for unsynchronous network?
Intel: intention is to focus on synchronous network first
NTT DOCOMO: for asynchronous network also interference from other cells need to be taken into account and mentioned in the WID
Intel: we are ok to focus the WI on synchronous case
Intel: WID has been submitted for one year now and figures show enough gain
NEC: considered transmission mode unclear
conclusion: revised in RP-150474

RP-150474 New WI: Interference mitigation for downlink control channels of LTE Intel Corporation, ZTE WID new RAN4 REL-13 -
conclusion: revised in RP-150494

RP-150494 New WI: Interference mitigation for downlink control channels of LTE Intel Corporation, ZTE WID new RAN4 REL-13 -
conclusion: postponed

Measurement gap:

RP-150274 Motivation for new SI: Measurement gap enhancement for LTE Intel Corporation Disc motiv REL-13 FS_LTE_meas_gap
conclusion: noted

RP-150276 New SI proposal: Study on Measurement gap enhancement for LTE Intel Corporation SID new RAN4 REL-13 -
new SI for LTE only; leading WG: RAN4; WI code to be used: FS_LTE_meas_gap; SI was postponed at RAN#66 in RP-142261
discussion: Intel: also Orange and Telecom Italia are supporting now
MCC: please do not tick Core part in a SID
conclusion: revised in RP-150475

RP-150475 New SI proposal: Study on Measurement gap enhancement for LTE Intel Corporation SID new RAN4 REL-13 -
conclusion: revised in RP-150515 (as multiple versions of RP-150475 exist)

RP-150515 New SI proposal: Study on Measurement gap enhancement for LTE Intel Corporation SID new RAN4 REL-13 -

Samsung Exhibit 1025, Page 1215 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

4 Downlink Receive antenna ports in LTE:

RP-150143 Motivation paper for new WI on LTE DL 4 Rx antenna ports Ericsson Disc motiv REL-13 -
conclusion: noted

RP-150142 New Work Item: LTE DL 4 Rx antenna ports Ericsson WID new RAN4 REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_4Rx_AP_DL; follow-up WI of REL-13 SI FS_LTE_4Rx_AP_DL (see AI 12.4.9)
discussion: CATT: supports this WI and would like to be added as supporting company
conclusion: revised in RP-150427

RP-150427 New Work Item: LTE DL 4 Rx antenna ports Ericsson WID new RAN4 REL-13 -
conclusion: approved

RP-150212 Considerations on the 4Rx Work Item Scope Qualcomm Incorporated Disc REL-13 -
presentation on why it is important to allow opportunistic fallback to 2 Rx operation
proposals:
Proposal 1. Allow opportunistic fallback to 2Rx operation.
Proposal 2. Do not define any requirements for idle mode.
Concerning the scope of the RRM part, we propose the following:
Proposal 3. Limit the RRM scope to defining RLM requirements subject to feasibility study.
discussion: Ericsson: proposals 2 & 3 are already in line with WID; proposal 1 could be added in a revision of the WID, maybe with slightly different wording
Sprint: concerned about two autonomous fallbacks to 2 Rx
Qualcomm: UE will not fall back and forth so this will be a controlled behaviour
Huawei: sounding transmit antenna switching could be also considered
Ericsson: this is a DL enhancement feature, would not like to mix it with UL sounding
AT&T: for backward compatibility is it not normal that you will need 2Rx
Ericsson: could be also fallback to 2Rx to reduce power consumption
conclusion: noted

Positioning enhancements LTE:

RP-150240 Motivation of Rel-13 New Work Item proposal: Positioning enhancements for E-UTRA Huawei, HiSilicon Disc motiv REL-13 -
conclusion: noted

RP-150239 New Work Item proposal: Positioning enhancements for E-UTRA Huawei, HiSilicon WID new RAN4 REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LCSenh_LTE; follow-up WI of Rel-13 SI FS_LCSenh_LTE completed in Dec.14
discussion: Qualcomm: not sure why PRS TX diversity should be specified as it does not bring advantages in some scenarios
Huawei: this WI has a different scope compared to the indoor positioning
ALU: supports to remove PRS TX diversity
Ericsson: RAN1 & RAN2 need to be involved somehow
conclusion: postponed

Way forward:

RP-150469 Way forward on RAN4-led WI proposals for RAN#67 NTT DOCOMO, INC. Disc REL-13 -
discussion: RAN chair: 2 ways forward?
NTT DOCOMO: these are 2 proposals
ALU: does not want to approve way forward 1
RAN chair: we need a multiple company way forward
Intel: any limitation that one company can only have one WI for a WG
TeliaSonera: a draft of RP-150469 was distributed offline and supports way forward 1
conclusion: noted

RP-150473 Way forward on RAN4-led SI/WI Intel Disc REL-13 -
conclusion: not treated

RP-150508 Way forward on RAN4 led WI/SI of RAN #67 NTT DOCOMO, INC. Disc REL-13 -
way forward proposal:

Samsung Exhibit 1025, Page 1216 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

The following WI/SI can be approved
- *Led by R4:*
  - *LTE DL 4 Rx antenna ports*
  - *Measurement gap enhancement for LTE*
- *Led by R2: (Follow final R2 decision)*
  - *Dual Connectivity enhancements for LTE*
  - *Multicarrier Load Distribution of UEs in LTE*
  - *RAN enhancements for extended DRX in LTE*
  - *Wireless LAN aggregation/inter working*
- *It is allowed for "interference mitigation for DL CCH of LTE" to be treated in the following manner: Even if the Study starts from R4#76bis, this can be preapproved if it is selected among the other proposed WI/SIs at R#68.*

conclusion: noted, way forward approved

less than 4 supporters, will be treated only if time allows:

common antenna MSR/LTE:

RP-150270 New WID: MSR BS configurations for LTE for common antenna case ZTE WID new RAN4 REL-13 -

new WI for LTE only?; leading WG: RAN4; WI code to be used: not allocated as affected system was unclear; original title: New MB-MSR BS configurations for common antenna case; no motivation paper; focus seems to be on RF requirements for LTE BS or MSR BS in case of common antenna with multi-band operation but WID in a bad shape (no Core/Perf part relation of specs & no system impact and just 1 supporting company)

conclusion: revised in RP-150464 as multiple versions of RP-150270 exist

RP-150464 New WID: RF requirements for LTE BS or MSR BS in case of common antenna with multi-band operation ZTE WID new RAN4 REL-13 -

new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_BS_Common_Ant; revision of RP-150270

conclusion: withdrawn (as not provided)

13.2 Spectrum related WIs/SIs

AWS extension:

RP-150195 Canadian Considerations for AWS Extension Band Plan Rogers CommunicationsDisc REL-13 -

recently published Canadian Government band plans for AWS3 and AWS4; provided for information

Rogers recommends that 3GPP should develop an AWS band plan that is harmonized for Region 2. As a first step, 3GPP should develop an AWS band plan that is compatible with the band plans recently adopted by the United States and Canada.

Rogers recommends that the AWS-3 and AWS-4 band plans recently adopted by the United States and Canada be considered as part of the associated work item.

conclusion: noted

RP-150150 Motivation for WID on AWS-Extension Band for LTEEricsson Disc motiv REL-13 -

conclusion: noted

RP-150148 New WID on AWS-Extension Band for LTE Ericsson WID new RAN4 s REL-13 -

new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_AWS_EXT; AWS = Advanced Wireless Services; to specify a band plan as follow-up of REL-13 SI FS_LTE_AWS_EXT (see TR 36.849); this is a paired band 1710-1780MHz / 2110-2200MHz with fixed duplex spacing; interoperability by means of CA is also proposed

discussion: RAN3 chair: impact on RAN3 specs need to be checked
Rogers is supporting the WI
Dish Network: some clarification in the objective section needed
Huawei: scope needs to be aligned with SI conclusions

conclusion: revised in RP-150428 (also wrong WI code is used, unclear whether TR 36.xxx is a TR 36.8xx or 36.9xx)

RP-150428 New WID on AWS-Extension Band for LTE Ericsson WID new RAN4 s REL-13 -

conclusion: approved

2DL inter-band CA:

Samsung Exhibit 1025, Page 1217 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150171 New WID: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 5 and Band 7 Nokia Networks WID new RAN4 s (2DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B5_B7_BWset; note: LTE_CA_B5_B7 was a REL-12 WI
conclusion: approved
Note: It was detected after RAN #67, that TR 36.852-13 is listed under new without indicating whether it is impacted by Core or Perf. part. As TR 36.852-13 is created by WI LTE_CA_B3_B38-Core it must be listed as affected. Rapporteur confirmed that the TR is affected by the Core part.

RP-150282 New WI proposal: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 5 Samsung WID new RAN4 s (2DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B5_BWset; note: LTE_CA_B3_B5 was a REL-11 WI
conclusion: revised in RP-150425

RP-150425 New WI proposal: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 5 Samsung WID new RAN4 s (2DL/1UL) REL-13 -
discussion: MCC: TR is for 2DL/1UL?
Samsung: yes
conclusion: approved

3DL/1UL inter-band CA:

RP-150083 New WID: LTE Advanced 3 Band Carrier Aggregation (3DL) of Band 1, Band 5 and Band 40 SK Telecom WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B5_B40; merged with RP-150085 (see RP-150418)
conclusion: withdrawn, see RP-150418 (4DL/1UL) instead

RP-150084 New WID: LTE Advanced 3 Band Carrier Aggregation (3DL) of Band 3, Band 5 and Band 40 SK Telecom WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B5_B40; merged with RP-150085 (see RP-150418)
conclusion: withdrawn, see RP-150418 (4DL/1UL) instead

RP-150111 New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 4 and Band 7 Rogers Communications WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B4_B4_B7_BWset
conclusion: revised in RP-150429 (correct WI code, change TR 36.853 into TR 36.853-13 and TR 36.851 into 36.852-13 and indicate whether they are affected by Core or Perf part)

RP-150429 New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 4 and Band 7 Rogers Communications WID new RAN4 s (3DL/1UL) REL-13 -
conclusion: approved (unseen)

RP-150112 New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 7 and Band 12 Rogers Communications WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B4_B7_B12_BWset
conclusion: revised in RP-150430 (correct WI code, change TR 36.853 into TR 36.853-13 and TR 36.851 into 36.852-13 and indicate whether they are affected by Core or Perf part)

RP-150430 New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 7 and Band 12 Rogers Communications WID new RAN4 s (3DL/1UL) REL-13 -
conclusion: approved (unseen)

RP-150113 New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 7 and Band 12 Rogers Communications WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B7_B12
conclusion: revised in RP-150431 (change TR 36.853 into TR 36.853-13 and TR 36.851 into 36.852-13 and indicate whether they are affected by Core or Perf part)

Samsung Exhibit 1025, Page 1218 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150431 New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 7 and Band 12
Rogers CommunicationsWID new RAN4 s (3DL/1UL) REL-13 -
conclusion: approved (unseen)

RP-150114 New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 4 and Band 7
Rogers CommunicationsWID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B7
conclusion: revised in RP-150432 (change TR 36.853 into TR 36.853-13 and TR 36.851 into 36.852-13 and indicate whether they are affected by Core or Perf part)

RP-150432 New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 4 and Band 7
Rogers CommunicationsWID new RAN4 s (3DL/1UL) REL-13 -
conclusion: approved (unseen)

RP-150121 New WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 3 and Band 42
NTT DOCOMO, INC. WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B42
conclusion: approved

RP-150122 New WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 19 and Band 42
NTT DOCOMO, INC. WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B19_B42
conclusion: approved

RP-150123 New WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 21 and Band 42
NTT DOCOMO, INC. WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B21_B42
conclusion: approved

RP-150124 New WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 19 and Band 42
NTT DOCOMO, INC. WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B19_B42
conclusion: approved

RP-150125 New WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 19, Band 21 and Band 42
NTT DOCOMO, INC. WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B19_B21_B42
conclusion: approved

RP-150144 New Work Item Proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 7, Band 20 and Band 38Vodafone WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B7_B20_B38
discussion: MCC: rapporteur, at least 2 supporting companies missing, tbd, TR is not new, 2DL TR missing
Qualcomm: makes some PCell assumptions, without it we could support it and take the PCell discussion separately
conclusion: revised in RP-150433 (remove TR 36.xxx from new specs and add TR 36.853-13 and TR 36.852-13 under affected specs indicating whether they are affected by Core or Perf. part; add a rapporteur, get at least 2 more supporting companies)

RP-150433 New Work Item Proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 7, Band 20 and Band 38Vodafone WID new RAN4 s (3DL/1UL) REL-13 -
conclusion: approved

4DL/1UL inter-band CA:

RP-150073 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 4 and Band 12 T-Mobile USA WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B4_B12
conclusion: approved

RP-150074 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 4 and Band 12 T-Mobile USA WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B2_B4_B12
conclusion: approved

Samsung Exhibit 1025, Page 1219 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150075 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 4 and Band 4 T-Mobile USA WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B2_B4_B4
conclusion: approved

RP-150085 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 5 and Band 40 SK Telecom WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B5_B40; could include also RP-150083 and RP-150084;
conclusion: revised in RP-1500418 merging RP-150085 and RP-150083 and RP-150084

RP-150418 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 5 and Band 40 SK Telecom WID new RAN4 s (4DL/1UL) REL-13 -
revision of RP-150085 (also including RP-150083 and RP-150084 aspects); new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B5_B40;
conclusion: revised in RP-150434 (change TR 36.8xx in section 10 into TR 36.854-13, add TR 36.853-13 as affected spec in section 10 and if also 2DL permutations need to be covered: also add TR 36.852-13 as affected spec in section 10)

RP-150434 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 5 and Band 40 SK Telecom WID new RAN4 s (4DL/1UL) REL-13 -
conclusion: approved (unseen)

RP-150172 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 7 and Band 8 Nokia Networks WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B7_B8
discussion: LG: supports the WI
MCC: 4DL, 3DL TR should be under affected
conclusion: revised in RP-150435 (TR 36.854-13 and TR 36.853-13 should be listed under affected specs)

RP-150435 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 7 and Band 8 Nokia Networks WID new RAN4 s (4DL/1UL) REL-13 -
conclusion: approved (unseen)

RP-150241 New work item proposal: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 5 and Band 29 Bell Mobility, TELUS, Huawei WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B5_B29
conclusion: revised in RP-150436 (Core/Perf part not ticked, Radio Access under section 1 not ticked, section 2.0 not filled out, section 9 not filled out, TR 36.8xx for 3DL should say TR 36.853-13, TR 36.8xx for 4DL should say TR 36.854-13)

RP-150436 New work item proposal: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4 Band 5 and Band 29 Bell Mobility, TELUS, Huawei WID new RAN4 s (4DL/1UL) REL-13 -
conclusion: approved (unseen)

2DL intra-band contiguous:

RP-150194 New WID Proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 8 CMCC WID new RAN4 s (C) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_C_B8;
conclusion: revised in RP-150416

RP-150416 New WID Proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 8 CMCC WID new RAN4 s (C) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_C_B8
discussion: Qualcomm: do we need 1.4MHz and 3MHz?
CMCC: RP-150416 has solved this already
Vodafone: concerned removing 3MHz (avoiding fragmentation)
conclusion: revised in RP-150437 (remove (2UL/2DL) from WI title, tick Radio Access in section 1, fill out section 2, section 9: no impact on AN?)

RP-150437 New WID Proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 8 CMCC WID new RAN4 s (C) REL-13 -
conclusion: approved

3DL intra-band non-contigous:

Samsung Exhibit 1025, Page 1220 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150246 New WID: LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 42 for 3DL
Huawei, Etisalat WID new RAN4 s (NC 3DL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_NC_B42_3DL
discussion: MCC: in the future we should replace the x in the new TR.
conclusion: approved
Note: The WID does not clarify whether the new TR is created by the Core part or the Perf. part. The rapporteur clarified that the TR is created by the Core part.

4DL intra-band contiguous:

RP-150198 New WI proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 4DL
CATT WID new RAN4 s (C 4DL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_C_B42_4DL
discussion: MCC: TR for Core or Perf. part?
Orange: table format is difficult to interpret; also a not that additional BW combis can be added
conclusion: revised in RP-150438

RP-150438 New WI proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 4DL
CATT WID new RAN4 s (C 4DL) REL-13 -
conclusion: approved

2UL:

Note: So far we had 5 2UL classes in REL-12: A1/A2/A3/A4/A5 which were covering FDD-FDD cases. For REL-13 we defined so far classes A1/A2/A3 which also covered so far just FDD-FDD cases. RP-150064 intends to cover new FDD-TDD cases and in the same connection it was clarified that in REL-13 A1/A2/A3, the new A4 (see RP-150103) and a potentially future A5 have to cover TDD-TDD as well. This requires updated REL-13 WIDs for A1/A2/A3 and a revision of RP-150103 in RP-150410:

RP-150064 New WID: LTE Advanced dual uplink inter-band Carrier Aggregation FDD-TDD KDDI WID new RAN4 s (2UL) REL-13 -
new class
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_2UL_FDD_TDD;
note: This will be another 2UL basket WI (covering e.g. B1_B42) for FDD-TDD cases while LTE_CA_2UL_R13-Ax covers FDD-FDD and TDD-TDD but TR 36.860-13 will also be used for combinations of LTE_CA_2UL_FDD_TDD
conclusion: approved

RP-150103 New WI proposal: LTE Advanced dual uplink inter-band Carrier Aggregation Class A4 Nokia Corporation WID (new) RAN4 s (2UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_2UL_R13-A4;
conclusion: revised in RP-150410 to clarify that TDD-TDD is part of this WI

RP-150410 New WI proposal: LTE Advanced dual uplink inter-band Carrier Aggregation Class A4 Nokia Corporation WID new RAN4 s (2UL) REL-13 -
revision of RP-150103 to add TDD-TDD; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_2UL_R13-A4
conclusion: approved
Note: The TR 36.860-13 was created by WI LTE_CA_2UL_R13-A1-Core, therefore this new WI can only affect the TR 36.860-13. This WID does not clarify whether TR 36.860-13 is affected by the Core or the Perf. part. The rapporteur clarified after RAN #67 that TR 36.860-13 is affected by Core and Perf. part.

3DL/2UL inter-band:

Note: It was clarified that the WI RP-150105 includes only combinations of 3DL/1UL and 2UL which are already standardized.

RP-150105 New WI proposal: LTE Advanced 3DL/2UL inter-band Carrier Aggregation Nokia Corporation, LG Electronics WID new RAN4 s (3DL/2UL) REL-13 -
new class
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_3DL_2UL
conclusion: revised in RP-150439

RP-150439 New WI proposal: LTE Advanced 3DL/2UL inter-band Carrier Aggregation Nokia Corporation, LG Electronics WID new RAN4 s (3DL/2UL) REL-13 -
discussion: Vodafone: concerned that combinations which are not yet completed could not be added later to the WID
conclusion: revised in RP-150479

Samsung Exhibit 1025, Page 1221 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150479 New WI proposal: LTE Advanced 3DL/2UL inter-band Carrier Aggregation Nokia Corporation, LG Electronics WID new RAN4 s (3DL/2UL) REL-13 -
conclusion: approved

13.3 UE conformance testing WIs/SIs led by RAN5

RP-150071 New WI proposal: UE Conformance Test Aspects - Further DL MIMO Enhancement for LTE-Advanced ZTE WID new RAN5 REL-12 -
new WI for LTE only; leading WG: RAN5; WI code to be used: LTE_eDL_MIMO_enh-UEConTest; tested core part: LTE_eDL_MIMO_enh-Core
conclusion: approved

RP-150130 New WI proposal: UE Conformance Test Aspects - DCH Enhancements for UMTS Qualcomm Incorporated WID new RAN5 REL-12 -
new WI for UTRA only; leading WG: RAN5; WI code to be used: UTRA_DCHenh-UEConTest; tested core part: UTRA_DCHenh-Core;
conclusion: revised in RP-150412

RP-150412 New WI proposal: UE Conformance Test Aspects - DCH Enhancements for UMTS Qualcomm Incorporated WID new RAN5 REL-12 -
new WI for UTRA only; leading WG: RAN5; WI code to be used: UTRA_DCHenh-UEConTest; tested core part: UTRA_DCHenh-Core;
conclusion: approved

RP-150131 New WI proposal: UE Conformance Test Aspects – LTE Device-to-Device Proximity Services Qualcomm Incorporated WID new RAN5 REL-12 -
new WI for LTE only; leading WG: RAN5 ; WI code to be used: LTE_D2D_Prox-UEConTest; tested core part: LTE_D2D_Prox-Core
conclusion: approved

RP-150134 New WI proposal: UE Conformance Test Aspects - L-band for Supplemental Downlink in E-UTRA and UTRA Ericsson WID new RAN5 REL-12 -
new WI for UTRA & LTE; leading WG: RAN5; WI code to be used: LTE_UTRA_SDL_BandL-UEConTest; tested core part: LTE_UTRA_SDL_BandL-Core
conclusion: approved

RP-150135 New WI proposal: UE Conformance Test Aspects - Low cost & enhanced coverage MTC UE for LTE Ericsson WID new RAN5 REL-12 -
new WI for LTE only; leading WG: RAN5; WI code to be used: LC_MTC_LTE-UEConTest; tested core part: LC_MTC_LTE-Core
conclusion: approved

RP-150136 New WI proposal: UE Conformance Test Aspects - Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL Ericsson WID new RAN5 REL-12 -
new WI for LTE only; leading WG: RAN5; WI code not yet allocated (maybe LTE_CA_Rel12_2UL-UEConTest) as scope of the WI unclear; tested core parts (?): LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A5-Core;
discussion: MCC: This would be the 3rd basket WI for REL-12 CA testing WIs, the first basket is proposed to be completed at RAN #67 shifting parts into the 2nd ongoing basket of 3DL (reason for this unclear, danger that 2nd basket is handled in the same way and WI titles do no longer reflect what is in the basket);
conclusion: approved

new basket

RP-150137 New WI proposal: UE Conformance Test Aspects - Codec for Enhanced Voice Services (EVS) Ericsson WID new RAN5 REL-12 -
new WI for IMS (UTRA & LTE); leading WG: RAN5; WI code to be used: EVS_codec-UEConTest; tested core part: SA4 REL-12 WI EVS_codec
conclusion: approved

RP-150202 New WI proposal: UE Conformance Test Aspects - Smart Congestion Mitigation in E-UTRAN NTT DOCOMO, INC. WID new RAN5 REL-12 -

Samsung Exhibit 1025, Page 1222 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

new WI for LTE only; leading WG: RAN5; WI code to be used: SCM_LTE-UEConTest; tested core part: SCM_LTE-Core
conclusion: approved

RP-150245 New WID Proposal: UE Conformance Test Aspects - Performance Requirements of Interference Cancellation and Suppression Receiver for SU-MIMO for E-UTRA Huawei, HiSilicon WID new RAN5 REL-12 -
new WI for LTE only; leading WG: RAN5; WI code to be used: LTE_SUMIMO_RX-UEConTest; tested: LTE_SUMIMO_RX-Perf (note: There was no Core part for this)
conclusion: approved

Samsung Exhibit 1025, Page 1223 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

14 UE capabilities/FGIs

RAN2 CRs:

RP-150378 RAN agreed CRs on UE capability for modified MPR behavior RAN2 CR 36.306 set REL-8 LTE-L23, TEI10
conclusion: approved

RP-150379 RAN agreed CR on Introduction of UL64QAM based on split of DL and UL categories RAN2 CR 36.3060261 1 F REL-8 LTE-L23, TEI12
Note: The corresponding signalling CR to TS 36.331 which was originally in R2-150714 CR1769r1 was merged into R2-150715 CR1768r1 on REL-12 ASN.1 review.
conclusion: approved

REL-12 UE capabilities:

RP-150032 LS on LTE Rel-12 UE feature list about RAN1 responsible features (R1-150947; to: RAN; cc: RAN2, RAN4; contact: NTT DOCOMO) RAN1 LSin REL-12 -
RAN action requested;
conclusion: noted, no LS answer

RP-150034 LS on LTE Rel-12 UE feature list about RAN2 responsible features (R2-150703; to: RAN; cc: RAN1, RAN4; contact: NTT DOCOMO) RAN2 LSin REL-12 -
RAN action requested;
conclusion: noted, no LS answer

RP-150036 LS on LTE Rel-12 UE feature list about RAN4 responsible features (R4-151044; to: RAN; cc: RAN1, RAN2; contact: NTT DOCOMO) RAN4 LSin REL-12 -
RAN action requested;
conclusion: noted, no LS answer

RP-150178 Handling of Rel-12 UE features (RAN4 part) NTT DOCOMO, INC., SoftBank Mobile, T-Mobile USA, CMCC, Orange, Deutsche Telekom, TeliaSonera, Lightsquared, Telecom Italia, Telefónica Disc REL-12 TEI12
Tdoc is moved from AI 8.4.2 to AI 14
provides views on which Rel-12 RAN4 UE features should be mandatory or optional; compare LSin RP-150036 = R4-151044
proposal about Rel-12 UE features.
Proposal 1: #19-10: RSRQ on all symbols for LTE is mandatory for Rel-12 UE and onwards.
More specifically, "rsrqOnAllSymbols-r12"
Proposal 2: IncMon (#17-1) is mandatory for Rel-12 UEs and onwards except for category 0 (Rel-12 Low cost MTC) capable UEs.
More specifically,
- *For LTE: incMonEUTRA-r12, incMonUTRA-r12,*
- *For UTRA: Increased UE carrier monitoring UTRA, Increased UE carrier monitoring E-UTRA*

Proposal 3: The others (#18-1: SU-MIMO, #19-9: RSRQ lower value range) are optional
conclusion: noted

RP-150259 On Rel-12 UE eIMTA UE capabilities CATT Disc REL-12 LTE_TDD_eIMTA
discussion on eIMTA feature 7-1 for Rel-12 UEs
Proposal: phy-TDD-ReConfig-TDDPCell is mandatory for Rel-12 UEs supporting TDD.
conclusion: noted

RP-150209 Merged LTE Rel-12 UE feature list and leftover issues NTT DOCOMO, INC. Disc REL-12 TEI12
Proposal 1: TSG-RAN approves the RAN WG recommendation on mandatory/optional features as in the feature list.
Proposal 2: TSG-RAN discusses and decides mandatory/optional features listed in Table 1:

Samsung Exhibit 1025, Page 1224 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

WI	#	Feature group	Responsible W	RAN WG recommendati	TSG-RAN decision
7. eIMTA	7-1	UL-DL re-configuration via L1 signaling for non-CA and CA (if supported) with TDD Pcell	RAN1	FFS	
17. Increasing the min. num. of freqs to monitor	17-1	Increased number of monitoring carriers for LTE and UTRA	RAN4	No consensus	
18. Interf. cancel and suppress	18-1	SU-MIMO Advanced receiver	RAN4	No consensus	
19. Group call eMBMS congestion management	19-1	MTCH suspension	RAN2/3	FFS	
20. TEI12	20-9	RSRQ lower value range extension	RAN4	No consensus	
	20-10	RSRQ on all symbols	RAN4	No consensus	

Proposal 3: The need of FDD/TDD differentiation for the small cell discovery features (3-3, 3-4 and 3-5 in the feature list) are decided later when their implementation becomes realistic.

WI	#	Feature group	Need of FDD/TDD differentiation
3. SCE Physical Layer	3-3	UE procedure related to Small cell on/off by CA SCell activation/deactivation	Same as 3-4
	3-4	CRS-based discovery signal/procedure	TBD
	3-5	CSI-RS-based discovery signal/procedure	Same as 3-4

discussion: proposal 2:
RAN chair: SU-MIMO Advanced and RSRQ lower value range extension could be made optional and others to be discussed?
Qualcomm, Intel, Samsung, Blackberry, LG: would like to see all features of proposal 2 optional
Orange, Telecom Italia: all features of proposal 2 should be mandatory (except SU-MIMO Advanced which can be optional)
AT&T: is there a signalling indication for 17-1 in RAN2? if yes, this can be optional
NTT DOCOMO: 17-1 is important feature for operators and vendors and should be mandatory
RAN chair: further offline discussion please
Telecom Italia: operators on one side and manufacturers on the other side will be difficult to converge

conclusion: noted

RP-150511 Way forward in handling of RAN4 features NTT DOCOMO, INC., Orange, TeliaSonera, AT&T, Telecom Italia, Softbank Mobile, Deutsche Telekom Disc REL-12 -

proposal:

- *The following two of the four capabilities for IncMon shall be mandatory for Rel-12 UEs and onwards except for category 0 (Rel-12 Low cost MTC) capable UEs to monitor more E-UTRA carriers.*
  - *incMonEUTRA-r12*
  - *Increased UE carrier monitoring E-UTRA*
- *The remaining following capabilities are FFS.*
  - *incMonUTRA-r12*
  - *Increased UE carrier monitoring UTRA*
- *The followings are handled as optional*
  - *SU-MIMO*
  - *RSRQ on all symbols*

Samsung Exhibit 1025, Page 1225 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- *RSRQ lower value range extension*

discussion: Deutsche Telekom: having it optional for cat. 0 is the only compromise that is possible
Qualcomm: is ok with the proposal but would suggest to have it optional for UTRA instead of ffs
Orange: prefers to keep it ffs
Microsoft: supports Qualcomm
RAN chair: it seems we cannot decide
Orange, Deutsche Telekom: think that we can decide on LTE and leave UMTS part ffs
Intel: that's not a compromise

conclusion: noted, way forward is not approved, discussion to continue until RAN #68

New UE categories:

RP-150096 Introduction of new UE categories Qualcomm Disc REL-12 TEI12

proposals:

- *The DL peak data rates of new UE categories should be a multiple of 200Mbps*
- *The following two new UE categories should be added:*
  - *Cat x: 1000Mbps DL*
  - *Cat y: 1600Mbps DL*
- *The 1000Mbps category should be defined for Rel-12, while the release for the 1600Mbps could be Rel-13+.*
- *The introduction of other UE Categories around 1000Mbps - in addition to 1000Mbps - can be also considered.*
- *The UL peak data rate(s) for the new categories is TBD.*

conclusion: noted

RP-150161 Introduction of new UE category KDDI Disc REL-12 ?

proposal:

- *Introduce a UE category of 1G DL peak data rate in Rel-12 with the following condition: Introducing 1G UE category should not restrict introducing other UE categories between 600M and 1G, or around 1Gbps*

discussion: KDDI: also Samsung supports this Tdoc
Qualcomm: is in line with our proposal RP-150096 so we support RP-150161
Ericsson: also supports KDDI Tdoc

conclusion: noted

RP-150207 Way forward on new UE categories in Rel-12 and 13 NTT DOCOMO, INC. Disc REL-12 TEI12

proposal:

- *Introduce a new UE category for DL 750 Mbps from Rel-12. The corresponding CR is prepared for RAN#68.*
- *Introduce new UE categories for 1 Gbps or beyond from Rel-13. The target rate will be continued to discuss and decided until RAN#69 (so that the corresponding CR can be prepared for RAN#70).*

conclusion: revised in RP-150367

RP-150367 Way forward on new UE categories in Rel-12 and 13 NTT DOCOMO, INC., AT&T, MediaTek, ACER, ASUS, CHT, HTC, ITRI, LGE, Panasonic, Sharp, Hitachi Disc REL-12 TEI12

proposal:

- *Introduce a new UE category for DL 750 Mbps from Rel-12.*

The corresponding CR is prepared for RAN#68.

- *Introduce new UE categories for 1 Gbps or beyond from Rel-13*

The target rate will be continued to discuss and decided until RAN#69 (so that the corresponding CR can be prepared for RAN#70).

discussion: KDDI: does not support NTT proposal, no need to postpone to REL-13

conclusion: noted

RP-150242 Way forward on new DL UE categories Huawei, HiSilicon Disc REL-12 LTE_CA-Core, LTE_SC_enh_L1, TEI12

proposal:

Introduce in Rel-12:

- *a UE DL category around 800 Mbps*
- *a UE DL category around 1 Gbs*
- *a UE DL category around 1.2 Gbps*

discussion: Deutsche Telekom: concerned that we are introducing too many categories if we go now in steps of 200Mbytes

Samsung Exhibit 1025, Page 1226 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Microsoft: supports Deutsche Telekom, normal user does not care about the categories
Sprint: supports the Huawei proposal
RAN chair: offline discussion needed, we will come back on Thu
Deutsche Telekom: we had the principle to minimize the number of categories in the past
conclusion: noted

RP-150298 CR to 36.306 on new DL UE categories Huawei, HiSilicon CR36.306 0268 - C REL-12 LTE_CA-Core, LTE_SC_enh_L1, TEI12
company contribution not related to RAN2 Tdocs
conclusion: revised in RP-150458 (as no CR number on CR cover of RP-150298)
RP-150458 CR to 36.306 on new DL UE categories Huawei, HiSilicon CR36.306 0268 1 C REL-12 LTE_CA-Core, LTE_SC_enh_L1, TEI12
conclusion: not treated

RP-150299 CR to 36.331 on new DL UE categories Huawei, HiSilicon CR36.331 1799 - C REL-12 LTE_CA-Core, LTE_SC_enh_L1, TEI12
company contribution not related to RAN2 Tdocs
conclusion: revised in RP-150459 (as no CR number on CR cover of RP-150299)
RP-150459 CR to 36.331 on new DL UE categories Huawei, HiSilicon CR36.331 1799 1 C REL-12 LTE_CA-Core, LTE_SC_enh_L1, TEI12
conclusion: not treated

On Thursday:
RP-150489 Way forward on new UE categories in Rel-12 KDDI, Sprint, CMCC, Huawei, HiSilicon, Qualcomm, Ericsson, Nokia Corporation, Nokia Networks, Samsung Disc REL-12 TEI12
proposal:
Introduce three new DL UE categories for 800 Mbps and 1Gbps, 1.2Gbps from Rel-12
- *256QAM should not be mandatory for any of these new categories*
- *RAN WGs work in 2015/2Q*
- *The corresponding CR is prepared for RAN#68*

discussion: NTT DOCOMO: any feasibility study for 4x4 plus 256QAM?
KDDI: we agreed to reduce the number of categories
Ericsson: does not agree with concerns from NTT DOCOMO
Deutsche Telekom: by far too many categories which would fragment the market
Microsoft: same view as Deutsche Telecom, 1Gbit/s is enough for REL-12
Huawei: what about agreeing the first 2 800 Mbps and 1Gbps for REL-12?
NTT DOCOMO: concerned about uncertain features
Nokia Networks: for HSPA we have 28 categories, it was never a problem but in fact just a few came to the market
Sprint: supports 1Gbps, 1.2Gbps from Rel-12
NTT DOCOMO: proposes 700Mbps for REL-12 and 1Gbps for REL-13
KDDI: cannot agree to 1Gbps just for REL-13
RAN chair: 800Mbps for REL-12 or 800Mbps + 1Gbps for REL-12

Show of hands:
1. 750/800Mbps only: 9 companies (DCM, LGE, Sierra, Sharp, MediaTek, NTT, MStar, CHTTL, ITRI)
2. 750/800Mbps and 1 Gbps: 19 companies (Softbank, Samsung, CMCC, Intel, MS, ALU, ASB, HUA-Dev, HUA, E///, QC, Sprint, KDDI, Nokia, Nokia Net, DT, HiSi, TD Tech, IDCC)

conclusion: noted; will go for option 2; RAN1 will decide if 750Mbps or 800Mbps and the feature combination to get to the category

15 Inter WG/TSG-related discussions & decisions

See also AI 11.3.5 for related MCPTT LSs.

RP-150380 MCPTT Project Plan Proposal SA WG2 Chairman, US Department of Commerce (Rapporteur), UK Home Office (Rapporteur), CESG Disc REL-13 MCPTT
A project plan to propose at SA, CT and RAN plenaries in March.

Samsung Exhibit 1025, Page 1227 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

presented by SA2 chairman (Samsung)
RAN impact: RAN WG SI in Q2/Q3 2015, WI in Q4 2015
proposal: It is proposed that RAN, CT and SA discuss the coordination aspects of this plan.
The plan assumes that work is initiated and progresses at a certain rate. It is proposed to reassess the plan with respect to achieved progress at each plenary to identify how best to complete work on the MCPTT and dependent features within the release time frame.
discussion: RAN chair: any comments? none
RAN chair: anyway corresponding containers are in place (e.g. eD2D and PtM)
conclusion: noted

16 Outputs to other groups

No contributions

17 TSG RAN elections

NOTE: Elections for RAN chair and 3 RAN vice-chair positions will be carried out during RAN #67 and will start on Monday morning.

voting list: http://www.3gpp.org/ftp/webExtensions/elections/RAN/Elections2015/votingList_RAN_mtg-67r1.htm
179 Individual Members have the right to vote
candidatures received so far: http://www.3gpp.org/news-events/elections/1652
3GPP working procedures: ftp://ftp.3gpp.org/Information/Working_Procedures/3GPP_WP.zip
see esp. Article 22, 28, 35

17.1 Election of RAN chairman

Election took place on 09.03.2015:

Candidates:
Mr. Dino Flore Qualcomm Incorporated / ATIS

RAN vice-chairman Giovanni Romano asked TSG RAN participants whether there are any further candidates with a letter of support from the Individual Member that he/she represents (acc. to Article 22 of 3GPP working procedures).

No other candidate, Mr. Dino Flore is elected as RAN chairman for a 2nd term by acclamation.

17.2 Election of RAN vice-chairmen

Election took place on 09.03.2015:

Candidates:
Mr. Giovanni Romano TELECOM ITALIA S.p.A. / ETSI
Mr. Sharat Chander AT&T / ATIS
Mr. Takaharu Nakamura Fujitsu Limited / ARIB

RAN chair Dino Flore asked TSG RAN participants whether there are any further candidates with a letter of support from the Individual Member that he/she represents (acc. to Article 22 of 3GPP working procedures).

No other candidate.
Mr. Giovanni Romano is elected as RAN vice-chairman for a 2nd term by acclamation.
Mr. Sharat Chander is elected as RAN vice-chairman for a 2nd term by acclamation.
Mr. Takaharu Nakamura is elected as RAN vice-chairman for a 2nd term by acclamation.

Samsung Exhibit 1025, Page 1228 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

18 Project management

5G:

LSs:

ITU-R related LSs RP-150041, RP-150031 and RP-150043 of AI 7.2.2 will be treated first.

RP-150019 LS on NGMN's 5G Initiative (2nd LS)
(NGMN_LS_141223; to: SA, RAN, CT; cc: -; contact: NGMN Office) NGMN
LSin - -
presented by Alcatel-Lucent
RAN action requested
discussion: RAN chair: NGMN suggests "standards ready end of 2018"
Huawei: reference is shifted compared to ITU
RAN chair: we will discuss our timeline here in 3GPP as we have to take into account also industry factors
Telecom Italia: do we plan to answer the LS?
RAN chair: can be decided later this week
conclusion: noted, no LS answer

5G Workplan:

RP-150056 Getting ready for "5G" RAN chairman (Qualcomm) Disc
discussion: Nokia Networks: supports a workshop in Sep. (could even go for Sat/Sun after RAN)
Telecom Italia: workshop open to non-3GPP members?
RAN chair: we do not be flooded by inputs but we could consider inputs from outside 3GPP as well
Microsoft: workshop should not impact REL-13, prefers workshop in Dec.
Mediatek: channel model ad hoc will have impact on WGs so we need to be careful
ALU: new radio below and above 6GHz have to be taken into account and they may have different time lines
ALU: for which band we consider the channel model needs to be decided as well
RAN chair: channel modelling group could look at this at the beginning
ALU: prefers to keep channel modelling in RAN1 but also sees impact on RAN1 then that has to be taken into account
Ericsson: supports the slides; slide 12: start of work in WGs: stage 3 freeze is in Dec. and WGs can work when they have finished REL-13
RAN chair: we can consider a disclaimer here regarding the freeze of REL-13
AT&T: agrees with the slides, workshop should happen in Sep.; having it before the RAN meeting would be more appropriate; does not support to have the workshop in the week-end
Samsung: supports chairman's slides; supports that WGs can start March 2016
Orange: "new radio": we do not yet know whether there is one or multiple; we need to be careful to not impact REL-13 as it is a big REL in a short time interval; time difference between NGMN and ITU-R: unclear what is contents of first REL
CMCC: 2 or 3 days workshop between RAN #69 and RAN #70 preferred; channel modelling should not impact REL-13 RAN1 work
Vodafone: if in Sep. then better after RAN #69
NTT DOCOMO: prefers workshop in Sep.15, would want to start channel model work in Sep.
Sprint: is for having workshop in Sep. and not on the week-end; Internet of things and tight integration will be key aspects of 5G so interworking will be essential
RAN chair: SA1 has already a 5G SI called SMARTER and a coordination with them will be useful in the future
Deutsche Telekom: RAN-SA coordination useful, workshop after RAN #69 is preferred (not necessarily on the week-end)
Fujitsu: we have to distinguish below and above 6GHz
RAN chair: the workshop will not be limited to one of them
Huawei: supports RAN workshop in Dec., before Nov.2015 (WRC) we will not know which bands are available; worshop on requirements or also technologies?
RAN chair: both possible, no restriction

Samsung Exhibit 1025, Page 1229 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

LG: REL-14 could start in June 2016, 2 days not enough for enough, channel model part will involve RAN1 people busy with MIMO and LAA, would propose to use whole REL-14 for channel modelling
TeliaSonera: would like to see the workshop after RAN #69 in Sep. bit shift the RAN meeting to start earlier; starting work in WGs in March 16 is too early
SA2 chair (Samsung): also inputs from SA2 expected (not only SA1)
NEC: supports that RAN and SA are involved in the workshop; Sep.15 is good; having it before RAN #69 would be too early
Intel: RAN SI in Dec. is ok; workshop after Sep. is ok; RAN1 REL-13 and channel modelling should not collide
Telecom Italia: we can submit our requirements to ITU-R, LTE could be also part of the submission

conclusion: revised in RP-150467

RP-150217 5G Standardization Work Plan NTT DOCOMO, INC. Disc
conclusion: revised in RP-150440

RP-150440 5G Standardization Work Plan NTT DOCOMO, Fujitsu, Hitachi, Kyocera, Mitsubishi, NEC, NTC, NTT, Panasonic, Sharp, Sony, KDDI, Sumitomo Elec. Industries Disc
conclusion: noted

RP-150222 Timeline of RAN work for 5G Samsung Disc
conclusion: noted

RP-150244 Views on the timeline of 5G standardization and channel modeling activities in RAN Huawei, HiSilicon Disc
conclusion: noted

RP-150286 Discussion on 5G timeline in RAN CATR Disc
conclusion: noted

RP-150305 5G timing in RAN Ericsson Disc
conclusion: noted

RP-150316 Considerations on 5G Standardization CMCC Disc
note: Includes a draft SID for information.
conclusion: noted

after offline discussion during Tue lunch break:

- show of hands for workshop in 2 steps:
- Sep.15 or Q4 option
  - if Sep.15:
  a. in TSG week (RAN: Mon-Wed and workshop Thu/Fri, only SIs that move to WIs, spectrum/testing WIs will be considered) or
  b. after (Mon/Tue)
  - if Q4:
  a. in the middle of Q4 (place tbd) or
  b. immediately before Nov. WG meetings
  c. immediately before RAN #70 in Dec. (Thu/Fri)
- channel modelling: a SI in Sep.15 RAN #69 planned, RAN will identify the bands in RAN #70 and WGs will not start before 2016
- REL-13 schedule is kept
- scope of joint RAN-SA discussion on Wed during RAN #67: reporting from RAN about 5G plan and comments from SA, will not reopening the discussion (also schedule for TSG #69 will be shown)
- no limitation on the scope of the "RAN workshop on 5G" for Sep.15, workshop will be open for non-3GPP members but details tbd

Sep.15 option: 43
Q4 option: 22
=> Sep.15 option decided

in same week: 36
on Mon/Tue: 16

Samsung Exhibit 1025, Page 1230 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> workshop will be in same week as RAN #69 (Mon-Wed RAN, Thu/Fri workshop)

RP-150467 Getting ready for "5G" RAN chairman (Qualcomm) Disc - -
planned to be presented to SA #67 in joint session on Wed evening
discussion: RAN4 chair: spectrum aspects excluded on slide 15
RAN chair: yes
RAN chair: there may be a problem for the host to get the room for Fri for the workshop; in case of problems the workshop will be moved to Mon/Tue in the week later; will be decided as soon as possible
Telecom Italia: concerns were raised that workshop is going on in parallel to SA and inviting SA1 chair will then not work
SA chair: we could swap CT and SA or condense CT/SA to 3 days
Telecom Italia: IMT2020 is still subject to some modifications
Fujitsu: it would also good to indicate a REL on slide 11
Telecom Italia: June 2019 on slide 11 is ITU-R deadline i.e. 3GPP has to do their part well in advance
Huawei: make sure that there is no 5G discussion in WGs in Q4
ALU: maybe it would be better to split usual aspects that are still for further discussions from RAN decisions (like the workshop)
NTT DOCOMO: scope/objectives of the workshop should be clarified in a separate Tdoc
Huawei: do we see an updated version?
RAN chair: no, only minor modifications will be done before SA submission
Orange: slide 18: concerned about "channel modelling will start"
conclusion: revised in RP-150483
RP-150483 Getting ready for "5G" RAN chairman (Qualcomm) Disc - -
conclusion: noted, will be presented to SA with minor modifications

beyond 6GHz:
Tdocs related to new SIs/WIs RP-150219, RP-150221, RP-150220 and RP-150308 of AI 13.1.1 will be handled here.

Work plan:

RP-150017 3GPP Work Plan review at Plenary #67 (pre-TSG version)ETSI MCC Workplan - -
conclusion: revised in RP-150057
RP-150057 3GPP Work Plan review at Plenary #67 (past-TSG version) ETSI MCC Workplan - -
discussion: General Dynamics: status of MBMS enhancement should be a SI not a WI
Workplan manager: will be checked with SA secretary and then updated
conclusion: noted

Others:

RP-150018 3GPP Support Team Report ETSI MCC Report - -
conclusion: noted

RP-150050 Hanging paragraphs ETSI MCC CR21.8010040 - F REL-12 TEI12
Toughens up the drafting rules relating to hanging paragraphs; CR is for approval in SA
discussion: No comments from RAN
conclusion: endorsed

RP-150051 Tdoc and CR status valuesETSI MCC Disc - -
Discusses and seeks approval for philosophy of status value allocation
discussion: NEC: "withdrawn" preferred to avoid "rejected" and "partially approved" is not appropriate
NEC: will status be announced by the chair?
Specs manager: yes, apart from "withdrawn" which is up to the Tdoc author
NextNav: what about "not treated"?
Specs manager: "available" will be in the meeting report as "not addressed"
conclusion: noted

RP-150052 Use of multiple WI codes on CRs ETSI MCC Disc - -
Outlines the working practices and (undocumented) rules
discussion: NEC: changes relevant for a whole group of CA were often abbreviated
MCC: as these abbreviations can not tracked anywhere, this has to be avoided and the WI codes have to be listed
Huawei: in RAN1 we often merge multiple WIs in the same CR

Samsung Exhibit 1025, Page 1231 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

MCC: If the CRs can not be split, that's ok. Often a common CR is considered because of time pressure but the draw back is that implementers or RAN5 will have difficulties to separate which changes are coming from which feature. So separate CRs is preferrable.

conclusion: noted

Samsung Exhibit 1025, Page 1232 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

19 Future meeting schedule

Meeting schedule 2010/2011/2012/2013/2014/2015/2016:

MEETING	DATES	LOCATION	HOST
RAN #47	16 March – 19 March 2010	Vienna, Austria	EF3
RAN #48	1 June – 4 June 2010	Seoul, Korea	TTA
RAN #49	14 Sep. – 17 Sep. 2010	San Antonio, USA	NAF3
RAN #50	7 Dec. – 10 Dec. 2010	Istanbul, Turkey	EF3
RAN #51	15 March – 18 March 2011	Kansas City, USA	Sprint Nextel
RAN #52	31 May – 3 June 2011	Bratislava, Slovakia	EF3
RAN #53	13 Sep. – 16 Sep. 2011	Fukuoka, Japan	ARIB & TTC
RAN #54	6 Dec. – 9 Dec. 2011	Berlin, Germany	EF3
RAN #55	28 Feb. – 2 March 2012	Xiamen, China	ZTE, CMCC
workshop ***	11 June - 12 June 2012	Ljubljana, Slovenia	EF3
RAN #56	13 June – 15 June 2012	Ljubljana, Slovenia	EF3
RAN #57	4 Sep. – 7 Sep. 2012	Chicago, USA	NAF3
RAN #58	4 Dec. – 7 Dec. 2012	Barcelona, Spain	EF3
RAN #59	26 Feb. – 1 March 2013	Vienna, Austria	EF3
RAN #60	11 June – 14 June 2013	Oranjestad, Aruba	NAF3
RAN #61	3 Sep. – 6 Sep. 2013	Porto, Portugal	EF3
RAN #62	3 Dec. – 6 Dec. 2013	Busan, Korea	TTA
RAN #63 **	3 March – 6 March 2014	Fukuoka, Japan	ARIB & TTC
RAN #64	10 June – 13 June 2014	Sophia Antipolis, France	ETSI
workshop LTE-U	13 June 2014	Sophia Antipolis, France	ETSI
RAN #65	9 Sep. – 12 Sep. 2014	Edinburgh, Scotland	EF3
RAN #66 **	8 Dec. – 11 Dec. 2014	Maui, USA	NAF3
**RAN #67 ** **	**9 March – 12 March 2015**	**Shanghai, China**	**Huawei**
RAN #68 **	15 June – 18 June 2015	Malmö, Sweden	EF3
RAN #69 **	14 Sep. – 17 Sep. 2015	Phoenix, USA	NAF3
RAN #70 **	7 Dec. – 10 Dec. 2015	Sitges, Spain	EF3
RAN #71 **	7 March – 10 March 2016	Göteborg, Sweden (tbc)	EF3
RAN #72 **	13 June – 16 June 2016	tbd, Korea	TTA
RAN #73 **	19 Sep. – 22 Sep. 2016		
RAN #74 **	5 Dec. – 8 Dec. 2016	Vienna, Austria (tbc)	EF3

***: RAN Workshop on REL-12 and onwards

**: 1 week TSG i.e. in same week with CT and SA, therefore starting on Monday

20 Any other business

Nothing to report.

21 Closing of the meeting

The TSG RAN chairman Dino Flore (Qualcomm) thanked the delegates for participating and contributing to RAN meeting #67, he thanked the host for organizing the meeting and he closed the meeting on Thursday March.12th, 2015 at about 4:45pm.

Samsung Exhibit 1025, Page 1233 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex A:
List of participants

The list of participants of this RAN meeting #67 is attached to this report.

Total number of participants: 229 (registered before the meeting: 310)

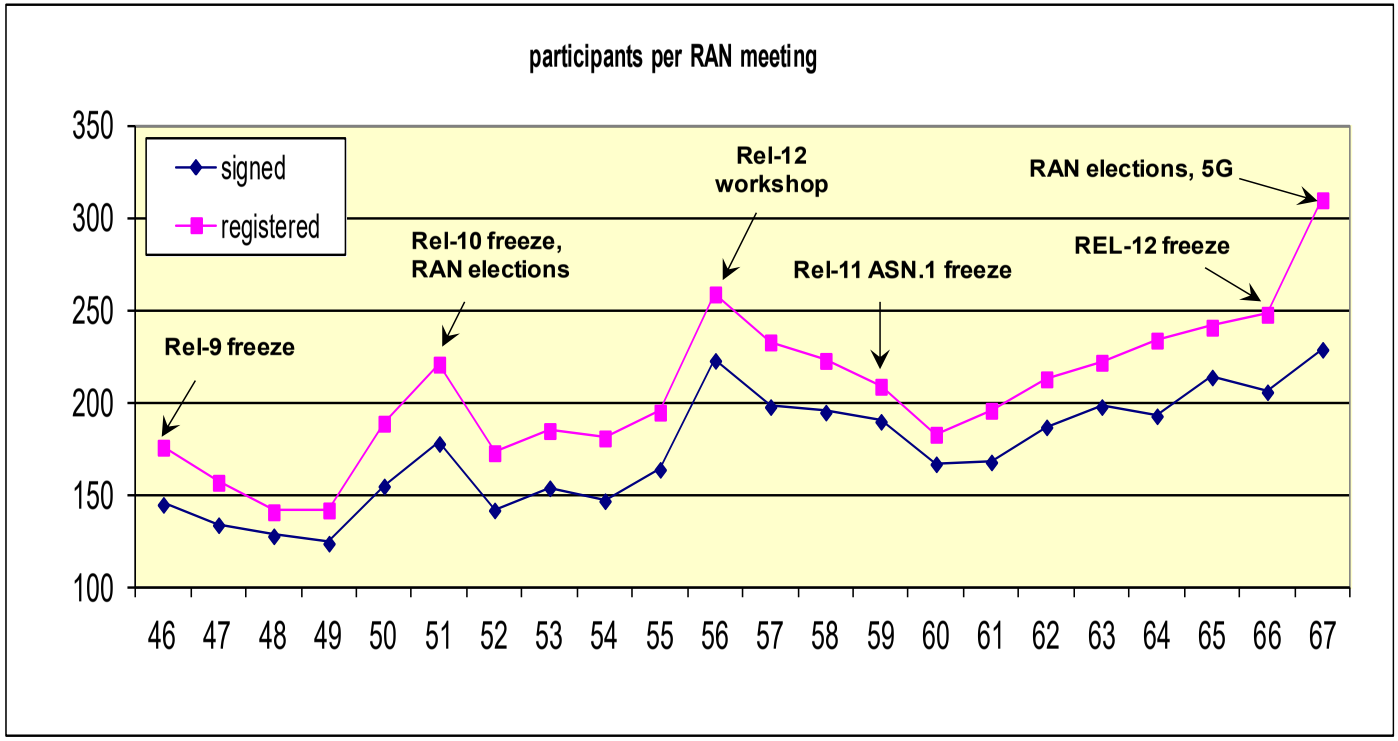


Fig. A-1: Participants per RAN meeting (registered beforehand and actual participants who signed)
(1 week TSG: #63, #66 and further meetings)

Samsung Exhibit 1025, Page 1234 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex B:
List of Tdocs

The list of Tdocs of this RAN meeting #67 is attached to this report.

Total number of Tdocs: 519 (RP-150001 - RP-1500519) of which 509 Tdocs are available, i.e. 10 are not available and they are withdrawn.

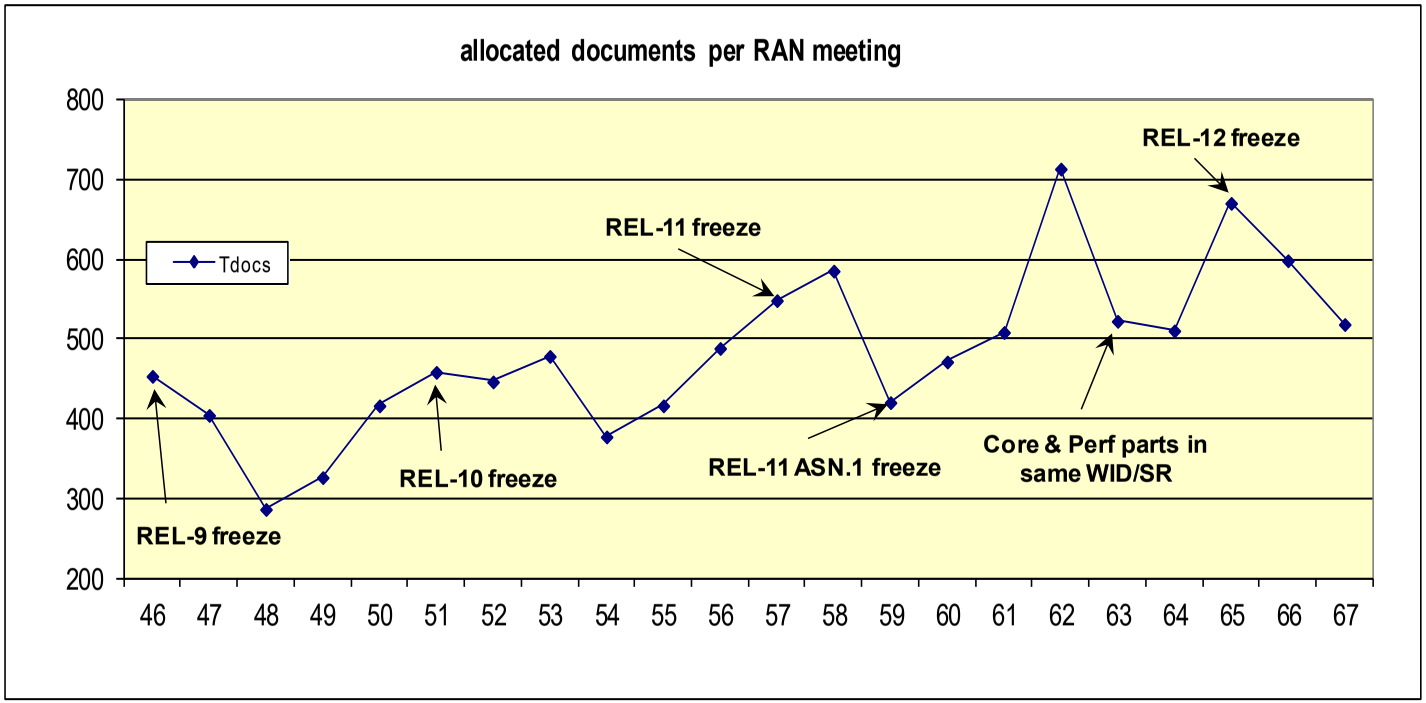


Fig. B-1: Number of allocated Tdocs per RAN meeting

Samsung Exhibit 1025, Page 1235 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex C:
Incoming liaison statements (LSin)

In total 27 LSs/LTIs were received for RAN #67 (1 of them received during the meeting; 0 of them received after the meeting). 27 LSs/LTIs were treated.

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-150019	LS on NGMN's 5G Initiative (2nd LS) (NGMN_LS_141223; to: SA, RAN, CT; cc: -; contact: NGMN Office)	NGMN	-	-	yes	noted	none	LS treated under AI 18
RP-150020	LS on Licensed Shared Access (LSA) related Activities in TC RRS (ETSI TC RRS(14)028019r1; to: SA; cc: RAN, SA5; contact: Intel)	ETSI TC RRS	-	-	not explicitly	noted	none	RRS = Reconfigurable Radio Systems
RP-150021	LS on public safety discovery (S2-150691; to: RAN1, RAN2, SA3, RAN; cc: -; contact: Qualcomm)	SA2	REL-13	eProSe-Ext	not explicitly	noted	none	RAN1 answer see RP-150033; LS treated under AI 11.3.5
RP-150022	LS on support for ProSe one-to-one communication in Release 13 (S6-150076; to: RAN2; cc: SA2, RAN; contact: General Dynamics)	SA6	REL-13	MCPTT	no	noted	none	LS treated under AI 11.3.5
RP-150023	LS on Establishment of new working group TSG SA WG6 (SP-140884; to: OMA, ETSI TC TCCE, 3GPP TSG CT, SA2, SA6, ATIS; cc: TCCA, PCG, RAN, CT1, CT3, CT4, CT6, SA1, SA3, SA4, SA5; contact: SA6 convener)	SA	REL-13	MCPTT	no	noted	none	TCCE = TETRA and Critical Communications Evolution; TCCA = TETRA + Critical Communications Association; LS treated under AI 11.3.5
RP-150024	LS regarding coexistence of Licensed Assisted Access (LAA) and IEEE 802 (IEEE_802_LMSC_150202; to: RAN; cc: RAN1, IEEE 802, IEEE 802.19; contact: Chairman IEEE 802 LMSC)	IEEE 802 LMSC	REL-13	FS_LTE_LAA	not explicitly	noted	RP-150454	LMSC = Local and Metropolitan Area Network Standards Committee; RAN #66 received LSin RP-141747; RAN chair presented RP-150055 at IEEE 802 Interim Session on 13.01.2015 in Atlanta, USA; LS treated under AI 12.4.3
RP-150025	LS on Request for information sharing between ATIS COAST SYNC and 3GPP RAN on timing requirements for wireless base stations in the United States (ATIS_COAST_SYNC_150122_00007; to: RAN; cc: ATIS; contact: AT&T)	ATIS COAST SYNC	-	-	yes	noted	RP-150421	COAST = Copper/Optical Access, Synchronization and Transport Committee; SYNC = Synchronization Subcommittee
RP-150026	LS regarding CTIA MIMO OTA Test Plan Development (CTIA_LS_150203; to: RAN4, RAN5; cc: RAN; contact: AT&T)	CTIA MOSG	REL-13	LTE_MIMO_OTA-Core	no	noted	none	CTIA = Cellular Telecommunications & Internet Association; LS treated under AI 11.2.4

Samsung Exhibit 1025, Page 1236 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-150027	Reply LS to RP-142316 on OTA Test Requirement Work Plan (CTIA_LS_150202; to: RAN; cc: RAN4; contact: Spirent)	CTIA OTA WG	REL-13	LTE_UTRA_TRP_TRS-Core	no	noted	none	CTIA = Cellular Telecommunications & Internet Association; LS treated under AI 11.2.1
RP-150028	LS on current implementation of 700 MHz bandplan with 3GPP specification (ITU-R WP5D/TEMP/567; to: RAN4, RAN; cc: -; contact: ITU-R SG5 Counselor)	ITU-R WP5D	REL-11	LTE_DL_FDD700, LTE_APAC700	yes	noted	RP-150477	bands in 700-800MHz range: FDD: 12, 13, 14, 17 (all 4 from REL-8 LTE-RF), 28 (REL-11 LTE_APAC700); FDD DL: 29 (REL-11 LTE_DL_FDD700); TDD: 44 (REL-11 LTE_APAC700); LS treated under AI 7.2.2
RP-150029	LS to GCS proponents and transposing organizations on the provision of transposition references and certification C for draft revision 2 of Recommendation ITU-R M.2012 (ITU-R WP5D/TEMP/530; to: RAN, CT, SA, PCG, 3GPP2, ARIB, ATIS, CCSA, ETSI, IEEE, ITRI, TIA, TTA, TTC, WiMAX Forum; cc: -; contact: ITU-R SG5 Counsellor)	ITU-R WP5D	-	-	yes	noted	RP-150478	LS treated under AI 7.2.2; 3GPP ITU-R ad hoc prepared an answer in RP-150044
RP-150030	Response LS to S2-150658 on Support of a mix of IPv4 and IPv6 eNBs and Backhauls in eMBMS (R3-150489; to: SA2; cc: CT4, RAN, CT; contact: Alcatel-Lucent)	RAN3	REL-13	TEI13	no	noted	none	LS S2-150658 was not sent to/cc RAN but just to RAN3, CT4; LS S2-150658 and included SA2 CR related to SA2 REL-13 WI MBMS_enh (started at SA #66 and target: SA #69); RP-150030 includes RAN3 endorsed CRs to 36.300, 36.444, 36.443
RP-150031	LS to ext. organizations and research entities engaged in "5G" development requesting an update on IMT activities (ITU-R WP5D/TEMP/521(Rev.1); to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counselor)	ITU-R WP5D	-	-	yes	noted	RP-150442	LS treated under AI 7.2.2
RP-150032	LS on LTE Rel-12 UE feature list about RAN1 responsible features (R1-150947; to: RAN; cc: RAN2, RAN4; contact: NTT DOCOMO)	RAN1	REL-12	-	yes	noted	none	LS treated under AI 14.

Samsung Exhibit 1025, Page 1237 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-150033	Response LS to S2-150691 = RP-150021 on public safety discovery (R1-150948; to: SA2; cc: RAN2, SA3, RAN; contact: Qualcomm)	RAN1	REL-13	eProSe-Ext-SA2	no	noted	none	LS treated under AI 11.3.5
RP-150034	LS on LTE Rel-12 UE feature list about RAN2 responsible features (R2-150703; to: RAN; cc: RAN1, RAN4; contact: NTT DOCOMO)	RAN2	REL-12	-	yes	noted	none	LS treated under AI 14.
RP-150035	LS reply to S6-150076 = RP-150021 on support for ProSe one-to-one communication in Release 13 (R2-150710; to: SA6; cc: SA2, RAN; contact: Intel)	RAN2	REL-13	MCPTT	no	noted	none	LS treated under AI 11.3.5
RP-150036	LS on LTE Rel-12 UE feature list about RAN4 responsible features (R4-151044; to: RAN; cc: RAN1, RAN2; contact: NTT DOCOMO)	RAN4	REL-12	-	yes	noted	none	LS treated under AI 14.
RP-150037	LS on impact of optional preconfigured parameters for D2D out of Network coverage mode (R4-151170; to: RAN1, RAN2, RAN5, SA2, RAN; cc: -; contact: Sprint)	RAN4	REL-12	LTE_D2D_Prox-Core	no	noted	none	LS treated under AI 10.6.5
RP-150038	Response LS to ATIS_COAST_SYNC_150122_00007 = RP-150025 on ATIS COAST SYNC and 3GPP RAN timing requirements for wireless base stations (R4-151239; to: RAN; cc: -; contact: NSN)	RAN4	REL-12	-	yes	noted	none	RP-150038 is a reply proposal from RAN4 to LSin RP-150025; LS treated under AI 6.1 together with LSin RP-150025
RP-150039 ***	DRAFT Letter to ITU in reply to ITU-R WP5D/TEMP/567 = RP-150028 on CURRENT IMPLEMENTATION OF 700 MHz BANDPLAN WITHIN 3GPP SPECIFICATION (R4-151242; to: RAN; cc: -; contact: Ericsson)	RAN4	REL-11	LTE_DL_FDD700, LTE_APAC700	yes	noted	none	RAN action requested; RP-150039 is a reply proposal from RAN4 to answer LSin RP-150028; corresponding REL-11 LTE_APAC700-Core CR is submitted to RAN #67 in R4-151155 (in RP-150384) to align REL-11 with REL-12; LS treated under AI 7.2.2
RP-150040	LS on preliminary draft new Report ITU-R M.[IMT.ABOVE 6 GHz] (ITU-R WP5D/TEMP/534(Rev.1); to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counselor)	ITU-R WP5D	-	-	not explicitly	noted	none	LS treated under AI 7.2.2

Samsung Exhibit 1025, Page 1238 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-150041	LS on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT) (ITU-R WP5D/TEMP/577; to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counselor)	ITU-R WP5D	-	-	yes	noted	RP-150442	LS treated under AI 7.2.2; 3GPP ITU-R ad hoc prepared an answer in RP-150043
RP-150042	LS on the introduction of the signalling for UL 64 QAM (R2-150733; to: RAN4; cc: RAN, RAN1; contact: Huawei)	RAN2	REL-12	LTE-L23, TEI12	no	noted	none	note: 64QAM UL functionality for LTE exists in 3GPP specs since REL-8; however, signalling of a UE capability in now introduced for REL-12 (see R2-150713 in RP-150378 and R2-150715 in RP-150377) and RF requirements will be introduced via REL-13 WI LTE_UL64QAM-Core
RP-150043	Draft letter to ITU in reply to ITU-R WP5D/TEMP/521(Rev.1) = RP-150031 and ITU-R WP5D/TEMP/577 = RP-150041 on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT) (RT-150009; to: RAN; cc: -; contact: Telecom Italia)	3GPP ITU-R ad hoc	-	-	yes	noted	none	3GPP ITU-R ad hoc prepared this draft answer to the LSin of ITU-R WP5D RP-150031 and RP-150041; LS treated under AI 7.2.2
RP-150044	Draft letter to ITU in reply to ITU-R WP5D/TEMP/530 = RP-150029 on 3GPP comments on draft revision 2 of Recommendation ITU-R M.2012 (RT-150010; to: CT, RAN; cc: -; contact: Telecom Italia)	3GPP ITU-R ad hoc	-	-	yes	noted	none	3GPP ITU-R ad hoc prepared this draft answer to the LSin of ITU-R WP5D RP-150029, LS treated under AI 7.2.2
RP-150443	CT-input to LETTER TO ITU ON 3GPP COMMENTS ON DRAFT REVISION 2 OF RECOMMENDATION ITU-R M.2012 (CP-150207; to: RAN; cc: -; contact: CT chair (Ericsson))	CT	-	-	no	noted	none	received on Tue of RAN #67; related to ITU-R LSin RP-150029 and triggered by RP-150044; LS treated under AI 7.2.2

***: uses Letter to ITU template (LTI)

Samsung Exhibit 1025, Page 1239 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

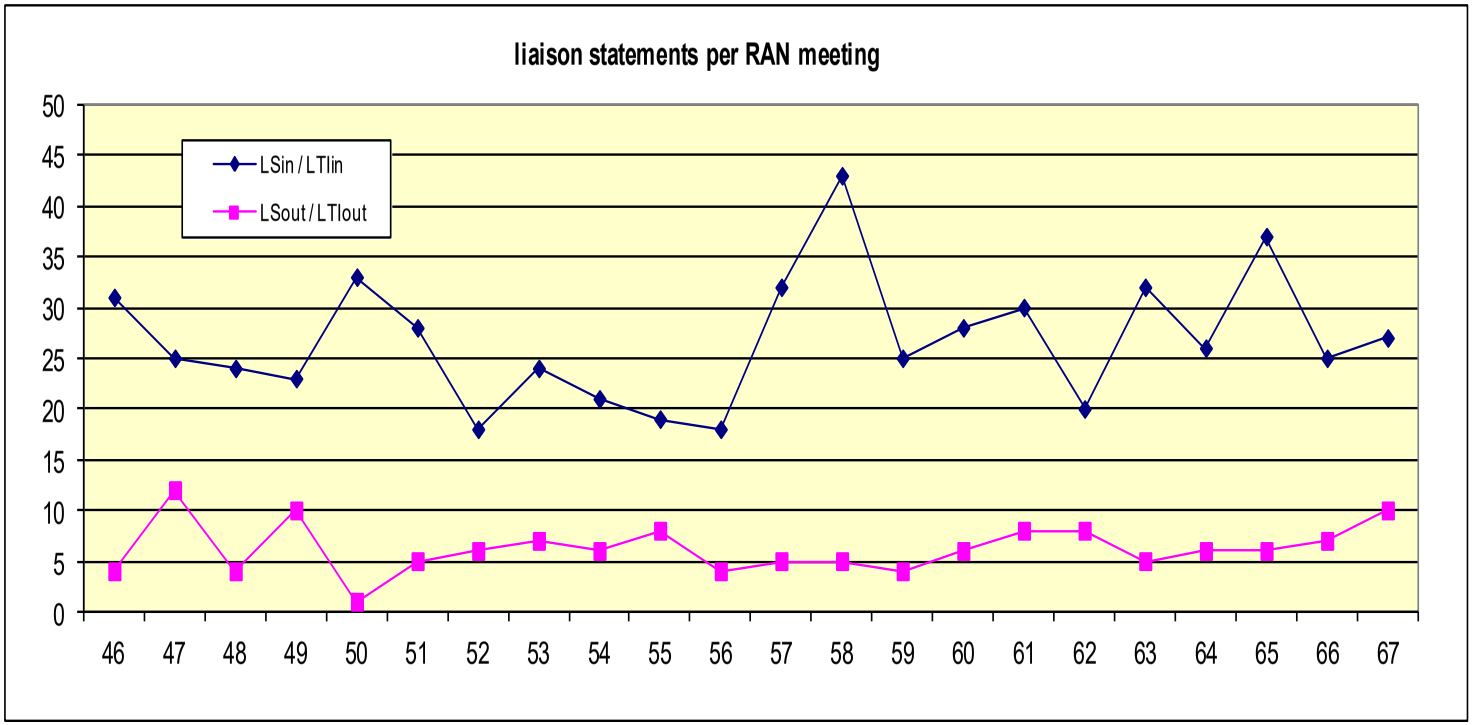


Fig. C-1: Number of incoming/outgoing Liason Statements (LS) and Letter to ITU (LTI) per RAN meeting

Samsung Exhibit 1025, Page 1240 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex D:
Outgoing liaison statements (LSout)

Only final outgoing LSs are listed here.
10 outgoing LSs/LTIs of RAN #67 (2 of them approved by email after the meeting):

final LS Tdoc	title	to	cc	contact	reply to	release	WI	comments
RP-150421	ATIS COAST SYNC and 3GPP RAN timing requirements for wireless base stations	ATIS COAST SYNC	-	Nokia Networks	ATIS_COAST_SYNC_150122_00007 = RP-150025	REL-12	-	based on RP-150038
RP-150442 ***	Draft letter to ITU on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT)	SA	-	Telecom Italia	ITU-R WP5D/TEMP/521(Rev.1) = RP-150031; ITU-R WP5D/TEMP/577 = RP-150041	-	-	will be provided to SA for review and from there to PCG for approval
RP-150454	Coexistence of Licensed Assisted Access (LAA) and IEEE 802	IEEE 802 LMSC	-	Ericsson	IEEE_802_LMSC_150202 = RP-150024	REL-13	FS_LTE_LAA	sent out on Wed of RAN #67
RP-150477	CURRENT IMPLEMENTATION OF 700 MHz BANDPLAN WITHIN 3GPP SPECIFICATION	ITU-R WP5D	-	Ericsson	ITU-R WP5D/TEMP/567 = RP-150028	REL-11	LTE_DL_FDD700, LTE_APAC700	will be sent out via 3GPP LS coordinator
RP-150478 ***	3GPP comments on draft revision 2 of Recommendation ITU-R M.2012	SA	-	Telecom Italia	ITU-R WP5D/TEMP/530 = RP-150029	-	-	will be provided to SA for review and from there to PCG for approval
RP-150505	Licensed-Assisted Access	ETSI BRAN	-	Ericsson	-	REL-13	FS_LTE_LAA	
RP-150509	3GPP RAN Study on regulatory aspects for flexible duplex for E-UTRAN	ECC PT1, FCC, RRA, National Communications Commission (TW), ARIB, CCSA, Wireless Adviser to the Government of India	-	Telecom Italia	-	REL-13	FS_LTE_flex_duplex_reg	approved via email discussion after RAN #67 and sent out on 27.03.2015

Samsung Exhibit 1025, Page 1241 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

final LS Tdoc	title	to	cc	contact	reply to	release	WI	comments
RP-150514	Consequence of RAN WI prioritisation for UPCON work in SA2	SA2	SA, RAN2, RAN3	NEC	-	REL-13	UPCON	related to new SI proposal for UPCON in RP-150291
RP-150516	D2D off network operation	CT1	SA2, RAN1, RAN2, RAN4, RAN5	Sprint	-	REL-12	LTE_D2D_Prox-Core	related to LSin RP-150037
RP-150520	DRAFT Letter to ITU on the schedule for updating Recommendation ITU-R M.1457 to Revision 13	CT	-	Telecom Italia	ITU-R WP5D/TEMP/473 = RP-141756	REL-12	-	agreed by email after RAN #67; email discussion started on 14.04.15 by ITU-R ad hoc convener via RAN reflector; LTI will be provided to CT for review and from there afterwards to SA for review, finally it has to be approved by PCG on 28.04.15; note: This is a 2nd reply to RP-141756 (first reply was in RP-142247) and a final reply will be sent from RAN #70 in Dec.15

***: uses Letter to ITU template (LTI)

Samsung Exhibit 1025, Page 1242 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex E:
List of Change Requests (CRs)

This list of 916 CRs includes all CRs submitted to RAN #67 with 909 approved CRs.

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
25.101	1060	-	Rel-12	F	RP-150385	R4-150790	approved	TX UE spurious emissions alignment with 36.101	12.6.0	12.7.0	R4	TEI12
25.101	1061	-	Rel-12	F	RP-150385	R4-150791	approved	RX UE spurious emissions simplification	12.6.0	12.7.0	R4	TEI12
25.101	1062	-	Rel-12	F	RP-150385	R4-150876	approved	Removal of square brackets of cubic metric (MPR) for UMTS HetNet Enhancements	12.6.0	12.7.0	R4	UTRA_hetnet_enh-Core
25.133	1393	1	Rel-12	F	RP-150386	R4-151133	approved	Clarification of IncMon requirements for UTRA idle/CELL_PCH/URA_PCH states	12.6.0	12.7.0	R4	LTE_UTRA_Incmon-Core
25.133	1394	1	Rel-12	F	RP-150386	R4-151134	approved	Clarification of IncMon requirements for UTRA CELL_FACH/CELL_DCH states	12.6.0	12.7.0	R4	LTE_UTRA_Incmon-Core
25.133	1395	1	Rel-11	F	RP-150384	R4-151099	approved	Corrections to FE-FACH DRX tests and core requirement	11.9.0	11.10.0	R4	Cell_FACH_enh-Perf
25.133	1396	-	Rel-12	A	RP-150384	R4-150847	approved	Corrections to FE-FACH DRX tests and core requirement	12.6.0	12.7.0	R4	Cell_FACH_enh-Perf
25.133	1397	-	Rel-12	F	RP-150385	R4-150865	approved	Corrections of table 8.0b	12.6.0	12.7.0	R4	EDCH_enh-Core
25.133	1398	-	Rel-12	F	RP-150389	R4-150919	approved	25.133 CR to correct DL_DCH_FET_Config reference number to point to 25.212	12.6.0	12.7.0	R4	TEI12
25.214	0735	1	Rel-12	F	RP-150360	R1-150714	approved	Clarifications to UMTS Heterogeneous Network Enhancements	12.1.0	12.2.0	R1	UTRA_HetNet_enh-Core
25.215	0200	2	Rel-12	C	RP-150361	R1-150250	approved	New E-UTRA RSRQ measurement definition	12.0.0	12.1.0	R1	TEI12
25.225	0103	3	Rel-12	C	RP-150361	R1-150251	approved	New E-UTRA RSRQ measurement definition	12.0.0	12.1.0	R1	TEI12
25.304	0385	1	Rel-12	F	RP-150373	R2-150685	approved	Cleanup on RAN-assisted WLAN interworking	12.4.0	12.5.0	R2	UTRA_LTE_WLAN_interw-Core
25.304	0386	-	Rel-12	F	RP-150373	R2-150599	approved	Correction on provision of WLAN identifiers	12.4.0	12.5.0	R2	UTRA_LTE_WLAN_interw-Core
25.306	0485	-	Rel-12	D	RP-150376	R2-150587	approved	Editorial corrections	12.4.0	12.5.0	R2	TEI12
25.306	0486	-	Rel-12	F	RP-150372	R2-150583	approved	Clarification for DRX enhancements	12.4.0	12.5.0	R2	EDCH_enh-Core
25.331	5735	-	Rel-12	D	RP-150376	R2-150586	approved	Rapporteur corrections for 25.331 RRC specification	12.4.0	12.5.0	R2	TEI12
25.331	5736	-	Rel-12	F	RP-150372	R2-150581	approved	Clarifications for Further EUL enhancements sub-feature Enhanced TTI switching	12.4.0	12.5.0	R2	EDCH_enh-Core
25.331	5737	-	Rel-12	F	RP-150372	R2-150582	approved	Pre-configuration for Enhanced TTI switching at upswitch to CELL_DCH	12.4.0	12.5.0	R2	EDCH_enh-Core
25.331	5739	-	Rel-12	F	RP-150373	R2-150585	approved	Cleanup corrections for increased UE carrier monitoring	12.4.0	12.5.0	R2	LTE_UTRA_IncMon-Core
25.331	5741	-	Rel-12	F	RP-150373	R2-150584	approved	Clarification for SIB23 reading	12.4.0	12.5.0	R2	UTRA_LTE_WLAN_interw-Core
25.331	5753	-	Rel-12	F	RP-150376	R2-150615	approved	Clarification on RSRQ Type	12.4.0	12.5.0	R2	TEI12
25.331	5754	1	Rel-10	B	RP-150370	R2-150595	approved	Introduction of network-requested LTE CA band combination capability reporting	10.18.0	10.19.0	R2	TEI10
25.331	5755	1	Rel-11	B	RP-150370	R2-150596	approved	Introduction of network-requested LTE CA band combination capability reporting	11.12.0	11.13.0	R2	TEI11
25.331	5756	1	Rel-12	F	RP-150370	R2-150597	approved	Correction to network-requested LTE CA band combination capability reporting	12.4.0	12.5.0	R2	TEI12

Samsung Exhibit 1025, Page 1243 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
25.331	5757	2	Rel-12	F	RP-150377	R2-150732	approved	ASN.1 corrections	12.4.0	12.5.0	R2	TEI12
25.331	5758	1	Rel-12	F	RP-150373	R2-150683	approved	Correction on provision of WLAN identifiers	12.4.0	12.5.0	R2	UTRA_LTE_WLAN_interw-Core
25.331	5763	2	Rel-12	F	RP-150368	R2-150705	approved	Correction of GLONASS system time	12.4.0	12.5.0	R2	RANimp-ANSS, TEI12
25.413	1290	-	Rel-12	F	RP-150356	R3-150048	approved	Correction of RSRQ type values	12.3.0	12.4.0	R3	TEI12
25.413	1291	1	Rel-12	F	RP-150356	R3-150390	approved	Rapporteur Review-ASN.1 consistency check	12.3.0	12.4.0	R3	TEI12
25.423	1861	1	Rel-12	F	RP-150350	R3-150373	approved	Add missing new SIB for IncMon	12.3.0	12.4.0	R3	LTE_UTRA_IncMon-Core
25.423	1862	1	Rel-12	F	RP-150349	R3-150371	approved	Correction on the value of Activation Delay	12.3.0	12.4.0	R3	EDCH_enh-core
25.423	1863	-	Rel-12	F	RP-150356	R3-150336	approved	Corrections following Rel12 ASN.1 review	12.3.0	12.4.0	R3	TEI12
25.425	0185	2	Rel-11	F	RP-150347	R3-150301	approved	Correction: add Extended S-RNTI in the Iur user plane	11.3.0	11.4.0	R3	TEI11
25.433	2060	-	Rel-12	F	RP-150349	R3-150117	approved	Correction on the value of Activation Delay	12.3.0	12.4.0	R3	EDCH_enh-core
25.433	2062	-	Rel-12	F	RP-150349	R3-150340	approved	Correction of ASN.1 for Fast TTI switching Mode Supported	12.3.0	12.4.0	R3	EDCH_enh-core
25.466	0055	1	Rel-12	F	RP-150356	R3-150372	approved	Correction of the reference	12.1.0	12.2.0	R3	TEI12
25.469	0106	2	Rel-12	F	RP-150356	R3-150389	approved	Rapporteur Review-ASN.1 consistency check	12.3.0	12.4.0	R3	TEI12
34.108	0971	-	Rel-11	F	RP-150322	R5-150096	approved	Correction to Contents of System Information Block Type 5 for condition B2 & B3	11.12.0	11.13.0	R5	TEI8_Test
34.108	0972	-	Rel-11	F	RP-150322	R5-150153	approved	Correction to default value of System Information Block type 5 for FDD	11.12.0	11.13.0	R5	TEI8_Test
34.108	0973	-	Rel-11	F	RP-150325	R5-150541	approved	Corrections in the default RADIO BEARER SETUP message for DC-HSDPA with MIMO	11.12.0	11.13.0	R5	TEI9_Test
34.108	0974	-	Rel-11	F	RP-150327	R5-150542	approved	Corrections in the default RADIO BEARER SETUP message for 4C-HSDPA	11.12.0	11.13.0	R5	TEI10_Test
34.108	0975	-	Rel-11	F	RP-150339	R5-150544	approved	Corrections in the default RADIO BEARER SETUP message for Multiflow	11.12.0	11.13.0	R5	HSDPA_MFTX-UEConTest
34.108	0976	-	Rel-11	F	RP-150322	R5-150605	approved	Correction to UTRAN Radio Bearer Setup Message for condition A30	11.12.0	11.13.0	R5	TEI8_Test
34.108	0977	-	Rel-11	F	RP-150321	R5-150619	approved	Correction to the default RADIO BEARER SETUP message for A28a MIMO/nonMIMO	11.12.0	11.13.0	R5	TEI7_Test
34.121-1	1597	-	Rel-12	F	RP-150338	R5-150893	approved	Update Test Tolerance analyses for enhCELL_FACH Test cases 8.3.5.2B and 8.3.5.2D	11.6.0	12.0.0	R5	Cell_FACH_enh-UEConTest
34.122	0435	-	Rel-11	F	RP-150325	R5-150473	approved	Correction to test procedure of TC 8.7.15 and 8.7.17	11.9.0	11.10.0	R5	TEI9_Test
34.123-1	3705	-	Rel-11	F	RP-150320	R5-150172	approved	Correction to 8.1.5.7: addition of new capabilities	11.5.0	11.6.0	R5	TEI_Test
34.123-1	3706	-	Rel-11	F	RP-150321	R5-150173	approved	Correction to Rel-7 MIMO/nonMIMO test cases 8.2.271 and 8.2.2.72	11.5.0	11.6.0	R5	TEI7_Test
34.123-1	3707	-	Rel-11	F	RP-150322	R5-150487	approved	Correction to MAC-i/is test case 7.1.7.3	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3708	-	Rel-11	F	RP-150322	R5-150491	approved	Correction to Rel-8 CSG testcase 12.3.1.10	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3709	-	Rel-11	F	RP-150322	R5-150492	approved	Correction to Rel-8 Supplementary Services testcase 15.8.9	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3710	-	Rel-11	F	RP-150339	R5-150545	approved	Addition of a new Multiflow test case 7.1.11	11.5.0	11.6.0	R5	HSDPA_MFTX-UEConTest
34.123-1	3711	-	Rel-11	F	RP-150321	R5-150556	approved	Correction to Rel-7 MIMO/nonMIMO test cases 8.3.11.17 and 8.3.11.18	11.5.0	11.6.0	R5	TEI7_Test
34.123-1	3712	-	Rel-11	F	RP-150321	R5-150614	approved	Correction to NISPCA test case 11.3.2a	11.5.0	11.6.0	R5	TEI7_Test
34.123-1	3713	-	Rel-11	F	RP-150322	R5-150620	approved	Correction to UTRAN test case 7.1.8.7	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3714	-	Rel-11	F	RP-150322	R5-150621	approved	Correction to idle mode test case 6.3.2.1	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3715	-	Rel-11	F	RP-150322	R5-150622	approved	Correction to ETWS test case 8.1.1.13	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3716	-	Rel-11	F	RP-150322	R5-150623	approved	Correction to SS test case 15.7.11 and 15.7.12	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3717	-	Rel-11	F	RP-150322	R5-150624	approved	Correction to SS test case 15.8.8	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3718	-	Rel-11	F	RP-150320	R5-150625	approved	Correction to SMS test case 16.1.1 and 16.1.2	11.5.0	11.6.0	R5	TEI_Test

Samsung Exhibit 1025, Page 1244 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.123-1	3719	-	Rel-11	F	RP-150320	R5-150626	approved	Correction to SMS test case 16.2.1 and 16.2.2	11.5.0	11.6.0	R5	TEI_Test
34.123-1	3720	-	Rel-11	F	RP-150321	R5-150627	approved	Correction to test case 11.1.5.2	11.5.0	11.6.0	R5	TEI7_Test
34.123-1	3721	-	Rel-11	F	RP-150325	R5-150628	approved	Correction to DC-HSUPA test case 8.3.4.20	11.5.0	11.6.0	R5	TEI9_Test
34.123-1	3722	-	Rel-11	F	RP-150322	R5-150629	approved	Correction to Rel-8 Absolute Priority Cell reselection testcase 8.3.1.52	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3723	-	Rel-11	F	RP-150322	R5-150630	approved	Correction to Rel-8 Absolute Priority Cell reselection testcase 8.3.1.53	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3724	-	Rel-11	F	RP-150322	R5-150631	approved	Correction to Rel-8 Absolute Priority Cell reselection testcase 8.3.1.54	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3725	-	Rel-11	F	RP-150327	R5-150634	approved	Correction to Rel-10 testcase 9.4.3.3a	11.5.0	11.6.0	R5	TEI10_Test
34.123-1	3726	-	Rel-11	F	RP-150327	R5-150635	approved	Correction to Rel-10 testcase 12.4.1.4f	11.5.0	11.6.0	R5	TEI10_Test
34.123-1	3727	-	Rel-11	F	RP-150325	R5-150636	approved	Correction of test case 8.2.2.77	11.5.0	11.6.0	R5	TEI9_Test
34.123-1	3728	-	Rel-11	F	RP-150325	R5-150637	approved	Correction of test case 8.2.2.78	11.5.0	11.6.0	R5	TEI9_Test
34.123-1	3729	-	Rel-11	F	RP-150322	R5-150638	approved	Correction of Improved L2 UL MAC test case 7.2.2.15	11.5.0	11.6.0	R5	TEI8_Test
34.123-1	3730	-	Rel-11	F	RP-150338	R5-150716	approved	Correction to Further Enhancement to CELL_FACH test cases 8.3.1.49b	11.5.0	11.6.0	R5	Cell_FACH_enh-UEConTest
34.123-1	3731	-	Rel-11	F	RP-150338	R5-150717	approved	Correction to Further Enhancement to CELL_FACH test cases 8.3.1.49c	11.5.0	11.6.0	R5	Cell_FACH_enh-UEConTest
34.123-1	3732	-	Rel-11	F	RP-150339	R5-150723	approved	Correction to Multiflow RLC test cases 7.2.5.4 and 7.2.5.5	11.5.0	11.6.0	R5	HSDPA_MFTX-UEConTest
34.123-1	3733	-	Rel-11	F	RP-150339	R5-150724	approved	Addition of new Multiflow HSDPA test case 8.2.2.85.2 test	11.5.0	11.6.0	R5	HSDPA_MFTX-UEConTest
34.123-1	3734	-	Rel-11	F	RP-150339	R5-150725	approved	Addition of new Multiflow test cases 7.2.5.1 and 7.2.5.2	11.5.0	11.6.0	R5	HSDPA_MFTX-UEConTest
34.123-1	3735	-	Rel-11	F	RP-150321	R5-150727	approved	Correction to CPC test case 7.1.6.2.11	11.5.0	11.6.0	R5	TEI7_Test
34.123-1	3736	-	Rel-11	F	RP-150339	R5-150738	approved	Correction to Multiflow HSDPA clause 8.2.2.85 and test case 8.2.2.85.1	11.5.0	11.6.0	R5	HSDPA_MFTX-UEConTest
34.123-2	0725	-	Rel-11	F	RP-150321	R5-150148	approved	Corrections to title in applicability table for test case 8.2.2.63a	11.5.0	11.6.0	R5	TEI7_Test
34.123-2	0726	-	Rel-11	F	RP-150339	R5-150494	approved	Adding applicability for new test cases 8.2.2.85.2	11.5.0	11.6.0	R5	HSDPA_MFTX-UEConTest
34.123-2	0727	-	Rel-11	F	RP-150321	R5-150502	approved	Correction of test case 8.1.7.3	11.5.0	11.6.0	R5	TEI7_Test
34.123-2	0728	-	Rel-11	F	RP-150339	R5-150549	approved	Addition of new MAC-ehs and RLC test cases for Multiflow	11.5.0	11.6.0	R5	HSDPA_MFTX-UEConTest
34.123-2	0729	-	Rel-12	F	RP-150320	R5-150639	approved	Correction to the applicability condition for the Test cases 11.1.1.1 and 12.2.1.5a	11.5.0	12.0.0	R5	TEI_Test
34.123-2	0730	-	Rel-11	F	RP-150320	R5-150640	approved	Correction to the applicability condition for the Test case 12.2.1.11	11.5.0	11.6.0	R5	TEI_Test
34.123-2	0731	-	Rel-11	F	RP-150325	R5-150641	approved	Correction of applicability condition for IMS Emergency test cases 13.4.1 to 13.4.5	11.5.0	11.6.0	R5	TEI9_Test
34.123-2	0732	-	Rel-11	F	RP-150322	R5-150642	approved	Update to GMM Test case 12.3.1.10 applicability condition	11.5.0	11.6.0	R5	TEI8_Test
34.123-2	0733	-	Rel-11	F	RP-150339	R5-150726	approved	Remove Multiflow RLC test case 7.2.5.5	11.5.0	11.6.0	R5	HSDPA_MFTX-UEConTest
34.123-3	3295	-	Rel-11	F	RP-150322	R5-150098	approved	Addition of TC 12.4.2.5e to the list of cases which requires more than two radio frequencies	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3296	-	Rel-11	F	RP-150339	R5-150124	approved	HSDPA Multiflow Test Model for RLC test cases	11.5.0	11.6.0	R5	HSDPA_MFTX-UEConTest
34.123-3	3297	-	Rel-11	F	RP-150338	R5-150125	approved	Addition of Further Enhanced CELL_FACH Test Model	11.5.0	11.6.0	R5	Cell_FACH_enh-UEConTest
34.123-3	3298	-	Rel-11	F	RP-150320	R5-150728	approved	Routine maintenance for TS 34.123-3	11.5.0	11.6.0	R5	TEI_Test
34.123-3	3299	-	Rel-11	F	RP-150331	R5s141119	approved	Corrections for WI-010 UTRA SMS test cases 16.1.2, 16.1.9.1, 16.1.9.2, 16.1.10, 16.2.2, 16.2.10	11.5.0	11.6.0	R5	TEI_Test
34.123-3	3300	-	Rel-11	F	RP-150331	R5s141242	approved	Correction to TTCN implementation for test case 9.5.2	11.5.0	11.6.0	R5	TEI_Test
34.123-3	3301	-	Rel-11	F	RP-150331	R5s141290	approved	Correction to GCF WI-140 NISPC test case 11.3.2a	11.5.0	11.6.0	R5	TEI7_Test
34.123-3	3302	-	Rel-11	F	RP-150331	R5s141328	approved	Correction in Rel-7 Uplink 16 QAM test cases	11.5.0	11.6.0	R5	TEI7_Test
34.123-3	3303	-	Rel-11	F	RP-150331	R5s141348	approved	Correction to UTRA SS Test Cases on IWD wk49	11.5.0	11.6.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1245 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.123-3	3304	-	Rel-11	B	RP-150331	R5s141355	approved	Addidtion of Rel-10 NAS testcase 12.4.1.4f to UTRAN testsuite	11.5.0	11.6.0	R5	TEI10_Test
34.123-3	3305	-	Rel-11	F	RP-150331	R5s141357	approved	Correction to Rel-8 CSG TCs 12.2.1.5e, 12.2.2.7e and 12.4.2.5e	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3306	-	Rel-11	B	RP-150331	R5s141382	approved	Addition of WI-131 Rel-8 Enh. Cell FACH UL Test Case 7.1.8.7 to HSPA8_ENH ATS	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3307	-	Rel-11	B	RP-150331	R5s141390	approved	Addidtion of Rel-10 NAS testcase 9.4.3.3a to UTRAN testsuite	11.5.0	11.6.0	R5	TEI10_Test
34.123-3	3308	-	Rel-11	F	RP-150331	R5s150002	approved	Correction to UTRAN Rel-7 test case 11.3.2a	11.5.0	11.6.0	R5	TEI7_Test
34.123-3	3309	-	Rel-11	B	RP-150331	R5s150015	approved	Addidtion of Rel-7 NISPC testcase 11.1.5.2 to UTRAN testsuite	11.5.0	11.6.0	R5	TEI7_Test
34.123-3	3310	-	Rel-11	F	RP-150331	R5s150018	approved	Correction to MAC-I/Is test case 7.1.7.3	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3311	-	Rel-11	B	RP-150331	R5s150020	approved	Addidtion of Rel-8 RRC testcase 8.3.1.52 to HSPA8_ENH testsuite	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3312	-	Rel-11	B	RP-150331	R5s150022	approved	Addidtion of Rel-8 RRC testcase 8.3.1.53 to HSPA8_ENH testsuite	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3313	-	Rel-11	B	RP-150331	R5s150024	approved	Addidtion of Rel-8 RRC testcase 8.3.1.54 to HSPA8_ENH testsuite	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3314	-	Rel-11	B	RP-150331	R5s150032	approved	Addition of WI-131 Rel-8 Enh. Cell FACH UL Test Case 8.2.1.42 to HSPA8_ENH ATS	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3315	-	Rel-11	F	RP-150331	R5s150040	approved	Correction to GCF WI-070 UTRA CPC Testcase 7.1.6.2.11	11.5.0	11.6.0	R5	TEI7_Test
34.123-3	3316	-	Rel-11	F	RP-150331	R5s150043	approved	General Corrections to all test suites for support of A5/4 and GEA4	11.5.0	11.6.0	R5	TEI_Test
34.123-3	3317	-	Rel-11	B	RP-150331	R5s150044	approved	Addition of WI-187 Rel-9 A5/4 and UEA1/UIA1 test case 8.3.7.1c to HSPA9_ENH ATS	11.5.0	11.6.0	R5	TEI9_Test
34.123-3	3318	-	Rel-11	B	RP-150331	R5s150046	approved	Addition of WI-187 Rel-9 A5/4 and UEA2/UIA2 test case 8.3.7.1d to HSPA9_ENH ATS	11.5.0	11.6.0	R5	TEI9_Test
34.123-3	3319	-	Rel-11	B	RP-150331	R5s150050	approved	Addition of WI-188 Rel-9 GEA4 and UEA2/UIA2 test case 8.3.11.1c to HSPA9_ENH ATS	11.5.0	11.6.0	R5	TEI9_Test
34.123-3	3320	-	Rel-11	F	RP-150331	R5s150052	approved	Corrections to UTRA CSG test case 6.3.1.4	11.5.0	11.6.0	R5	TEI9_Test
34.123-3	3321	-	Rel-11	B	RP-150331	R5s150058	approved	Addition of WI-130 MAC-IS/I 7.1.7.5 to HSPA8_ENH ATS	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3322	-	Rel-11	F	RP-150331	R5s150083	approved	Correction to Attach Accept procedures for UTRAN34 testcases	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3323	-	Rel-11	F	RP-150331	R5s150084	approved	Correction to Rel-8 Supplementary service test cases based on 14wk49 ATS	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3324	-	Rel-11	F	RP-150331	R5s150111	approved	Corrections to GCF WI-158 UTRA CSG test case 12.3.1.10	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3325	-	Rel-11	F	RP-150331	R5s150112	approved	Corrections to the UTRA CSG test case 6.3.1.1	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3326	-	Rel-11	F	RP-150331	R5s150117	approved	Corrections to UTRA CSG test case 6.3.2.2	11.5.0	11.6.0	R5	TEI8_Test
34.123-3	3327	-	Rel-11	F	RP-150330	-	approved	CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A	11.5.0	11.6.0	R5	TEI8_Test
34.229-1	0620	-	Rel-12	F	RP-150325	R5-150128	approved	Correction to IMS test case 8.16	12.4.1	12.5.0	R5	TEI9_Test
34.229-1	0621	-	Rel-12	F	RP-150325	R5-150247	approved	Correction to Test case 19.5.8	12.4.1	12.5.0	R5	TEI9_Test
34.229-1	0622	-	Rel-12	F	RP-150322	R5-150248	approved	Correction to Test case 15.10a	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0623	-	Rel-12	F	RP-150325	R5-150250	approved	Correction to Test case 19.5.7	12.4.1	12.5.0	R5	TEI9_Test
34.229-1	0624	-	Rel-12	F	RP-150325	R5-150251	approved	Add reference document of RFC4488	12.4.1	12.5.0	R5	TEI9_Test
34.229-1	0625	-	Rel-12	F	RP-150322	R5-150267	approved	Correction to GCF WI-154 IMS Emergency call Testcase 19.5.7	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0626	-	Rel-12	F	RP-150322	R5-150268	approved	Correction to GCF WI-154 IMS Emergency call Testcases	12.4.1	12.5.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1246 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.229-1	0627	-	Rel-12	F	RP-150325	R5-150338	approved	Correction to IMS Emergency Call test case 19.1.5	12.4.1	12.5.0	R5	TEI9_Test
34.229-1	0628	-	Rel-12	F	RP-150325	R5-150345	approved	Correction to IMS Emergency Call test case 19.5.7	12.4.1	12.5.0	R5	TEI9_Test
34.229-1	0629	-	Rel-12	F	RP-150322	R5-150384	approved	Three way session creation	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0630	-	Rel-12	F	RP-150322	R5-150385	approved	Updating RFC 4244 to RFC 7044	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0631	-	Rel-12	F	RP-150322	R5-150386	approved	s-lines in SDP	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0632	-	Rel-12	F	RP-150340	R5-150584	approved	Updates to A.1 default REGISTER messages	12.4.1	12.5.0	R5	rSRVCC-UEConTest
34.229-1	0633	-	Rel-12	F	RP-150340	R5-150585	approved	Updates to A.8 default messages for CS to PS SRVCC	12.4.1	12.5.0	R5	rSRVCC-UEConTest
34.229-1	0634	-	Rel-12	F	RP-150340	R5-150586	approved	Updates to annex C.39	12.4.1	12.5.0	R5	rSRVCC-UEConTest
34.229-1	0635	-	Rel-12	F	RP-150322	R5-150692	approved	Contact header in UPDATE requests	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0636	-	Rel-12	F	RP-150322	R5-150694	approved	Correction for generic test procedure for IMS MO call	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0637	-	Rel-12	F	RP-150340	R5-150696	approved	Correction to the procedure of C.40	12.4.1	12.5.0	R5	rSRVCC-UEConTest
34.229-1	0638	-	Rel-12	F	RP-150325	R5-150698	approved	Correction to the inconsistency in 19.1.3a	12.4.1	12.5.0	R5	TEI9_Test
34.229-1	0639	-	Rel-12	F	RP-150325	R5-150699	approved	Correction to the missing part on TC19.3.2	12.4.1	12.5.0	R5	TEI9_Test
34.229-1	0640	-	Rel-12	F	RP-150325	R5-150700	approved	Correction to IMS Emergency Call test case 19.1.3	12.4.1	12.5.0	R5	TEI9_Test
34.229-1	0641	-	Rel-12	F	RP-150322	R5-150701	approved	Updating draft-montemurro-gsma-imei-urn to RFC	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0642	-	Rel-12	F	RP-150322	R5-150702	approved	Addressing Action Point AP#65.02 on o-lines in SDP	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0643	-	Rel-12	F	RP-150322	R5-150703	approved	Correction to GCF WI-198 IMS Video call Testcase 12.22	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0644	-	Rel-12	F	RP-150325	R5-150704	approved	Correction to test case 19.3.2b	12.4.1	12.5.0	R5	TEI9_Test
34.229-1	0645	-	Rel-12	F	RP-150322	R5-150705	approved	Corrections to IMS test case 15.15	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0646	-	Rel-12	F	RP-150322	R5-150706	approved	ACK request in C.31	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0647	-	Rel-12	F	RP-150322	R5-150707	approved	183 Session Progress in TC 15.8	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0648	-	Rel-12	F	RP-150322	R5-150708	approved	Add test case for GBA	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0649	-	Rel-12	F	RP-150322	R5-150709	approved	Directionality attribute in MO and MT calls	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0650	-	Rel-12	F	RP-150322	R5-150711	approved	Update annex C.29.2	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0651	-	Rel-12	F	RP-150340	R5-150713	approved	Updates to annex C.40	12.4.1	12.5.0	R5	rSRVCC-UEConTest
34.229-1	0652	-	Rel-12	F	RP-150340	R5-150714	approved	Updates to annex C.42	12.4.1	12.5.0	R5	rSRVCC-UEConTest
34.229-1	0653	-	Rel-12	F	RP-150322	R5-150734	approved	Correction to C.25 - Generic test procedure for setting up MTSI MO video call for EPS	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0654	-	Rel-12	F	RP-150322	R5-150736	approved	Update of SDP message content for test case 17.1	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0655	-	Rel-12	F	RP-150322	R5-150745	approved	Correction to WI-103 Conference Call TC	12.4.1	12.5.0	R5	TEI8_Test
34.229-1	0656	-	Rel-12	F	RP-150340	R5-150931	approved	Addition of new generic procedure for UE receiving SIP REFER request for transfer of additional CS to PS Call	12.4.1	12.5.0	R5	rSRVCC-UEConTest
34.229-2	0136	-	Rel-12	F	RP-150322	R5-150537	approved	Add applicability for new GBA test case	12.3.0	12.4.0	R5	TEI8_Test
34.229-2	0137	-	Rel-12	F	RP-150322	R5-150712	approved	Add capability for GBA	12.3.0	12.4.0	R5	TEI8_Test
34.229-2	0138	-	Rel-12	F	RP-150322	R5-150737	approved	Clarification on A.12/23 vs A.12/35	12.3.0	12.4.0	R5	TEI8_Test
34.229-3	0253	-	Rel-10	F	RP-150322	R5-150355	approved	Routine maintenance for TS 34.229-3	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0254	-	Rel-10	B	RP-150333	R5s141155	approved	Addition of GCF WI-154 IMS emergency call testcase 19.3.1 over 36.523-3 Test Model	10.5.0	10.6.0	R5	TEI9_Test
34.229-3	0255	-	Rel-10	F	RP-150333	R5s141212	approved	Correction of IMS test case 8.1: sip-instance	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0256	-	Rel-10	B	RP-150333	R5s141221	approved	Addition of GCF WI-198 MO MTSI Video Call test case 12.21 ^^(using 36.523-3 test model)	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0257	-	Rel-10	F	RP-150333	R5s141232	approved	Correction to IMS Emergency call test case 19.4.1	10.5.0	10.6.0	R5	TEI9_Test
34.229-3	0258	-	Rel-10	B	RP-150333	R5s141237	approved	Addition of GCF WI-154 Emergency Call Testcase 19.3.4 over 36.523-3 Test Model	10.5.0	10.6.0	R5	TEI9_Test
34.229-3	0259	-	Rel-10	F	RP-150333	R5s141244	approved	Correction of o-lines in SDP bodies sent by SS	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0260	-	Rel-10	F	RP-150333	R5s141273	approved	Correction to GCF WI-171 IMS SSAC test case 12.18	10.5.0	10.6.0	R5	TEI9_Test

Samsung Exhibit 1025, Page 1247 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.229-3	0261	-	Rel-10	B	RP-150333	R5s141286	approved	Addition of GCF WI-154 IMS Emergency Call test case 19.1.5	10.5.0	10.6.0	R5	TEI9_Test
34.229-3	0262	-	Rel-10	F	RP-150333	R5s141322	approved	Correction to IMS Registration Procedure	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0263	-	Rel-10	F	RP-150333	R5s141326	approved	Correction to GCF WI-103 IMS test case 11.2	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0264	-	Rel-10	B	RP-150333	R5s141329	approved	Addition of GCF WI-198 MO MTSI Video Call test case 12.22 over 36.523-3 Test Model	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0265	-	Rel-10	F	RP-150333	R5s141335	approved	Correction to GCF WI-154 IMS emergency test case 19.5.6 and 19 5.7	10.5.0	10.6.0	R5	TEI9_Test
34.229-3	0266	-	Rel-10	F	RP-150333	R5s141336	approved	Correction to GCF WI-198 IMS MO Video Call Testcase 12.21	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0267	-	Rel-10	F	RP-150333	R5s141337	approved	Correction to GCF WI-154 IMS emergency test case 19.3.4	10.5.0	10.6.0	R5	TEI9_Test
34.229-3	0268	-	Rel-10	B	RP-150333	R5s141341	approved	Addition of GCF WI-103 IMS Conference Call Testcase 15.17 over 36.523-3 Test Model	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0269	-	Rel-10	B	RP-150333	R5s141343	approved	Addition of GCF WI-103 IMS Conference Call Testcase 15.19 over 36.523-3 Test Model	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0270	-	Rel-10	F	RP-150333	R5s141350	approved	Correction of IMS TC 15.10a: not-registered condition	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0271	-	Rel-10	F	RP-150333	R5s141351	approved	Correction to GCF WI-103 IMS 15.x XCAP Testcases	10.5.0	10.6.0	R5	TEI9_Test
34.229-3	0272	-	Rel-10	F	RP-150333	R5s141353	approved	Correction of XCAP TCs on usage of str2oct	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0273	-	Rel-10	F	RP-150333	R5s141370	approved	Correction of IMS Emergency Call testcase 19.4.5	10.5.0	10.6.0	R5	TEI9_Test
34.229-3	0274	-	Rel-10	F	RP-150333	R5s141381	approved	Correction of IMS SSAC Testcases 12.18, 12.19, 12.20, 12.18a, 12.19a and 12.20a	10.5.0	10.6.0	R5	TEI9_Test
34.229-3	0275	-	Rel-10	F	RP-150333	R5s150030	approved	Correction of prefix to XCAP Root Uri	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0276	-	Rel-10	F	RP-150333	R5s150035	approved	Correction to UPDATE message for IMS MT Call Testcases	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0277	-	Rel-10	F	RP-150333	R5s150039	approved	Correction for record-route header in IMS MT call scenarios	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0278	-	Rel-10	F	RP-150333	R5s150054	approved	Correction to cr_UE_RadioAccessCapability template for IMS UTRA test cases	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0279	-	Rel-10	F	RP-150333	R5s150055	approved	Correction to IMS Multiple PDN	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0280	-	Rel-10	F	RP-150333	R5s150085	approved	Correction to DNS Query procedure for IMS Testcases	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0281	-	Rel-10	F	RP-150333	R5s150086	approved	Correction to SessionID in IMS signalling procedures	10.5.0	10.6.0	R5	TEI8_Test
34.229-3	0282	-	Rel-10	B	RP-150333	R5s150115	approved	Addition of GCF WI-171 MO MTSI Video Call test case 12.19 ^^(using 36.523-3 test model)	10.5.0	10.6.0	R5	TEI9_Test
34.229-3	0283	-	Rel-10	F	RP-150332	-	approved	CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (prose), Annex A	10.5.0	10.6.0	R5	TEI8_Test
34.902	0022	-	Rel-11	F	RP-150338	R5-150894	approved	Add Test Tolerance analysis for 34.121-1 RRM Test cases 8.3.5.2b and 8.3.5.2d	9.5.0	11.0.0	R5	Cell_FACH_enh-UEConTest
36.101	2760	2	Rel-12	B	RP-150387	R4-151196	approved	Introduce additional bands of LC MTC	12.6.0	12.7.0	R4	LC_MTC_LTE-Core
36.101	2761	-	Rel-12	F	RP-150387	R4-150027	approved	CR on corrections to Dual-Layer Spatial Multiplexing with multiple CSI-RS config Rel-12	12.6.0	12.7.0	R4	TEI12
36.101	2763	-	Rel-11	D	RP-150384	R4-150059	approved	Correction for timing offset test for intraband non-contiguous CA	11.11.0	11.12.0	R4	TEI11
36.101	2765	1	Rel-12	B	RP-150392	R4-151138	approved	CR for applicability and test rules for TDD-FDD CA performance requirements	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf
36.101	2766	-	Rel-12	B	RP-150392	R4-150062	approved	Introduction of CQI tests for TDD-FDD CA	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf
36.101	2767	1	Rel-12	B	RP-150395	R4-151081	approved	CR to introduce the SU-MIMO whitening verification test	12.6.0	12.7.0	R4	LTE_SUMIMO_RX-Perf
36.101	2768	1	Rel-12	B	RP-150392	R4-151086	approved	CR on power imbalance test for 3DL CA	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf
36.101	2769	-	Rel-12	B	RP-150392	R4-150109	approved	CR on sustained data rate test for TDD FDD CA	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf
36.101	2770	1	Rel-12	B	RP-150394	R4-151077	approved	CR for introduction of 256QAM demodulation performance requirements	12.6.0	12.7.0	R4	LTE_SC_enh_L1-Perf
36.101	2772	1	Rel-12	B	RP-150393	R4-151084	approved	CR: DC UE performance requirements	12.6.0	12.7.0	R4	LTE_SC_enh_dualC-Perf

Samsung Exhibit 1025, Page 1248 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	2773	1	Rel-12	B	RP-150390	R4-151053	approved	CR: MTC demodulation performance requirements	12.6.0	12.7.0	R4	LC_MTC_LTE-Perf
36.101	2774	1	Rel-12	B	RP-150390	R4-151054	approved	CR: MTC CSI requirements	12.6.0	12.7.0	R4	LC_MTC_LTE-Perf
36.101	2775	1	Rel-12	B	RP-150396	R4-151058	approved	Introduction of the eIMTA functional PDSCH demodulation test	12.6.0	12.7.0	R4	LTE_TDD_eIMTA-Perf
36.101	2776	3	Rel-12	B	RP-150387	R4-151273	approved	CR on RF core requirements for D2D	12.6.0	12.7.0	R4	LTE_D2D_Prox-Core
36.101	2777	-	Rel-12	F	RP-150387	R4-150239	approved	Modification of CSI reference measurement channel Rel-12	12.6.0	12.7.0	R4	TEI12
36.101	2778	-	Rel-11	F	RP-150384	R4-150240	approved	Modification of CSI reference measurement channel Rel-11	11.11.0	11.12.0	R4	TEI11
36.101	2779	-	Rel-12	D	RP-150388	R4-150241	approved	Editorial correction for CA_18A-28A	12.6.0	12.7.0	R4	LTE_CA_B18_B28-Core
36.101	2781	-	Rel-12	F	RP-150388	R4-150246	approved	Removing brackets for CA_1A-28A MSD requirements	12.6.0	12.7.0	R4	LTE_CA_B1_B28-Core
36.101	2782	-	Rel-11	F	RP-150384	R4-150259	approved	Editorial correction on symbols for enhanced performance requirements type A	11.11.0	11.12.0	R4	LTE_Interf_Rej-Perf
36.101	2783	-	Rel-12	A	RP-150384	R4-150260	approved	Editorial correction on symbols for enhanced performance requirements type A	12.6.0	12.7.0	R4	LTE_Interf_Rej-Perf
36.101	2784	-	Rel-12	F	RP-150387	R4-150310	approved	Corrections on reference measurement channel	12.6.0	12.7.0	R4	TEI12
36.101	2792	-	Rel-12	F	RP-150388	R4-150361	approved	Correction of TS 36.101 for the Pcell support of 25+41	12.6.0	12.7.0	R4	LTE_CA_B25_B41_B41-Core
36.101	2793	1	Rel-12	B	RP-150395	R4-151082	approved	CR for single cell demodulation test for SU-MIMO	12.6.0	12.7.0	R4	LTE_SUMIMO_RX-Perf
36.101	2794	-	Rel-12	B	RP-150391	R4-150441	approved	Introduction of CA_3A-42A and CA_3A-42C into 36.101	12.6.0	12.7.0	R4	LTE_CA_B3_B42_B42-Core
36.101	2795	-	Rel-10	F	RP-150382	R4-150451	approved	UL HARQ in PDSCH and PDCCH/PCFICH demod test cases for eICIC with MBSFN ABS	10.17.0	10.18.0	R4	eICIC_LTE-Perf
36.101	2796	-	Rel-11	F	RP-150384	R4-150452	approved	UL HARQ in PDSCH and PDCCH/PCFICH demod test cases for eICIC/feICIC with MBSFN ABS	11.11.0	11.12.0	R4	eICIC_LTE-Perf, eICIC_enh_LTE-Perf
36.101	2797	-	Rel-12	A	RP-150384	R4-150453	approved	UL HARQ in PDSCH and PDCCH/PCFICH demod test cases for eICIC/feICIC with MBSFN ABS	12.6.0	12.7.0	R4	eICIC_LTE-Perf
36.101	2798	-	Rel-10	F	RP-150382	R4-150454	approved	Correction to eICIC aggressor cell configurations	10.17.0	10.18.0	R4	eICIC_LTE-Perf
36.101	2799	-	Rel-11	A	RP-150382	R4-150455	approved	Correction to eICIC aggressor cell configurations	11.11.0	11.12.0	R4	eICIC_LTE-Perf
36.101	2800	-	Rel-12	A	RP-150382	R4-150456	approved	Correction to eICIC aggressor cell configurations	12.6.0	12.7.0	R4	eICIC_LTE-Perf
36.101	2801	-	Rel-12	F	RP-150387	R4-150504	approved	R4-73AH-0040: Correction for uplik CA configuration in TS 36.101 Rel-12	12.6.0	12.7.0	R4	LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A5-Core, LTE_CA_NC_2UL-Core
36.101	2802	1	Rel-12	F	RP-150387	R4-151160	approved	Correction of MSD levels for CA_1A-8A in TS 36.101 rel-12	12.6.0	12.7.0	R4	LTE_CA_2UL-A4-Core
36.101	2803	-	Rel-10	F	RP-150382	R4-150526	approved	Removal of eDL-MIMO term from specification	10.17.0	10.18.0	R4	LTE_eDL_MIMO-Core
36.101	2804	-	Rel-11	A	RP-150382	R4-150527	approved	Removal of eDL-MIMO term from specification	11.11.0	11.12.0	R4	LTE_eDL_MIMO-Core
36.101	2805	-	Rel-12	F	RP-150387	R4-150528	approved	Removal of eDL-MIMO term from specification	12.6.0	12.7.0	R4	LTE_eDL_MIMO-Core, LC_MTC_LTE-Core
36.101	2809	-	Rel-12	F	RP-150388	R4-150533	approved	Clarification of 2UL/3DL contiguous intraband CA REFSENS test	12.6.0	12.7.0	R4	LTE_CA_C_B41_3DL-Core
36.101	2811	1	Rel-12	B	RP-150392	R4-151085	approved	CR on TM4 normal demodulation test for 3DL CA	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf
36.101	2812	-	Rel-12	F	RP-150392	R4-150552	approved	CR on introducing new DL referece measurement channels	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf
36.101	2813	1	Rel-12	B	RP-150392	R4-151087	approved	CR on normal demodulation test for TDD-FDD CA	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf

Samsung Exhibit 1025, Page 1249 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	2815	-	Rel-12	F	RP-150388	R4-150568	approved	Additions of bandwidth combination set reference	12.6.0	12.7.0	R4	LTE_CA_B1_B42_B42-Core, LTE_CA_B2_B4_B4-Core, LTE_CA_B2_B2_B5-Core, LTE_CA_B2_B12_B12-Core, LTE_CA_B2_B2_B13-Core, LTE_CA_B2_B2_B29-Core, LTE_CA_B3_B3_B7-Core, LTE_CA_B4_B4_B5-Core, LTE_CA_B4_B4_B12-Core, LTE_CA_B4_B12_B12-Core, LTE_CA_B4_B4_B13-Core
36.101	2816	-	Rel-12	F	RP-150388	R4-150569	approved	Correction of band number in Table 5.6A.1-2a for LTE_CA_B4_B12_B30	12.6.0	12.7.0	R4	LTE_CA_B4_B12_B30-Core
36.101	2817	-	Rel-10	F	RP-150382	R4-150610	approved	UE to UE co-existence between B42/B43	10.17.0	10.18.0	R4	RInImp8-UMTSLTE3500, LTE-RF
36.101	2818	-	Rel-11	A	RP-150382	R4-150611	approved	UE to UE co-existence between B42/B43	11.11.0	11.12.0	R4	RInImp8-UMTSLTE3500, LTE-RF
36.101	2819	-	Rel-12	F	RP-150382	R4-150612	approved	UE to UE co-existence between B42/B43	12.6.0	12.7.0	R4	RInImp8-UMTSLTE3500, LTE-RF
36.101	2820	-	Rel-10	F	RP-150382	R4-150613	approved	Corrections to CA in-band emissions requirement	10.17.0	10.18.0	R4	TEI10
36.101	2821	-	Rel-11	A	RP-150382	R4-150614	approved	Corrections to CA in-band emissions requirement	11.11.0	11.12.0	R4	TEI10
36.101	2822	-	Rel-12	A	RP-150382	R4-150615	approved	Corrections to CA in-band emissions requirement	12.6.0	12.7.0	R4	TEI10
36.101	2827	-	Rel-9	F	RP-150381	R4-150623	approved	Uplink RMCs for sustained data rate test	9.21.0	9.22.0	R4	TEI9
36.101	2828	-	Rel-10	A	RP-150381	R4-150624	approved	Uplink RMCs for sustained data rate test	10.17.0	10.18.0	R4	TEI9
36.101	2829	-	Rel-11	A	RP-150381	R4-150625	approved	Uplink RMCs for sustained data rate test	11.11.0	11.12.0	R4	TEI9
36.101	2830	-	Rel-12	A	RP-150381	R4-150626	approved	Uplink RMCs for sustained data rate test	12.6.0	12.7.0	R4	TEI9
36.101	2831	-	Rel-10	F	RP-150382	R4-150628	approved	Corrections to the CA power imbalance test	10.17.0	10.18.0	R4	TEI10
36.101	2832	-	Rel-11	A	RP-150382	R4-150629	approved	Corrections to the CA power imbalance test	11.11.0	11.12.0	R4	TEI10
36.101	2833	-	Rel-12	A	RP-150382	R4-150630	approved	Corrections to the CA power imbalance test	12.6.0	12.7.0	R4	TEI10
36.101	2839	1	Rel-12	B	RP-150392	R4-151088	approved	CR for soft buffer tests for TDD-FDD CA in 36.101 in Rel-12	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf
36.101	2840	-	Rel-10	F	RP-150392	R4-150705	approved	Editorial CR for CA UE performance tests in 36.101 in Rel-10	10.17.0	10.18.0	R4	LTE_CA_Mult-Perf
36.101	2841	-	Rel-11	A	RP-150392	R4-150706	approved	Editorial CR for CA UE performance tests in 36.101 in Rel-11	11.11.0	11.12.0	R4	LTE_CA_Mult-Perf
36.101	2842	-	Rel-12	F	RP-150392	R4-150707	approved	Editorial CR for CA UE performance tests in 36.101 in Rel-12	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf
36.101	2845	-	Rel-10	F	RP-150382	R4-150787	approved	UE spurious emissions structure correction for CA	10.17.0	10.18.0	R4	TEI10
36.101	2846	-	Rel-11	F	RP-150384	R4-150788	approved	UE spurious emissions structure correction for CA	11.11.0	11.12.0	R4	TEI11
36.101	2847	-	Rel-12	F	RP-150387	R4-150789	approved	UE spurious emissions structure correction for CA	12.6.0	12.7.0	R4	TEI12
36.101	2848	1	Rel-10	F	RP-150382	R4-151204	approved	Removal of Pcmax requirements for UL inter-band CA in early release	10.17.0	10.18.0	R4	LTE_CA-Core
36.101	2849	-	Rel-11	A	RP-150382	R4-150802	approved	Removal of Pcmax requirements for UL inter-band CA in early release	11.11.0	11.12.0	R4	LTE_CA-Core
36.101	2850	-	Rel-12	F	RP-150387	R4-150803	approved	Correction of PCMAX for uplink inter-band and intra-band carrier aggregation	12.6.0	12.7.0	R4	LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A5-Core

Samsung Exhibit 1025, Page 1250 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	2851	-	Rel-12	F	RP-150387	R4-150805	approved	Exceptions for spurious response for UL CA	12.6.0	12.7.0	R4	LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A5-Core
36.101	2852	1	Rel-12	F	RP-150388	R4-151162	approved	Correction of REFSENS, OOBB and uplink configuration for 3DL/1UL CA	12.6.0	12.7.0	R4	LTE_CA-Core
36.101	2853	-	Rel-12	B	RP-150390	R4-150868	approved	SNR definition for category 0 UE	12.6.0	12.7.0	R4	LC_MTC_LTE-Perf
36.101	2854	1	Rel-12	B	RP-150390	R4-151051	approved	FRC for category 0 UE PDSCH performance requirements	12.6.0	12.7.0	R4	LC_MTC_LTE-Perf
36.101	2855	1	Rel-12	B	RP-150390	R4-151052	approved	Introduction of new PHICH and PBCH performance requirements for category 0 UE	12.6.0	12.7.0	R4	LC_MTC_LTE-Perf
36.101	2861	-	Rel-12	F	RP-150387	R4-150989	approved	Correction to FOOB reference in definition of MPR for contiguous CA with non-contiguous resource allocation	12.6.0	12.7.0	R4	TEI12
36.101	2862	-	Rel-12	F	RP-150387	R4-150996	approved	Band 31 update	12.6.0	12.7.0	R4	TEI12
36.101	2865	-	Rel-11	F	RP-150384	R4-151155	approved	Band 28 UE emissions correction	11.11.0	11.12.0	R4	LTE_APAC700-Core
36.101	2866	-	Rel-11	F	RP-150384	R4-151211	approved	Implementation of CA configurations specified in later releases	11.11.0	11.12.0	R4	LTE_CA-Core
36.101	2867	-	Rel-12	A	RP-150384	R4-151212	approved	Implementation of CA configurations specified in later releases	12.6.0	12.7.0	R4	LTE_CA-Core
36.104	0627	-	Rel-12	F	RP-150382	R4-150362	approved	Co-location between Band 42 and Band 43 in TS 36.104	12.6.0	12.7.0	R4	RInImp8-UMTSLTE3500
36.104	0629	-	Rel-12	B	RP-150391	R4-150438	approved	Introduction of CA_3A-42A and CA_3A-42C into 36.104	12.6.0	12.7.0	R4	LTE_CA_B3_B42_B42-Core
36.104	0636	-	Rel-12	F	RP-150388	R4-150817	approved	MB and TDD+FDD	12.6.0	12.7.0	R4	LTE_CA_TDD_FDD-Core
36.112	0004	1	Rel-12	F	RP-150384	R4-151165	approved	Update annex C.2 to match Release 11.	12.1.0	12.2.0	R4	LCS_LTE-NBPS-Core
36.116	0010	-	Rel-11	F	RP-150384	R4-150359	approved	Corrections for TS 36.116 cluase 7.6: Blocking characteristics	11.3.0	11.4.0	R4	LTE_Relay2-Core
36.116	0011	-	Rel-12	A	RP-150384	R4-150360	approved	Corrections for TS 36.116 cluase 7.6: Blocking characteristics	12.0.0	12.1.0	R4	LTE_Relay2-Core
36.133	2746	-	Rel-11	F	RP-150384	R4-150008	approved	CR to Correct Implementation Errors in Intra-Frequency RSTD Measurement Reporting Delay Test Cases	11.11.0	11.12.0	R4	TEI11
36.133	2747	-	Rel-12	F	RP-150387	R4-150009	approved	CR to Correct Implementation Error in FDD RSTD Measurement Reporting Delay Test Case and to Update Io Levels for Certain RSTD Test Cases	12.6.0	12.7.0	R4	TEI12
36.133	2748	-	Rel-10	F	RP-150382	R4-150014	approved	Remove incorrect note from CA RSTD Accuracy tests	10.17.0	10.18.0	R4	TEI10
36.133	2749	-	Rel-11	A	RP-150382	R4-150015	approved	Remove incorrect note from CA RSTD Accuracy tests	11.11.0	11.12.0	R4	TEI10
36.133	2750	-	Rel-12	A	RP-150382	R4-150016	approved	Remove incorrect note from CA RSTD Accuracy tests	12.6.0	12.7.0	R4	TEI10
36.133	2751	-	Rel-12	F	RP-150387	R4-150017	approved	Change Nprs value for 5MHz CA RSTD Accuracy tests	12.6.0	12.7.0	R4	TEI12
36.133	2752	1	Rel-10	F	RP-150382	R4-151105	approved	Maximum allowed layers for multiple monitoring for CA	10.17.0	10.18.0	R4	LTE_CA-Perf
36.133	2753	1	Rel-11	A	RP-150065	-	approved	Maximum allowed layers for multiple monitoring for CA	11.11.0	11.12.0	R4	LTE_CA-Core
36.133	2753	-	Rel-11	A	RP-150383	R4-150040	revised	Maximum allowed layers for multiple monitoring for CA	11.11.0		R4	LTE_CA-Perf
36.133	2754	1	Rel-12	A	RP-150066	-	approved	Maximum allowed layers for multiple monitoring for CA	12.6.0	12.7.0	R4	LTE_CA-Core
36.133	2754	-	Rel-12	F	RP-150383	R4-150041	revised	Maximum allowed layers for multiple monitoring for CA	12.6.0		R4	LTE_CA-Perf
36.133	2756	-	Rel-12	F	RP-150387	R4-150044	approved	DRX correction for interruption with dual connectivity	12.6.0	12.7.0	R4	LTE_SC_enh_dualC-Perf
36.133	2757	-	Rel-12	F	RP-150388	R4-150045	approved	Correction of Interruptions with RSTD Measurements for 3DL CA	12.6.0	12.7.0	R4	LTE_CA_B1_B19_B21-Core, LTE_CA_B1_B3_B20-Core, LT
36.133	2761	1	Rel-12	B	RP-150387	R4-151126	approved	RRM requirements for ProSe	12.6.0	12.7.0	R4	LTE_D2D_Prox-Core
36.133	2763	1	Rel-12	F	RP-150396	R4-151055	approved	Updating the requirements applicability for TDD config 0	12.6.0	12.7.0	R4	LTE_TDD_eIMTA-Perf
36.133	2764	1	Rel-12	F	RP-150394	R4-151059	approved	Cleanup for RSRQ measurement requirement for SCE	12.6.0	12.7.0	R4	LTE_SC_enh_L1-Perf
36.133	2774	1	Rel-12	F	RP-150394	R4-151074	approved	Clean up the correction on discovery signal measurements	12.6.0	12.7.0	R4	LTE_SC_enh_L1-Perf
36.133	2775	1	Rel-12	F	RP-150387	R4-151114	approved	Correction on MBSFN measurements	12.6.0	12.7.0	R4	MBMS_LTE_OS-Core
36.133	2776	-	Rel-12	F	RP-150394	R4-150305	approved	Introduce CA measurement accuracy requirements for SCE	12.6.0	12.7.0	R4	LTE_SC_enh_L1-Perf

Samsung Exhibit 1025, Page 1251 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	2777	-	Rel-12	F	RP-150382	R4-150306	approved	Correction on Io in carrier aggregation test cases	12.6.0	12.7.0	R4	LTE_CA-Perf
36.133	2783	-	Rel-12	B	RP-150387	R4-150345	approved	Introducing accuracy requirement for new RSRQ	12.6.0	12.7.0	R4	TEI12
36.133	2784	-	Rel-11	F	RP-150384	R4-150457	approved	Time-domain measurement resource restriction pattern for serving cell in feICIC RSRP and RSRQ test cases	11.11.0	11.12.0	R4	eICIC_enh_LTE-Perf
36.133	2785	-	Rel-12	A	RP-150384	R4-150458	approved	Time-domain measurement resource restriction pattern for serving cell in feICIC RSRP and RSRQ test cases	12.6.0	12.7.0	R4	eICIC_enh_LTE-Perf
36.133	2790	-	Rel-11	F	RP-150384	R4-150491	approved	CR on typo of referencing section name in CA measurements	11.11.0	11.12.0	R4	TEI11
36.133	2791	-	Rel-12	A	RP-150384	R4-150492	approved	CR on typo of referencing section name in CA measurements	12.6.0	12.7.0	R4	TEI11
36.133	2797	1	Rel-12	F	RP-150393	R4-151063	approved	Clarification including PSCell in Note 1 for Ecat	12.6.0	12.7.0	R4	LTE_SC_enh_dualC-Perf
36.133	2798	1	Rel-12	F	RP-150386	R4-151135	approved	Clarification of IncMon requirements for E-UTRA idle state	12.6.0	12.7.0	R4	LTE_UTRA_Incmon-Core
36.133	2799	1	Rel-12	F	RP-150386	R4-151136	approved	Clarification of IncMon requirements for E-UTRA connected state	12.6.0	12.7.0	R4	LTE_UTRA_Incmon-Core
36.133	2800	1	Rel-12	F	RP-150386	R4-151112	approved	Clarification concerning IncMon scaling for non-gap-assisted measurements	12.6.0	12.7.0	R4	LTE_UTRA_Incmon-Core
36.133	2801	-	Rel-10	F	RP-150382	R4-150616	approved	Correction of RMC and OCNG pattern in event triggered tests without measurement gap	10.17.0	10.18.0	R4	TEI10
36.133	2802	-	Rel-11	A	RP-150382	R4-150617	approved	Correction of RMC and OCNG pattern in event triggered tests without measurement gap	11.11.0	11.12.0	R4	TEI10
36.133	2803	-	Rel-12	A	RP-150382	R4-150618	approved	Correction of RMC and OCNG pattern in event triggered tests without measurement gap	12.6.0	12.7.0	R4	TEI10
36.133	2804	-	Rel-12	B	RP-150394	R4-150645	approved	CR on RSRQ requirements for CRS based discovery signal	12.6.0	12.7.0	R4	LTE_SC_enh_L1-Perf
36.133	2807	-	Rel-11	F	RP-150384	R4-150652	approved	UE Behaviour after Measurement Gap	11.11.0	11.12.0	R4	TEI11
36.133	2808	-	Rel-12	F	RP-150387	R4-150653	approved	Correction to RRM test cases	12.6.0	12.7.0	R4	TEI12
36.133	2809	-	Rel-12	F	RP-150388	R4-150655	approved	Correction to CA Testing with Different CA Configurations	12.6.0	12.7.0	R4	LTE_CA_TDD_FDD-Core
36.133	2811	-	Rel-12	B	RP-150393	R4-150660	approved	Principle to test synchronous and asynchronous DC requirements	12.6.0	12.7.0	R4	LTE_SC_enh_dualC-Perf
36.133	2814	-	Rel-12	F	RP-150387	R4-150855	approved	Further revision of RSRP requirement for 36.133 release 12	12.6.0	12.7.0	R4	TEI12
36.133	2815	-	Rel-12	F	RP-150387	R4-150857	approved	Additional bandwidths for EUTRAN activation and deactivation of known and unknown SCell in non-DRX	12.6.0	12.7.0	R4	TEI12
36.133	2816	1	Rel-12	F	RP-150387	R4-151125	approved	High Doppler measurement accuracy requirements	12.6.0	12.7.0	R4	TEI12
36.133	2817	1	Rel-12	A	RP-150384	R4-151100	approved	36.133 CR to change CPICH Ec/No to CPICH Ec/Io in EUTRA FDD to UTRA FDD HO test cases	12.6.0	12.7.0	R4	TEI11
36.133	2818	-	Rel-11	F	RP-150384	R4-150921	approved	36.133 CR to change CPICH Ec/No to CPICH Ec/Io in EUTRA FDD to UTRA FDD HO test cases	11.11.0	11.12.0	R4	TEI11
36.133	2822	-	Rel-12	F	RP-150388	R4-150046	approved	Maximum Transmission Timing Difference in 3DL CA	12.6.0	12.7.0	R4	LTE_CA_B1_B19_B21-Core, LTE_CA_B1_B3_B20-Core, LT
36.133	2824	-	Rel-12	F	RP-150053	-	approved	Correction to the implementation of CR 2471r3 (Clarification for ACK/NACK feedback of CGI measurement)	12.6.0	12.7.0	R4	LTE_TDD_eIMTA-Core
36.141	0696	-	Rel-12	F	RP-150382	R4-150363	approved	Co-location between Band 42 and Band 43 in TS 36.141	12.6.0	12.7.0	R4	RInImp8-UMTSLTE3500
36.141	0698	-	Rel-12	B	RP-150391	R4-150439	approved	Introduction of CA_3A-42A and CA_3A-42C into 36.141	12.6.0	12.7.0	R4	LTE_CA_B3_B42_B42-Perf
36.141	0707	-	Rel-12	F	RP-150388	R4-150818	approved	MB and TDD+FDD	12.6.0	12.7.0	R4	LTE_CA_TDD_FDD-Core
36.201	0009	2	Rel-12	B	RP-150366	R1-150899	approved	Introduction of D2D feature into 36.201	12.1.0	12.2.0	R1	LTE_D2D_Prox-Core
36.211	0196	7	Rel-12	B	RP-150366	R1-150961	approved	Inclusion of ProSe	12.4.0	12.5.0	R1	LTE_D2D_Prox-Core
36.211	0198	-	Rel-12	F	RP-150364	R1-150895	approved	Correction on 256QAM applicability to PMCH	12.4.0	12.5.0	R1	LTE_SC_enh_L1-Core
36.211	0199	-	Rel-12	F	RP-150364	R1-150954	approved	Correction of discovery signal transmission	12.4.0	12.5.0	R1	LTE_SC_enh_L1-Core
36.212	0162	3	Rel-12	B	RP-150366	R1-150959	approved	Introduction of D2D feature into 36.212	12.3.0	12.4.0	R1	LTE_D2D_Prox-Core

Samsung Exhibit 1025, Page 1252 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.213	0492	2	Rel-12	B	RP-150366	R1-150962	approved	Introduction of D2D feature into 36.213	12.4.0	12.5.0	R1	LTE_D2D_Prox-Core
36.213	0494	1	Rel-12	F	RP-150363	R1-150770	approved	Correction to PUCCH procedures in case of FDD Pcell and TDD Scell in TDD-FDD CA	12.4.0	12.5.0	R1	LTE_CA_TDD_FDD-Core
36.213	0498	-	Rel-12	F	RP-150364	R1-150586	approved	Correction on higher layer parameter names for 256QAM	12.4.0	12.5.0	R1	LTE_SC_enh_L1-Core
36.213	0499	-	Rel-11	F	RP-150359	R1-150831	approved	TM10 CSI-IM Interference Measurements	11.9.0	11.10.0	R1	COMP_LTE_DL-Core
36.213	0500	-	Rel-12	A	RP-150359	R1-150832	approved	TM10 CSI-IM Interference Measurements	12.4.0	12.5.0	R1	COMP_LTE_DL-Core
36.213	0501	-	Rel-11	F	RP-150358	R1-150922	approved	Clarification on common search reception related to MBMS	11.9.0	11.10.0	R1	LTE-Phys, TEI11
36.213	0502	-	Rel-12	A	RP-150358	R1-150923	approved	Clarification on common search reception related to MBMS	12.4.0	12.5.0	R1	LTE-Phys, TEI11
36.213	0503	-	Rel-12	F	RP-150364	R1-150957	approved	Correction to Discovery in Small Cell Enhancement feature	12.4.0	12.5.0	R1	LTE_SC_enh_L1-Core
36.213	0504	1	Rel-12	F	RP-150365	R1-150963	approved	Corrections to Dual Connectivity feature	12.4.0	12.5.0	R1	LTE_SC_enh_dualC-Core
36.214	0021	2	Rel-12	C	RP-150361	R1-150249	approved	New E-UTRA RSRQ measurement definition	12.1.0	12.2.0	R1	TEI12
36.214	0026	2	Rel-12	C	RP-150366	R1-150252	approved	Inclusion of measurement for ProSe	12.1.0	12.2.0	R1	LTE_D2D_Prox-Core
36.300	0691	-	Rel-12	F	RP-150373	R2-150656	approved	Clarification on DC	12.4.0	12.5.0	R2	LTE_SC_enh_dualC-Core
36.300	0692	-	Rel-12	F	RP-150373	R2-150655	approved	Addition of PDCP-PDU retransmission to PDCP functions	12.4.0	12.5.0	R2	LTE_SC_enh_dualC-Core
36.300	0693	-	Rel-12	F	RP-150374	R2-150645	approved	Corrections to stage 2 description of ProSe	12.4.0	12.5.0	R2	LTE_D2D_Prox-Core
36.300	0698	1	Rel-12	F	RP-150373	R2-150725	approved	Minor corrections on DC 36.300	12.4.0	12.5.0	R2	LTE_SC_enh_dualC-Core
36.300	0700	-	Rel-12	B	RP-150375	R2-150697	approved	Introduction of MBMS congestion management for Public Safety Group Call	12.4.0	12.5.0	R2	GCSE_LTE-MBMS_CM-Core
36.300	0705	-	Rel-12	F	RP-150373	R2-150661	approved	Clarification on SCG change definition	12.4.0	12.5.0	R2	LTE_SC_enh_dualC-Core
36.300	0706	-	Rel-11	F	RP-150348	R2-150720	approved	Correction of the Usage of the MultibandInfoList IE	11.12.0	11.13.0	R2	TEI11
36.300	0707	-	Rel-12	A	RP-150348	R2-150721	approved	Correction of the Usage of the MultibandInfoList IE	12.4.0	12.5.0	R2	TEI11
36.300	0708	-	Rel-12	F	RP-150373	R2-150722	approved	Clarification of the description of the NAICS procedure	12.4.0	12.5.0	R2	LTE_NAICS-Core
36.300	0709	-	Rel-12	F	RP-150373	R2-150723	approved	Correction on SeNB behaviour for distinguishing uplink PDCP PDUs	12.4.0	12.5.0	R2	LTE_SC_enh_dualC-Core
36.300	0710	-	Rel-12	F	RP-150373	R2-150724	approved	Correction on DL Data Forwarding for Split Bearer	12.4.0	12.5.0	R2	LTE_SC_enh_dualC-Core
36.302	0059	-	Rel-12	F	RP-150376	R2-150672	approved	Removal of unnecessary requirement to receive MIB on SCell	12.2.0	12.3.0	R2	TEI12
36.304	0260	-	Rel-12	F	RP-150373	R2-150559	approved	UE capability signaling for WLAN/3GPP radio interworking	12.3.0	12.4.0	R2	UTRA_LTE_WLAN_interw-Core
36.304	0264	1	Rel-12	B	RP-150374	R2-150699	approved	Introduction of ProSe	12.3.0	12.4.0	R2	LTE_D2D_Prox-Core
36.304	0265	1	Rel-12	F	RP-150373	R2-150572	approved	Cleanup on RAN-assisted WLAN interworking	12.3.0	12.4.0	R2	UTRA_LTE_WLAN_interw-Core
36.304	0266	-	Rel-12	F	RP-150373	R2-150579	approved	Correction on WLAN identifiers	12.3.0	12.4.0	R2	UTRA_LTE_WLAN_interw-Core
36.306	0253	-	Rel-12	F	RP-150373	R2-150675	approved	Introduction of total L2 buffer sizes for UEs supporting split bearers	12.3.0	12.4.0	R2	LTE_SC_enh_dualC-Core
36.306	0257	-	Rel-12	F	RP-150373	R2-150654	approved	Correction to UE capabilities for Low Complexity UEs	12.3.0	12.4.0	R2	LC_MTC_LTE-Core
36.306	0258	-	Rel-12	F	RP-150373	R2-150663	approved	Extended number of measurement identities capability	12.3.0	12.4.0	R2	LTE_UTRA_IncMon-Core, LTE_SC_enh_dualC-Core
36.306	0259	-	Rel-12	F	RP-150373	R2-150659	approved	Clarificatoin of TDD DC capability	12.3.0	12.4.0	R2	LTE_SC_enh_dualC-Core
36.306	0261	1	Rel-12	F	RP-150379	R2-150713	approved	Introduction of UL64QAM based on split of DL and UL categories	12.3.0	12.4.0	R2	LTE-L23, TEI12
36.306	0263	-	Rel-10	F	RP-150378	R2-150628	approved	UE capability for modified MPR behavior	10.11.0	10.12.0	R2	LTE-L23, TEI10
36.306	0264	-	Rel-11	A	RP-150378	R2-150629	approved	UE capability for modified MPR behavior	11.9.0	11.10.0	R2	LTE-L23, TEI10
36.306	0265	-	Rel-12	A	RP-150378	R2-150630	approved	UE capability for modified MPR behavior	12.3.0	12.4.0	R2	LTE-L23, TEI10
36.306	0266	1	Rel-12	C	RP-150376	R2-150702	approved	Change related to configuration of the priority for frequency bands in mFBI	12.3.0	12.4.0	R2	TEI12
36.306	0267	-	Rel-12	B	RP-150374	R2-150700	approved	Introduction of ProSe	12.3.0	12.4.0	R2	LTE_D2D_Prox-Core

Samsung Exhibit 1025, Page 1253 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.306	0268	1	Rel-12	C	RP-150458	-	-	new DL UE categories	12.3.0		R2	LTE_CA-Core, LTE_SC_enh_L1, TEI12
36.306	0268	-	Rel-12	C	RP-150298	-	revised	new DL UE categories	12.3.0		R2	LTE_CA-Core, LTE_SC_enh_L1, TEI12
36.307	0462	-	Rel-11	F	RP-150387	R4-150502	approved	R4-73AH-0112: Correction of UE RF requirements for dual uplik to TS 36.307 Rel-11	11.10.0	11.11.0	R4	LTE_CA_2UL-A1-Perf, LTE_CA_2UL-A2- Perf, LTE_CA_2UL-A3- Perf, LTE_CA_2UL-A4- Perf, LTE_CA_2UL-A5- Perf, LTE_CA_NC_2UL-Core
36.307	0463	-	Rel-12	F	RP-150387	R4-150503	approved	R4-73AH-0113: Correction of UE RF requirements for dual uplik to TS 36.307 Rel-12	12.6.0	12.7.0	R4	LTE_CA_2UL-A1-Perf, LTE_CA_2UL-A2- Perf, LTE_CA_2UL-A3- Perf, LTE_CA_2UL-A4- Perf, LTE_CA_2UL-A5- Perf, LTE_CA_NC_2UL-Core
36.307	0466	-	Rel-10	F	RP-150392	R4-150708	approved	CR for 36.307 on CA UE performance requirement in Rel-10	10.13.0	10.14.0	R4	LTE_CA_Mult-Perf
36.307	0467	-	Rel-11	F	RP-150392	R4-150709	approved	CR for 36.307 on CA UE performance requirement in Rel-11	11.10.0	11.11.0	R4	LTE_CA_Mult-Perf
36.307	0468	-	Rel-12	F	RP-150392	R4-150710	approved	CR for 36.307 on CA UE performance requirement in Rel-12	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf
36.307	0469	-	Rel-12	F	RP-150387	R4-150854	approved	Further revision of RSRP requirement for 36.307 release 12	12.6.0	12.7.0	R4	TEI12
36.307	0476	1	Rel-11	F	RP-150388	R4-151147	approved	Release independent requirements for CA_42C	11.10.0	11.11.0	R4	LTE_CA_C_B42-Core
36.321	0751	-	Rel-12	F	RP-150373	R2-150562	approved	Clarification on the Logical channel prioritization in DC	12.4.0	12.5.0	R2	LTE_SC_enh_dualC-Core
36.321	0755	1	Rel-12	B	RP-150374	R2-150717	approved	Introduction of ProSe in MAC	12.4.0	12.5.0	R2	LTE_D2D_Prox-Core
36.321	0756	-	Rel-11	F	RP-150371	R2-150621	approved	Uplink transmission time difference	11.5.0	11.6.0	R2	LTE_CA_enh-Core
36.321	0762	1	Rel-12	B	RP-150375	R2-150698	approved	Introduction of MBMS congestion management for Public Safety Group Call	12.4.0	12.5.0	R2	GCSE_LTE-MBMS_CM-Core
36.321	0763	2	Rel-12	F	RP-150371	R2-150719	approved	Uplink transmission time difference	12.4.0	12.5.0	R2	LTE_CA_enh-Core, TEI12
36.322	0105	1	Rel-12	F	RP-150376	R2-150564	approved	RLC concatenation for extended LI field	12.1.1	12.2.0	R2	TEI12
36.322	0107	-	Rel-12	B	RP-150374	R2-150570	approved	Introduction of ProSe Direct Communication	12.1.1	12.2.0	R2	LTE_D2D_Prox-Core
36.323	0133	-	Rel-12	F	RP-150373	R2-150563	approved	Reconfiguration of PDCP reordering timer	12.2.0	12.3.0	R2	LTE_SC_enh_dualC-Core
36.323	0135	-	Rel-12	B	RP-150374	R2-150571	approved	Introduction of ProSe Direct Communication	12.2.0	12.3.0	R2	LTE_D2D_Prox-Core
36.331	1726	-	Rel-10	F	RP-150370	R2-150634	approved	Presence of codebookSubsetRestriction	10.15.0	10.16.0	R2	TEI10
36.331	1737	-	Rel-12	F	RP-150373	R2-150614	approved	Clarification on the setting of measScaleFactor without reducedMeasPerformance	12.4.1	12.5.0	R2	LTE_UTRA_IncMon-Core
36.331	1746	-	Rel-11	F	RP-150371	R2-150617	approved	Clarification on Measurement Configuration handling	11.10.0	11.11.0	R2	TEI11
36.331	1747	-	Rel-12	A	RP-150371	R2-150618	approved	Clarification on Measurement Configuration handling	12.4.1	12.5.0	R2	TEI11
36.331	1748	-	Rel-10	F	RP-150370	R2-150631	approved	Clarification on CSI measurement subframe set	10.15.0	10.16.0	R2	eICIC_LTE-Core
36.331	1749	-	Rel-11	A	RP-150370	R2-150632	approved	Clarification on CSI measurement subframe set	11.10.0	11.11.0	R2	eICIC_LTE-Core
36.331	1751	-	Rel-12	F	RP-150370	R2-150633	approved	Clarification on CSI measurement subframe set	12.4.1	12.5.0	R2	eICIC_LTE-Core, LTE_SC_enh_dualC-Core
36.331	1764	-	Rel-11	F	RP-150371	R2-150626	approved	Clarification to usage of field deltaTxD-OffsetPUCCH-Format1bCS-r11 in dedicated uplink power control parameter signalling	11.10.0	11.11.0	R2	LTE_CA_enh-Core
36.331	1765	-	Rel-12	A	RP-150371	R2-150627	approved	Clarification to usage of field deltaTxD-OffsetPUCCH-Format1bCS-r11 in dedicated uplink power control parameter signalling	12.4.1	12.5.0	R2	LTE_CA_enh-Core

Samsung Exhibit 1025, Page 1254 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.331	1768	2	Rel-12	F	RP-150377	R2-150735	approved	Miscellaneous changes resulting from review for REL-12 ASN.1 freeze	12.4.1	12.5.0	R2	TEI12
36.331	1770	2	Rel-12	B	RP-150374	R2-150734	approved	Introduction of ProSe	12.4.1	12.5.0	R2	LTE_D2D_Prox-Core
36.331	1772	-	Rel-11	F	RP-150371	R2-150635	approved	Correction of DRB establishment in case of fullConfig	11.10.0	11.11.0	R2	TEI11
36.331	1780	-	Rel-10	F	RP-150368	R2-150624	approved	The absence of supportedMIMO-CapabilityUL-r10	10.15.0	10.16.0	R2	LTE-L23, TEI10
36.331	1782	-	Rel-11	F	RP-150368	R2-150619	approved	Handling of WB RSRQ parameters	11.10.0	11.11.0	R2	LTE-L23, TEI11
36.331	1794	-	Rel-11	A	RP-150368	R2-150676	approved	The absence of supportedMIMO-CapabilityUL-r10	11.10.0	11.11.0	R2	LTE-L23, TEI10
36.331	1795	-	Rel-12	A	RP-150368	R2-150677	approved	The absence of supportedMIMO-CapabilityUL-r10	12.4.1	12.5.0	R2	LTE-L23, TEI10
36.331	1797	-	Rel-11	A	RP-150370	R2-150692	approved	Presence of codebookSubsetRestriction	11.10.0	11.11.0	R2	TEI10
36.331	1798	-	Rel-12	A	RP-150370	R2-150693	approved	Presence of codebookSubsetRestriction	12.4.1	12.5.0	R2	TEI10
36.331	1799	1	Rel-12	C	RP-150459	-	-	new DL UE categories	12.4.1		R2	LTE_CA-Core, LTE_SC_enh_L1, TEI12
36.331	1799	-	Rel-12	C	RP-150299	-	revised	new DL UE categories	12.4.1		R2	LTE_CA-Core, LTE_SC_enh_L1, TEI12
36.355	0125	1	Rel-12	F	RP-150376	R2-150726	approved	LPP clean-up	12.3.0	12.4.0	R2	TEI12
36.355	0126	2	Rel-12	F	RP-150369	R2-150704	approved	Correction of GLONASS system time	12.3.0	12.4.0	R2	LCS_LTE, TEI12
36.401	0069	1	Rel-12	F	RP-150351	R3-150401	approved	Correction on AP IDs for Dual Connectivity	12.1.0	12.2.0	R3	LTE_SC_enh_dualC-Core
36.413	1230	6	Rel-12	B	RP-150353	R3-150319	approved	ProSe UE Authorization in S1AP	12.4.0	12.5.0	R3	LTE_D2D_Prox-Core
36.413	1276	1	Rel-12	F	RP-150356	R3-150450	approved	Corrections of SON configuration transfer	12.4.0	12.5.0	R3	TEI12
36.413	1281	2	Rel-12	F	RP-150356	R3-150388	approved	Rapporteur Review-ASN.1 consistency check	12.4.0	12.5.0	R3	TEI12
36.413	1285	2	Rel-12	F	RP-150352	R3-150377	approved	Correction of reloading PWS Alerts	12.4.0	12.5.0	R3	REP_WMD-RFR_PWS
36.423	0693	5	Rel-12	B	RP-150353	R3-150039	approved	ProSe authorized indication	12.4.2	12.5.0	R3	LTE_D2D_Prox-Core
36.423	0782	1	Rel-12	F	RP-150351	R3-150402	approved	Corrections on the usage of SeNB UE AMBR in dual connectivity	12.4.2	12.5.0	R3	LTE_SC_enh_dualC-Core
36.423	0790	1	Rel-12	F	RP-150351	R3-150404	approved	Corrections of Dual Connectivity in general	12.4.2	12.5.0	R3	LTE_SC_enh_dualC-Core
36.423	0797	1	Rel-12	F	RP-150356	R3-150405	approved	Correction on DC stage3	12.4.2	12.5.0	R3	TEI12
36.423	0800	1	Rel-11	F	RP-150348	R3-150380	approved	Correction of the Usage of the MultibandInfoList IE	11.8.0	11.9.0	R3	TEI11
36.423	0801	1	Rel-12	A	RP-150348	R3-150381	approved	Correction of the Usage of the MultibandInfoList IE	12.4.2	12.5.0	R3	TEI11
36.423	0802	1	Rel-12	F	RP-150351	R3-150426	approved	Introduction of Cause values for Dual Connectivity	12.4.2	12.5.0	R3	LTE_SC_enh_dualC-Core
36.423	0803	1	Rel-12	F	RP-150356	R3-150386	approved	ASN.1 Corrections for X2AP	12.4.2	12.5.0	R3	TEI12
36.423	0804	2	Rel-12	F	RP-150351	R3-150406	approved	Corrections for Dual Connectivity	12.4.2	12.5.0	R3	LTE_SC_enh_dualC-Core
36.423	0805	-	Rel-12	D	RP-150356	R3-150391	approved	Miscellaneous Editorials for X2AP	12.4.2	12.5.0	R3	TEI12
36.423	0806	1	Rel-12	F	RP-150351	R3-150471	approved	Correction on SeNB behaviour for distinguishing uplink PDCP PDUs	12.4.2	12.5.0	R3	LTE_SC_enh_dualC-Core
36.424	0021	1	Rel-12	F	RP-150351	R3-150407	approved	Correction on Data Transmission over X2	12.1.0	12.2.0	R3	LTE_SC_enh_dualC-Core
36.425	0001	1	Rel-12	F	RP-150351	R3-150408	approved	Correction on DL USER DATA (PDU Type 0) Format for multiple PDCP PDUs	12.0.0	12.1.0	R3	LTE_SC_enh_dualC-Core
36.443	0092	1	Rel-12	F	RP-150356	R3-150376	approved	Add missing behavior for MBMS Service Counting procedure	12.1.0	12.2.0	R3	TEI12
36.443	0098	-	Rel-11	F	RP-150347	R3-150367	approved	Correction of M2AP Scheduling Information	11.3.0	11.4.0	R3	TEI11
36.443	0099	-	Rel-12	A	RP-150347	R3-150368	approved	Correction of M2AP Scheduling Information	12.1.0	12.2.0	R3	TEI11
36.443	0101	1	Rel-12	B	RP-150355	R3-150495	approved	Support for eMBMS congestion management, via MBMS Scheduling Information procedure	12.1.0	12.2.0	R3	GCSE_LTE-MBMS_CM-Core
36.443	0102	-	Rel-12	B	RP-150354	R3-150494	rejected	Support for eMBMS congestion management, via new procedure	12.1.0		R3	GCSE_LTE-MBMS_CM-Core
36.444	0070	1	Rel-12	D	RP-150356	R3-150385	approved	Rapporteur Review on 36444	12.1.0	12.2.0	R3	TEI12
36.455	0050	1	Rel-12	D	RP-150356	R3-150387	approved	ASN.1 Corrections for LPPa	12.1.0	12.2.0	R3	TEI12
36.459	0009	-	Rel-12	F	RP-150356	R3-150210	approved	Correction of Error Indication	12.1.0	12.2.0	R3	TEI12

Samsung Exhibit 1025, Page 1255 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.508	0567	-	Rel-12	F	RP-150342	R5-150103	approved	Correction to CA_19A-21A, CA_39A-41A	12.4.1	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.508	0568	-	Rel-12	F	RP-150323	R5-150127	approved	Support of 2nd PDN connectivity at UE registration - Corrections for C2K	12.4.1	12.5.0	R5	TEI8_Test
36.508	0569	-	Rel-12	F	RP-150345	R5-150933	approved	Addition of UE Positioning testing to State 3A	12.4.1	12.5.0	R5	TEI12_Test
36.508	0570	-	Rel-12	F	RP-150326	R5-150273	approved	Correction of MFBI Test Frequencies for Band 38->41	12.4.1	12.5.0	R5	TEI9_Test
36.508	0571	-	Rel-12	F	RP-150341	R5-150367	approved	Addition of CA_8A-20A to Clause 6.2.3.2 of TS 36.508	12.4.1	12.5.0	R5	TEI11_Test
36.508	0572	-	Rel-12	F	RP-150343	R5-150480	approved	Addition of CA_1A-20A to Clause 6.2.3.2 of TS 36.508	12.4.1	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0573	-	Rel-12	F	RP-150342	R5-150936	approved	Addition of Signalling test frequecies to 36.508 for CA_23B	12.4.1	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.508	0574	-	Rel-12	F	RP-150342	R5-150937	approved	Addition of Signalling test frequecies to 36.508 for CA_23A-29A	12.4.1	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.508	0575	-	Rel-12	F	RP-150342	R5-150679	approved	Correction to TDD CA contiguous Intra-band setting for signalling test	12.4.1	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.508	0576	-	Rel-12	F	RP-150342	R5-150680	approved	Addition of Signalling test frequecies to 36.508 for CA_1A-7A	12.4.1	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.508	0577	-	Rel-12	F	RP-150343	R5-150682	approved	Addition of CA_2A-30A to Clause 6.2.3.2 of TS 36.508.	12.4.1	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0578	-	Rel-12	F	RP-150343	R5-150683	approved	Addition of CA_4A-30A to Clause 6.2.3.2 of TS 36.508.	12.4.1	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0579	-	Rel-12	F	RP-150343	R5-150684	approved	Addition of CA_5A-30A to Clause 6.2.3.2 of TS 36.508.	12.4.1	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0580	-	Rel-12	F	RP-150342	R5-150722	approved	Addition of Signalling test frequencies to 36.508 for CA_5A-25A and CA_12A-25A	12.4.1	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.508	0581	-	Rel-12	F	RP-150343	R5-150743	approved	Correction to CA_18A-28A SIG test frequency in 36.508	12.4.1	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0582	-	Rel-12	F	RP-150342	R5-150859	approved	Addition of test frequency table for Band 23B to 36.508	12.4.1	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.508	0583	-	Rel-12	F	RP-150343	R5-150864	approved	Addition of test frequencies for CA_18A-28A in 36.508	12.4.1	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0584	-	Rel-12	F	RP-150343	R5-150895	approved	Addition of 3DL Intra-band Contiguous and Non-contiguous Test Frequencies	12.4.1	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0585	-	Rel-12	F	RP-150342	R5-150896	approved	Addition of further test frequencies for Intra-band Non-contiguous 2DL CA	12.4.1	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.508	0586	-	Rel-12	F	RP-150343	R5-150912	approved	Update of SCC configuration for 3DL CA RF/RRM tests	12.4.1	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1744	-	Rel-12	F	RP-150343	R5-150112	approved	Addition of CA_2-30 to Clause 5.2A of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1745	-	Rel-12	F	RP-150343	R5-150135	approved	Addition of CA_5-30 to Clause 5.2A of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1746	-	Rel-12	F	RP-150343	R5-150136	approved	Addition of CA_5A-30A to Clause 5.4.2A of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1747	-	Rel-12	F	RP-150343	R5-150169	approved	Addition of CA_4A-5A-30A to Clause 5.4.2A of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1748	-	Rel-12	F	RP-150341	R5-150181	approved	Addition of new TC 9.3.6.1_F.2 FDD CQI Reporting under fading conditions with Three CSI processes for CoMP	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1749	-	Rel-12	F	RP-150341	R5-150184	approved	Addition of new TC 9.3.6.2_F.2 TDD CQI Reporting under fading conditions with Three CSI processes for CoMP	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1750	-	Rel-12	F	RP-150323	R5-150209	approved	Corrections to 1 PRB allocation performance in presence of MBSF	12.4.0	12.5.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1256 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	1751	-	Rel-12	F	RP-150327	R5-150210	approved	Corrections to the Common Test Parameters for User-specific Reference Symbols	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1752	-	Rel-12	F	RP-150341	R5-150214	approved	Test Tolerances for 8.3.1.2.1_D_1 FDD PDSCH Dual-layer Spatial Multiplexing for eDL-MIMO Rel-11	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1753	-	Rel-12	F	RP-150341	R5-150215	approved	Test Tolerances for 8.3.2.2.1_D_1 TDD PDSCH Dual-layer Spatial Multiplexing for eDL-MIMO Rel-11	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1754	-	Rel-12	F	RP-150341	R5-150216	approved	Uncertainties and Test Tolerances to Annex F for PDSCH for eDL-MIMO Rel-11	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1755	-	Rel-12	F	RP-150327	R5-150234	approved	CA RF: Corrections to power imbalance test	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1756	-	Rel-12	F	RP-150341	R5-150252	approved	Update of non-contiguous CA Rx Test Cases	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1757	-	Rel-12	F	RP-150341	R5-150364	approved	ePDCCH RF: Corrections to sustained data rate test	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1758	-	Rel-12	F	RP-150342	R5-150373	approved	Introduction of new CA band combinations 5+25 and 12+25 for Transmitter Characteristics	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1759	-	Rel-12	F	RP-150323	R5-150409	approved	Correction in cl.3 of 36.521-1	12.4.0	12.5.0	R5	TEI8_Test
36.521-1	1760	-	Rel-12	F	RP-150327	R5-150415	approved	Correction to message exceptions for eICIC performance test cases	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1761	-	Rel-12	F	RP-150327	R5-150416	approved	Clean up on Performance and CSI test cases for eICIC and feICIC	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1762	-	Rel-12	F	RP-150341	R5-150417	approved	Correction to test procedure in CQI Reporting under AWGN for feICIC	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1763	-	Rel-12	F	RP-150341	R5-150420	approved	Correction to minimum test time for feICIC performance tests in G.3A.5	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1764	-	Rel-12	F	RP-150342	R5-150437	approved	New CA band combination CA_1A-28A - Updates of 5.2A Operating bands	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1765	-	Rel-12	F	RP-150342	R5-150438	approved	New CA band combination CA_1A-28A - Updates of 5.4.2A Channel bandwidth	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1766	-	Rel-12	F	RP-150342	R5-150440	approved	New CA band combination CA_1A-28A - Updates of 6.2.5.3 Delta TIB	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1767	-	Rel-12	F	RP-150342	R5-150441	approved	New CA band combination CA_1A-28A - Updates of 7.3.3 Delta RIB	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1768	-	Rel-12	F	RP-150343	R5-150452	approved	New CA band combination CA_1A-18A-28A - Updates of 5.4.2A Channel bandwidth	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1769	-	Rel-12	F	RP-150343	R5-150453	approved	New CA band combinations (CA_1A-41A, CA_1A-41C) - Updates of 5.2A Operating bands	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1770	-	Rel-12	F	RP-150343	R5-150455	approved	New CA band combinations (CA_26A-41A, CA_26A-41C) - Updates of 5.2A Operating bands	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1771	-	Rel-12	F	RP-150343	R5-150456	approved	New CA band combination CA_1A-18A-28A - Updates of 5.2A Operating bands	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1772	-	Rel-12	F	RP-150343	R5-150460	approved	Correction to the description of duplex mode related to CA_18A-28A	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1773	-	Rel-12	F	RP-150343	R5-150461	approved	Correction to the test frequencies and test CC combinations for CA_18A-28A	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1774	-	Rel-12	F	RP-150342	R5-150472	approved	Correction to requirements for test case 7.6.2A.1 and 7.6.2A.2	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1775	-	Rel-12	F	RP-150327	R5-150476	approved	Removal of Note 1 in requirements of TC 6.2.2A	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1776	-	Rel-12	F	RP-150327	R5-150478	approved	Addition of &#916:RIB,c to requirements of blocking and spurios response test cases	12.4.0	12.5.0	R5	TEI10_Test

Samsung Exhibit 1025, Page 1257 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	1777	-	Rel-12	F	RP-150327	R5-150479	approved	Correction to PUSCH configuration details for 36.521-1 4x2 CA test cases	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1778	-	Rel-12	F	RP-150342	R5-150505	approved	Added TT in annex for TDD inter band CA performance tests	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1779	-	Rel-12	F	RP-150342	R5-150506	approved	Updated TT in TDD inter band CA performance tests	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1780	-	Rel-12	F	RP-150343	R5-150522	approved	Addition of CA_1A-20A to TS 36.521-1	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1781	-	Rel-12	F	RP-150342	R5-150543	approved	Addition of 2A-12A and 5A-13A 2DL Interband CA to 36.521-1	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1782	-	Rel-12	F	RP-150323	R5-150606	approved	Clarification on bandwidth to be tested	12.4.0	12.5.0	R5	TEI8_Test
36.521-1	1783	-	Rel-12	F	RP-150323	R5-150800	approved	Correction to 6.6.3.2 of Tx Spurious	12.4.0	12.5.0	R5	TEI8_Test
36.521-1	1784	-	Rel-12	F	RP-150327	R5-150801	approved	Correction in 6.2.5A and 6.5.1A of 36.521-1	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1785	-	Rel-12	F	RP-150327	R5-150802	approved	Fixing numbering in Table 6.6.2.3A.1.4.1-1	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1786	-	Rel-12	F	RP-150323	R5-150803	approved	Change of test points for A-MPR in band 26	12.4.0	12.5.0	R5	TEI8_Test
36.521-1	1787	-	Rel-12	F	RP-150342	R5-150809	approved	Addition of BCS1 to 25A-25A CA	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1788	-	Rel-12	F	RP-150342	R5-150810	approved	Introduction of CA_1A-7A to TS 36.521-1	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1789	-	Rel-12	F	RP-150342	R5-150811	approved	Correction to test points for intra-band contiguous receiver test cases	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1790	-	Rel-12	F	RP-150343	R5-150816	approved	Addition of CA_2A-30A to Clause 7.3.3 of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1791	-	Rel-12	F	RP-150343	R5-150817	approved	Addition of CA_2A-30A to Clause 6.2.5 of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1792	-	Rel-12	F	RP-150343	R5-150818	approved	Addition of CA_2A-30A to Clause 5.4.2A of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1793	-	Rel-12	F	RP-150343	R5-150819	approved	Addition of CA_4A-30A to Clause 7.3.3 of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1794	-	Rel-12	F	RP-150343	R5-150820	approved	Addition of CA_4A-30A to Clause 6.2.5 of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1795	-	Rel-12	F	RP-150343	R5-150821	approved	Addition of CA_4-30 to Clause 5.2A of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1796	-	Rel-12	F	RP-150343	R5-150822	approved	Addition of CA_4A-30A to Clause 5.4.2A of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1797	-	Rel-12	F	RP-150343	R5-150823	approved	Addition of CA_5A-30A to Clause 7.3.3 of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1798	-	Rel-12	F	RP-150343	R5-150824	approved	Addition of CA_5A-30A to Clause 6.2.5 of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1799	-	Rel-12	F	RP-150343	R5-150825	approved	Addition of CA_4-5-30 to Clause 5.2A of TS 36.521-1.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1800	-	Rel-12	F	RP-150343	R5-150826	approved	Addition of new TC FDD PDSCH Single Antenna Port Performance for CA (3DL CA)	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1801	-	Rel-12	F	RP-150343	R5-150827	approved	Addition of CA_2A-2A-13A to TS 36.521-1	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1802	-	Rel-12	F	RP-150343	R5-150828	approved	Addition of 40D,41D,41C-41A and 25A-25A BCS1 to Channel BW for CA tables	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1803	-	Rel-12	F	RP-150343	R5-150829	approved	Addition of multiple interband 3DL CA Combinations to Channel BW for CA tables	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1804	-	Rel-12	F	RP-150341	R5-150848	approved	Addition of new TC 9.3.6.1_F.1 FDD CQI Reporting under fading conditions with Single CSI process for CoMP	12.4.0	12.5.0	R5	TEI11_Test

Samsung Exhibit 1025, Page 1258 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	1805	-	Rel-12	F	RP-150341	R5-150849	approved	Addition of new TC 9.3.6.1_F.3 FDD CQI Reporting under fading conditions with Four CSI processes for CoMP	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1806	-	Rel-12	F	RP-150341	R5-150850	approved	Addition of new TC 9.3.6.2_F.1 TDD CQI Reporting under fading conditions with Single CSI process for CoMP	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1807	-	Rel-12	F	RP-150341	R5-150851	approved	Addition of new TC 9.3.6.2_F.3 TDD CQI Reporting under fading conditions with Four CSI processes for CoMP	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1808	-	Rel-12	F	RP-150342	R5-150860	approved	Introduction of new CA band combinations 5+25 and 12+25 for Receiver Characteristics	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1809	-	Rel-12	F	RP-150343	R5-150861	approved	Addition of CA_1A-7A-20A to TS 36.521-1	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1810	-	Rel-12	F	RP-150343	R5-150862	approved	Update of minimum requirements for TC 6.2.5 Configured UE transmitted Output Power	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1811	-	Rel-12	F	RP-150343	R5-150863	approved	Updates of minimum requirement to reference sensitivity for CA	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1812	-	Rel-12	F	RP-150343	R5-150865	approved	Addition of new TC TDD PDSCH Single Antenna Port Performance for CA (3DL CA)	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1813	-	Rel-12	F	RP-150343	R5-150866	approved	Addition of new TC FDD Sustained data rate performance for CA (3DL CA)	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1814	-	Rel-12	F	RP-150343	R5-150867	approved	Addition of new TC TDD Sustained data rate performance for CA (3DL CA)	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1815	-	Rel-12	F	RP-150343	R5-150870	approved	New CA band combinations (CA_1A-41A, CA_1A-41C) - Updates of 5.4.2A Channel bandwidth	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1816	-	Rel-12	F	RP-150343	R5-150871	approved	New CA band combinations (CA_26A-41A, CA_26A-41C) - Updates of 5.4.2A Channel bandwidth	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1817	-	Rel-12	F	RP-150327	R5-150935	approved	Change in UE co-existence 6.6.3.2 harmonic emissions exceptions	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1818	-	Rel-12	F	RP-150327	R5-150874	approved	CA RF: Updates to in-band emissions requirements	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1819	-	Rel-12	F	RP-150345	R5-150875	approved	Correction to test procedure of TC 7.6.1A.4	12.4.0	12.5.0	R5	TEI12_Test
36.521-1	1820	-	Rel-12	F	RP-150327	R5-150880	approved	Update of CA sustained data rate tests	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1821	-	Rel-12	F	RP-150327	R5-150881	approved	Aligning Bandwidth Combination Sets with latest core specification	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1822	-	Rel-12	F	RP-150341	R5-150892	approved	Update to TC 7.5A.4 Adjacent Channel Selectivity (ACS) for CA (intra-band non-contiguous DL CA without UL CA)	12.4.0	12.5.0	R5	TEI11_Test
36.521-1	1823	-	Rel-12	F	RP-150342	R5-150897	approved	New CA band combination CA_1A-28A - Updates of 7.3A Refsens	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-1	1824	-	Rel-12	F	RP-150323	R5-150928	approved	Updates to Spurious emission band UE co-existence test case 6.6.3.2	12.4.0	12.5.0	R5	TEI8_Test
36.521-1	1825	-	Rel-12	F	RP-150327	R5-150906	approved	Updates to FDD and TDD RI Reporting test cases for CoMP	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1827	-	Rel-12	F	RP-150327	R5-150929	approved	Addition of CA capability in Rx tests	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1828	-	Rel-12	F	RP-150327	R5-150927	approved	Addition of Multi-Cluster PUSCH with One Uplink Carrier test cases to 36.521-1	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1829	-	Rel-12	F	RP-150327	R5-150915	approved	Addition of CA capability and applicability changes to Section 8 36.521-1 FDD TM3 CA test cases	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1830	-	Rel-12	F	RP-150327	R5-150916	approved	Changes to Annex F of 36.521-1 related to CA capability and applicability changes to FDD CA test cases	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1831	-	Rel-12	F	RP-150327	R5-150917	approved	Correction to CA applicability and test rules	12.4.0	12.5.0	R5	TEI10_Test

Samsung Exhibit 1025, Page 1259 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	1832	-	Rel-12	F	RP-150327	R5-150918	approved	Addition of CA capability and applicability changes to 36.521-1 FDD TM1 CA test cases	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1833	-	Rel-12	F	RP-150327	R5-150919	approved	Update to LTE CA Sustained Data rate test cases	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1834	-	Rel-12	F	RP-150327	R5-150920	approved	CA demod Soft Buffer test case variants merge	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1835	-	Rel-12	F	RP-150327	R5-150921	approved	Addition of CA capability and applicability changes to Section 8 36.521-1 FDD TM4 CA test cases	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1836	-	Rel-12	F	RP-150327	R5-150922	approved	Addition of CA capability and applicability changes to FDD chap9 CA test cases	12.4.0	12.5.0	R5	TEI10_Test
36.521-1	1837	-	Rel-12	F	RP-150343	R5-150925	approved	Introduction of Test Case for Maximum input level for 3DL CA	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1838	-	Rel-12	F	RP-150343	R5-150926	approved	Addition of new TC of reference sensitivity for 3DL CA	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1839	-	Rel-12	F	RP-150343	R5-150869	approved	Addition of Cell IDs for 3DL CA Rx tests	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1840	-	Rel-12	F	RP-150341	R5-150186	approved	Addition of TT for new TCs 9.3.6.1_F.1, 9.3.6.1_F.2, 9.3.6.1_F.3, 9.3.6.2_F.1, 9.3.6.2_F.2 and 9.3.6.2_F.3	12.4.0	12.5.0	R5	TEI11_Test
36.521-2	0221	-	Rel-12	F	RP-150342	R5-150298	approved	Introduction of CA_1A-7A to TS 36.521-2	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-2	0222	-	Rel-12	F	RP-150323	R5-150304	approved	Corrections to title of RRM test case 8.7.1 in applicability table	12.4.0	12.5.0	R5	TEI8_Test
36.521-2	0223	-	Rel-12	F	RP-150328	R5-150365	approved	CA: Corrections to CA capability tables	12.4.0	12.5.0	R5	TEI10_Test
36.521-2	0224	-	Rel-12	F	RP-150342	R5-150374	approved	Introduction of RF applicability for CA band combinations 5+25 and 12+25	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-2	0225	-	Rel-12	F	RP-150342	R5-150444	approved	New CA band combination CA_1A-28A - Updates of Table A.4.6.3-3	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-2	0226	-	Rel-12	F	RP-150343	R5-150524	approved	Addition of CA_1A-20A to TS 36.521-2	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0227	-	Rel-12	F	RP-150342	R5-150546	approved	Addition of 2A-12A and 5A-13A 2DL Interband CA to 36.521-2	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-2	0228	-	Rel-12	F	RP-150328	R5-150558	approved	Applicability conditions added to TCs 9.1.12.x and 9.2.11.x	12.4.0	12.5.0	R5	TEI10_Test
36.521-2	0229	-	Rel-12	F	RP-150343	R5-150564	approved	Addition of CA_2A-2A-13A to TS 36.521-2	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0230	-	Rel-12	F	RP-150323	R5-150805	approved	Update of FGI definitions in TS 36.521-2	12.4.0	12.5.0	R5	TEI8_Test
36.521-2	0231	-	Rel-12	F	RP-150343	R5-150830	approved	Addition of CA_2-30 to Annex A.4.6 of TS 36.521-2.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0232	-	Rel-12	F	RP-150343	R5-150831	approved	Addition of CA_4-30 to Annex A.4.6 of TS 36.521-2.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0233	-	Rel-12	F	RP-150343	R5-150832	approved	Addition of CA_5-30 to Annex A.4.6 of TS 36.521-2.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0234	-	Rel-12	F	RP-150341	R5-150858	approved	Update of applicability statements for CoMP - TCs being split	12.4.0	12.5.0	R5	TEI11_Test
36.521-2	0235	-	Rel-12	F	RP-150343	R5-150872	approved	Addition of applicability for 3DL CA test cases	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0236	-	Rel-12	F	RP-150342	R5-150876	approved	Addition of applicability for CA_39C in TS36.521-2	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.521-2	0238	-	Rel-12	F	RP-150345	R5-150882	approved	Addition of applicability for newly added 20MHz+10MHz RRM test cases	12.4.0	12.5.0	R5	TEI12_Test
36.521-2	0239	-	Rel-12	F	RP-150345	R5-150883	approved	Addition of applicability for newly added RSRP accuracy RRM test cases	12.4.0	12.5.0	R5	TEI12_Test
36.521-2	0240	-	Rel-12	F	RP-150343	R5-150904	approved	Addition of a new table for Supported CA configurations for Inter-band CA (three bands)	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest

Samsung Exhibit 1025, Page 1260 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-2	0241	-	Rel-12	F	RP-150328	R5-150914	approved	Addition of applicability for Multi-Cluster PUSCH with One Uplink Carrier test cases	12.4.0	12.5.0	R5	TEI10_Test
36.521-2	0242	-	Rel-12	F	RP-150328	R5-150923	approved	CA demod test case variants merge in 36.521-2	12.4.0	12.5.0	R5	TEI10_Test
36.521-3	1043	-	Rel-12	F	RP-150341	R5-150213	approved	Corrections to multicarrier handover from E-UTRA to UTRA requirements	12.4.1	12.5.0	R5	TEI11_Test
36.521-3	1044	-	Rel-12	F	RP-150323	R5-150218	approved	Test Tolerances for 4.3.1.3 E-UTRAN FDD - UTRAN FDD cell re-selection	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1045	-	Rel-12	F	RP-150323	R5-150220	approved	Test Tolerance for 4.3.4.3 EUTRA TDD-UTRA TDD cell reselection	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1046	-	Rel-12	F	RP-150323	R5-150222	approved	Test Tolerances for 8.5.2 E-UTRAN FDD - UTRAN FDD SON ANR cell search reporting	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1047	-	Rel-12	F	RP-150323	R5-150224	approved	Test Tolerances for 8.7.3 E-UTRAN TDD - UTRAN TDD SON ANR cell search reporting	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1048	-	Rel-12	F	RP-150323	R5-150226	approved	Test Tolerances for 8.9.1 E-UTRAN FDD - UTRAN TDD event triggered reporting	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1049	-	Rel-12	F	RP-150323	R5-150228	approved	Test Tolernaces for 8.8.1+8.10.1 E-UTRAN - GSM event triggered reporting	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1050	-	Rel-12	F	RP-150323	R5-150230	approved	Test Tolerances for 8.8.2+8.10.2 E-UTRAN - GSM event triggered reporting when DRX is used	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1051	-	Rel-12	F	RP-150323	R5-150232	approved	Uncertainties to Annex F for RRM test cases	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1052	-	Rel-12	F	RP-150323	R5-150242	approved	Update Uncertainties for Test case 5.1.5	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1053	-	Rel-12	F	RP-150323	R5-150244	approved	Update Uncertainties for Test case 5.1.6	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1054	-	Rel-12	F	RP-150323	R5-150246	approved	Update Uncertainties for Test case 5.2.3, 5.2.6	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1055	-	Rel-12	F	RP-150343	R5-150256	approved	Introduction of Test Cases for RSRQ Accuracy for TDD-FDD CA	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1056	-	Rel-12	F	RP-150345	R5-150306	approved	Uncerts and Test Tols for TCs 8.16.11+8.16.12 36.521-3 CR	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1057	-	Rel-12	F	RP-150345	R5-150310	approved	Uncerts and Test Tols for TCs 8.16.15+8.16.16 36.521-3 CR	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1058	-	Rel-12	F	RP-150345	R5-150314	approved	Uncerts and Test Tols for TCs 9.1.18.2+9.1.19.2 36.521-3 CR	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1059	-	Rel-12	F	RP-150345	R5-150316	approved	Uncerts and Test Tols for TCs 9.1.20.1+9.1.21.1 36.521-3 CR	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1060	-	Rel-12	F	RP-150345	R5-150318	approved	Uncerts and Test Tols for TCs 9.1.20.2+9.1.21.2 36.521-3 CR	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1061	-	Rel-12	F	RP-150328	R5-150320	approved	RRM: Corrections to event triggered tests without measurement gap	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1062	-	Rel-12	F	RP-150345	R5-150324	approved	Uncerts and Test Tols for TCs 9.2.23.1+9.2.24.1 36.521-3 CR	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1063	-	Rel-12	F	RP-150345	R5-150327	approved	Uncerts and Test Tols for TCs 9.2.23.2+9.2.24.2 36.521-3 CR	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1064	-	Rel-12	F	RP-150345	R5-150328	approved	Correction to RRM TCs 9.1.6.2 and 9.1.7.2	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1065	-	Rel-12	F	RP-150345	R5-150361	approved	Addition of cell mapping for some test cases	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1066	-	Rel-12	F	RP-150328	R5-150381	approved	Update of Annex E and F for TCs 9.1.12 and 9.2.11	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1067	-	Rel-12	F	RP-150328	R5-150390	approved	Correction to test procedure for LTE CA event reporting test case	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1068	-	Rel-12	F	RP-150328	R5-150421	approved	Correction to message exceptions in eICIC MBSFN ABS	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1069	-	Rel-12	F	RP-150341	R5-150423	approved	Correction to feICIC common exceptions in AnnexH	12.4.1	12.5.0	R5	TEI11_Test
36.521-3	1070	-	Rel-12	F	RP-150341	R5-150424	approved	Clean up on cl.7 and cl.8 feICIC RRM test cases	12.4.1	12.5.0	R5	TEI11_Test
36.521-3	1071	-	Rel-12	F	RP-150341	R5-150425	approved	Clean up on cl.9 feICIC RRM test cases	12.4.1	12.5.0	R5	TEI11_Test
36.521-3	1072	-	Rel-12	F	RP-150328	R5-150517	approved	Error correction to TDD Absolute RSRQ Accuracy for E-UTRA Carrier Aggregation	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1073	-	Rel-12	F	RP-150345	R5-150523	approved	Cell configuration mapping for Rel 12 and forward absolute RSRP accuracy RRM cases	12.4.1	12.5.0	R5	TEI12_Test

Samsung Exhibit 1025, Page 1261 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-3	1074	-	Rel-12	F	RP-150323	R5-150526	approved	Update R8 intra frequency absolute RSRP accuracy requirements	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1075	-	Rel-12	F	RP-150323	R5-150527	approved	Update R8 inter frequency absolute RSRP accuracy requirements	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1076	-	Rel-12	F	RP-150326	R5-150529	approved	Update R9 inter frequency absolute RSRP accuracy requirements	12.4.1	12.5.0	R5	TEI9_Test
36.521-3	1077	-	Rel-12	F	RP-150328	R5-150530	approved	Update R10 intra frequency absolute RSRP accuracy requirements	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1078	-	Rel-12	F	RP-150328	R5-150531	approved	Update TDD RSRP Accuracy requirements for Carrier Aggregation	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1079	-	Rel-12	F	RP-150345	R5-150806	approved	New TCs: intra frequency absolute RSRP accuracy requirements	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1080	-	Rel-12	F	RP-150345	R5-150807	approved	New TCs: inter frequency absolute RSRP accuracy requirements	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1081	-	Rel-12	F	RP-150345	R5-150808	approved	New TCs: RSRP absolute accuracy for E-UTRA CA	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1082	-	Rel-12	F	RP-150345	R5-150812	approved	New TC: E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX for 20MHz+10MHz	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1083	-	Rel-12	F	RP-150345	R5-150813	approved	New TC: E-UTRAN TDD event triggered reporting on deactivated SCell with PCell interruption in non-DRX for 20MHz+10MHz bandwidth	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1084	-	Rel-12	F	RP-150345	R5-150814	approved	New TC: TDD RSRP Accuracy for E-UTRAN Carrier Aggregation for 20MHz + 10MHz	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1085	-	Rel-12	F	RP-150345	R5-150815	approved	New TC: TDD RSRQ Accuracy for E-UTRAN Carrier Aggregation for 20MHz + 10MHz	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1086	-	Rel-12	F	RP-150328	R5-150841	approved	Corrections to on time to identify the target UTRA TDD cell for blind redirection	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1087	-	Rel-12	F	RP-150328	R5-150842	approved	Update of TCs 9.1.12 for FDD RSRP Accuracy for CA 20MHz	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1088	-	Rel-12	F	RP-150328	R5-150843	approved	Update TCs 9.2.11 for FDD RSRQ Accuracy for CA 20MHz	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1089	-	Rel-12	F	RP-150328	R5-150844	approved	Correction to eICIC Radio link monitoring test cases	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1090	-	Rel-12	F	RP-150328	R5-150845	approved	Clean up on cl.7 and cl.9 eICIC RRM test cases	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1092	-	Rel-12	F	RP-150345	R5-150847	approved	Update R11 RSRP Accuracy for E-UTRA Carrier Aggregation for 10MHz+5MHz	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1093	-	Rel-12	F	RP-150345	R5-150852	approved	Uncerts and Test Tols for TCs 8.16.13+8.16.14 36.521-3 CR	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1094	-	Rel-12	F	RP-150345	R5-150856	approved	Uncerts and Test Tols for TCs 8.16.9+8.16.10 36.521-3 CR	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1095	-	Rel-12	F	RP-150345	R5-150884	approved	Cell configuration mapping for 20MHz +10MHz CA RRM new cases	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1096	-	Rel-12	F	RP-150328	R5-150885	approved	Editorial correction to 8.14.2 and 8.15.2	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1097	-	Rel-12	F	RP-150323	R5-150886	approved	Corrections to RRM test cases in clauses 5 and 8	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1098	-	Rel-12	F	RP-150345	R5-150887	approved	Uncerts and Test Tols for TCs 9.1.18.1+9.1.19.1 36.521-3 CR	12.4.1	12.5.0	R5	TEI12_Test
36.521-3	1099	-	Rel-12	F	RP-150328	R5-150901	approved	CA RRM: Correction to test frequencies and Cell-IDs	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1100	-	Rel-12	F	RP-150328	R5-150902	approved	Addition of CA capability in RRM tests	12.4.1	12.5.0	R5	TEI10_Test
36.521-3	1101	-	Rel-12	F	RP-150341	R5-150903	approved	feICIC RRM: Corrections to Cell-IDs	12.4.1	12.5.0	R5	TEI11_Test
36.521-3	1102	-	Rel-12	F	RP-150323	R5-150930	approved	RRM: Consideration of unsent measurement reports	12.4.1	12.5.0	R5	TEI8_Test
36.521-3	1103	-	Rel-12	F	RP-150328	R5-150908	approved	Updates of test procedures in activation and deactivation test cases	12.4.1	12.5.0	R5	TEI10_test
36.521-3	1104	-	Rel-12	F	RP-150323	R5-150857	approved	RRM: Inter-frequency testing for Band 30	12.4.1	12.5.0	R5	TEI8_Test
36.523-1	2839	-	Rel-12	F	RP-150324	R5-150062	approved	Correction of Idle mode test case 6.1.1.2	12.4.0	12.5.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1262 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-1	2840	-	Rel-12	F	RP-150324	R5-150063	approved	Correction of Idle mode test case 6.1.1.9	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2841	-	Rel-12	F	RP-150329	R5-150068	approved	Forgotten removal of TC 6.3.12 from TS 36.523-1	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2842	-	Rel-12	F	RP-150341	R5-150089	approved	Correction to eMDT test case 8.6.4.5	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2843	-	Rel-12	F	RP-150341	R5-150090	approved	Correction to eMDT test case 8.6.6.6	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2844	-	Rel-12	F	RP-150326	R5-150100	approved	Correction to MFBI test case 6.1.2.20	12.4.0	12.5.0	R5	TEI9_Test
36.523-1	2845	-	Rel-12	F	RP-150341	R5-150101	approved	Correction to test case 6.2.4.3	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2846	-	Rel-12	F	RP-150329	R5-150151	approved	Update of Idle mode test case 6.2.3.35	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2847	-	Rel-12	F	RP-150345	R5-150270	approved	Correction of EUTRA<>UTRA bSRVCC Testcase 13.4.3.20	12.4.0	12.5.0	R5	TEI12_Test
36.523-1	2848	-	Rel-12	F	RP-150324	R5-150271	approved	Correction to GCF WI-082 EUTRA ESM test case 10.4.1	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2849	-	Rel-12	F	RP-150329	R5-150277	approved	Correction the parameter in TC 13.4.3.28	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2850	-	Rel-12	F	RP-150341	R5-150321	approved	Correction to CA intra band non-contiguous clause 7.1 rel-11 test cases	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2851	-	Rel-12	F	RP-150345	R5-150322	approved	Correction to CA intra band non-contiguous clause 7.1 rel-12 test cases	12.4.0	12.5.0	R5	TEI12_Test
36.523-1	2852	-	Rel-12	F	RP-150341	R5-150323	approved	Correction to CA intra band non-contiguous clause 8.2 rel-11 test cases	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2853	-	Rel-12	F	RP-150345	R5-150329	approved	Correction to CA intra band non-contiguous clause 8.2 rel-12 test cases	12.4.0	12.5.0	R5	TEI12_Test
36.523-1	2854	-	Rel-12	F	RP-150341	R5-150330	approved	Correction to CA intra band non-contiguous clause 8.3 rel-11 test cases	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2855	-	Rel-12	F	RP-150341	R5-150331	approved	Correction to CA intra band non-contiguous clause 8.4 rel-11 test cases	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2856	-	Rel-12	F	RP-150341	R5-150332	approved	Correction to CA intra band non-contiguous clause 8.5 rel-11 test cases	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2857	-	Rel-12	F	RP-150324	R5-150339	approved	Correction to ESM test case 10.4.2 test case	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2858	-	Rel-12	F	RP-150326	R5-150340	approved	Correction to IMS Emergency Call test case 11.2.4	12.4.0	12.5.0	R5	TEI9_Test
36.523-1	2859	-	Rel-12	F	RP-150326	R5-150341	approved	Correction to IMS Emergency Call test case 11.2.5	12.4.0	12.5.0	R5	TEI9_Test
36.523-1	2860	-	Rel-12	F	RP-150326	R5-150342	approved	Correction to IMS Emergency Call test case 11.2.8 and 11.2.8a	12.4.0	12.5.0	R5	TEI9_Test
36.523-1	2861	-	Rel-12	F	RP-150329	R5-150348	approved	Correction to LTE-A Carrier Aggregation test cases 8.2.4.23.x	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2862	-	Rel-12	F	RP-150329	R5-150362	approved	Updates to MDT test case 8.6.5.1	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2863	-	Rel-12	F	RP-150324	R5-150397	approved	Update of SRVCC test case 13.4.3.2	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2864	-	Rel-12	F	RP-150329	R5-150398	approved	Update of aSRVCC test case 13.4.3.14 and 13.4.3.16	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2865	-	Rel-12	F	RP-150345	R5-150399	approved	Update of bSRVCC test case 13.4.3.18	12.4.0	12.5.0	R5	TEI12_Test
36.523-1	2866	-	Rel-12	F	RP-150324	R5-150401	approved	Update of EMM test case 9.1.5.1	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2867	-	Rel-12	F	RP-150340	R5-150426	approved	New TC 13.4.3.31 Inter-system mobility / GERAN CS voice to E-UTRA voice / rSRVCC	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-1	2868	-	Rel-12	F	RP-150340	R5-150427	approved	New TC 13.4.3.33 Inter-system mobility / GERAN CS voice to E-UTRA voice / alerting / rSRVCC / MO call	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-1	2869	-	Rel-12	F	RP-150340	R5-150428	approved	New TC 13.4.3.35 Inter-system mobility / GERAN CS voice to E-UTRA voice / alerting / rSRVCC / MT call	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-1	2870	-	Rel-12	F	RP-150340	R5-150429	approved	New TC 13.4.3.37 Inter-system mobility / GERAN CS voice to E-UTRA voice / rSRVCC / HO cancelled	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-1	2871	-	Rel-12	F	RP-150326	R5-150934	approved	Correction to IMS Emergency Call test case 11.2.7	12.4.0	12.5.0	R5	TEI9_Test
36.523-1	2872	-	Rel-12	F	RP-150340	R5-150589	approved	Updates to TC 13.4.3.32	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-1	2873	-	Rel-12	F	RP-150340	R5-150590	approved	Updates to TC 13.4.3.34	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-1	2874	-	Rel-12	F	RP-150340	R5-150591	approved	Updates to TC 13.4.3.36	12.4.0	12.5.0	R5	rSRVCC-UEConTest

Samsung Exhibit 1025, Page 1263 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-1	2875	-	Rel-12	F	RP-150340	R5-150592	approved	Updates to TC 13.4.3.38	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-1	2876	-	Rel-12	F	RP-150326	R5-150599	approved	Remove of test case 8.2.4.22	12.4.0	12.5.0	R5	TEI9_Test
36.523-1	2877	-	Rel-12	F	RP-150341	R5-150600	approved	Correction to eMBMS-SC test case 17.4.2	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2878	-	Rel-12	F	RP-150329	R5-150607	approved	Correction to RFT-117 EUTRA MFBI Testcase 6.2.3.35	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2879	-	Rel-12	F	RP-150324	R5-150648	approved	Correction to EUTRA Idle Mode test cases 6.1.1.8 and 6.1.1.9	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2880	-	Rel-12	F	RP-150324	R5-150649	approved	Correction to short DRX cycle test case 7.1.6.3	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2881	-	Rel-12	F	RP-150341	R5-150650	approved	Correction to UL-Comp test case 7.1.10.1	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2882	-	Rel-12	F	RP-150341	R5-150651	approved	Correction to UL-Comp test case 7.1.10.2	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2883	-	Rel-12	F	RP-150341	R5-150652	approved	Correction to ePDCCH test case 7.1.3.14	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2884	-	Rel-12	F	RP-150341	R5-150653	approved	Correction to ePDCCH test case 7.1.3.15	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2885	-	Rel-12	F	RP-150341	R5-150654	approved	New test case 8.5.4.2 for Network-requested CA Band Combination Capability Signalling	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2886	-	Rel-12	F	RP-150341	R5-150655	approved	New test case 8.5.4.3 for Network-requested CA Band Combination Capability Signalling	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2887	-	Rel-12	F	RP-150324	R5-150656	approved	Correction to EUTRA RRC test case 8.5.4.1	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2888	-	Rel-12	F	RP-150341	R5-150657	approved	Correction to CA test case 8.2.4.16.x	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2889	-	Rel-12	F	RP-150329	R5-150658	approved	Correction to CA test case 8.2.4.20.x	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2890	-	Rel-12	F	RP-150329	R5-150659	approved	Update of eICIC test case 8.3.1.20	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2891	-	Rel-12	F	RP-150341	R5-150660	approved	Correction to eMDT test case 8.6.2.3a	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2892	-	Rel-12	F	RP-150341	R5-150661	approved	Correction to eMDT test case 8.6.2.10	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2893	-	Rel-12	F	RP-150341	R5-150662	approved	Correction to eMDT test case 8.6.2.11	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2894	-	Rel-12	F	RP-150341	R5-150663	approved	Correction to test cases 8.6.4.9 and 8.6.8.2	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2895	-	Rel-12	F	RP-150329	R5-150664	approved	Correction to test cases 8.6.5.2, 8.6.5.3 and 8.6.6.2	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2896	-	Rel-12	F	RP-150324	R5-150666	approved	Correction to GCF WI-086 EUTRA EMM test case 9.2.1.2.1b	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2897	-	Rel-12	F	RP-150329	R5-150668	approved	Correction to aSRVCC test case 13.4.3.28	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2898	-	Rel-12	F	RP-150345	R5-150669	approved	Correction of Multilayer bSRVCC TC 13.4.3.19	12.4.0	12.5.0	R5	TEI12_Test
36.523-1	2899	-	Rel-12	F	RP-150326	R5-150670	approved	New test case "Inter-system mobility / E-UTRA PS voice to GSM CS voice / HO cancelled / Notification procedure / SRVCC"	12.4.0	12.5.0	R5	TEI9_Test
36.523-1	2900	-	Rel-12	F	RP-150329	R5-150671	approved	Correction to eMBMS test case 17.3.2	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2901	-	Rel-12	F	RP-150341	R5-150673	approved	Correction to eMBMS-SC test case 17.4.2	12.4.0	12.5.0	R5	TEI11_Test
36.523-1	2902	-	Rel-12	F	RP-150324	R5-150932	approved	up of IE 'cs-FallbackIndicator' value in clause 13 xSRVCC handover test cases	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2903	-	Rel-12	F	RP-150340	R5-150715	approved	Addition of Test case - "Inter-system mobility / UTRA CS voice + PS data to E-UTRA voice + PS data / rSRVCC" to rSRVCC Work Plan	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-1	2904	-	Rel-12	F	RP-150324	R5-150718	approved	Update of IDLE mode test case 6.2.2.5	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2905	-	Rel-12	F	RP-150329	R5-150730	approved	Correction to test Case 8.3.1.19	12.4.0	12.5.0	R5	TEI10_Test
36.523-1	2906	-	Rel-12	F	RP-150326	R5-150732	approved	Correction to IMS Emergency Call test case 11.2.3	12.4.0	12.5.0	R5	TEI9_Test
36.523-1	2907	-	Rel-12	F	RP-150326	R5-150733	approved	Correction to IMS Emergency Call test case 11.2.6	12.4.0	12.5.0	R5	TEI9_Test
36.523-1	2908	-	Rel-12	F	RP-150340	R5-150740	approved	Addition of Test Case - Intersystem mobility / UTRA CS voice to E-UTRA voice / rSRVCC / Multiple voice calls with mid-call feature	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-1	2910	-	Rel-12	F	RP-150324	R5-150746	approved	Correction to EMM test case 9.2.1.1.28a	12.4.0	12.5.0	R5	TEI8_Test
36.523-1	2911	-	Rel-12	F	RP-150324	R5-150731	approved	Update of Test Case 9.1.5.1	12.4.0	12.5.0	R5	TEI8_Test
36.523-2	0692	-	Rel-12	F	RP-150341	R5-150094	approved	Correction to applicability for CA test cases 8.2.4.16.3, 8.2.4.18.3 and 8.2.4.20.3	12.4.0	12.5.0	R5	TEI11_Test

Samsung Exhibit 1025, Page 1264 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-2	0693	-	Rel-12	F	RP-150341	R5-150368	approved	Addition of CA_8A-20A to Annex A.4.3.3 of TS 36.523-2	12.4.0	12.5.0	R5	TEI11_Test
36.523-2	0694	-	Rel-12	F	RP-150342	R5-150375	approved	Introduction of SIG applicability for CA band combinations 5+25 and 12+25	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.523-2	0695	-	Rel-12	F	RP-150324	R5-150403	approved	Applicability update of IDLE mode test case 6.2.2.5	12.4.0	12.5.0	R5	TEI8_Test
36.523-2	0696	-	Rel-12	F	RP-150340	R5-150430	approved	Addition of applicability statements for new rSRVCC to GERAN test cases	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-2	0697	-	Rel-12	F	RP-150343	R5-150432	approved	Addition of CA_1-41 and CA_26-41 in 36.523-2	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-2	0698	-	Rel-12	F	RP-150343	R5-150481	approved	Addition of CA_1A-20A to Annex A.4.3.3 of TS 36.523-2	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-2	0699	-	Rel-12	F	RP-150324	R5-150490	approved	Correction to the applicability of EUTRA to UTRA HSUPA test case 8.4.1.5	12.4.0	12.5.0	R5	TEI8_Test
36.523-2	0700	-	Rel-12	F	RP-150326	R5-150539	approved	Update of applicability for TC 8.3.4.4 'Inter-RAT SI acquisition / RRC_CONNECTED / UMTS member CSG cell'	12.4.0	12.5.0	R5	TEI9_Test
36.523-2	0701	-	Rel-12	F	RP-150342	R5-150548	approved	Addition of Multiple 2DL Interband CA combinations to 36.523-2 Table A.4.3.3.3-3	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.523-2	0702	-	Rel-12	F	RP-150324	R5-150557	approved	Update of FGI definitions in TS 36.523-2	12.4.0	12.5.0	R5	TEI8_Test
36.523-2	0703	-	Rel-12	F	RP-150342	R5-150581	approved	Addition of CA_1-7, CA_23 and CA_23-29 to TS 36.523-2	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.523-2	0704	-	Rel-12	F	RP-150326	R5-150601	approved	Remove applicability for test case 8.2.4.22	12.4.0	12.5.0	R5	TEI9_Test
36.523-2	0705	-	Rel-12	F	RP-150341	R5-150674	approved	Correction to Applicability for eMDT test cases	12.4.0	12.5.0	R5	TEI11_Test
36.523-2	0706	-	Rel-12	F	RP-150324	R5-150675	approved	Corrections in applicability conditions of Table 4-1a for 1x CS Fallback test cases	12.4.0	12.5.0	R5	TEI8_Test
36.523-2	0707	-	Rel-12	F	RP-150324	R5-150676	approved	Corrections to applicability statements for MIMO test cases 8.2.4.12 and 12.3.1	12.4.0	12.5.0	R5	TEI8_Test
36.523-2	0708	-	Rel-12	F	RP-150341	R5-150677	approved	Applicability of new test cases 8.5.4.2 and 8.5.4.3 (Network-requested CA Band Combination Capability Signalling)	12.4.0	12.5.0	R5	TEI11_Test
36.523-2	0709	-	Rel-12	F	RP-150326	R5-150678	approved	Addition of applicability statements for new test case "Inter-system mobility / E-UTRA PS voice to GSM CS voice / HO cancelled / Notification procedure / SRVCC"	12.4.0	12.5.0	R5	TEI9_Test
36.523-2	0710	-	Rel-12	F	RP-150343	R5-150685	approved	Addition of CA_2-30 to Annex A.4.3 of TS 36.523-2.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-2	0711	-	Rel-12	F	RP-150343	R5-150686	approved	Addition of CA_4-30 to Annex A.4.3 of TS 36.523-2.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-2	0712	-	Rel-12	F	RP-150343	R5-150687	approved	Addition of CA_5-30 to Annex A.4.3 of TS 36.523-2.	12.4.0	12.5.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-2	0713	-	Rel-12	F	RP-150340	R5-150721	approved	Applicability of new test cases 13.4.3.39 and 13.4.3.40	12.4.0	12.5.0	R5	rSRVCC-UEConTest
36.523-2	0714	-	Rel-12	F	RP-150342	R5-150744	approved	Addition of CA_41-42 to TS 36.523-2	12.4.0	12.5.0	R5	LTE_CA_Rel12-UEConTest
36.523-3	2499	-	Rel-12	F	RP-150324	R5-150123	approved	Routine maintenance for TS 36.523-3	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2500	-	Rel-12	F	RP-150340	R5-150356	approved	rSRVCC Test Model	12.0.0	12.1.0	R5	rSRVCC-UEConTest
36.523-3	2501	-	Rel-12	F	RP-150335	R5s140966	approved	Correction to GCF WI-177 EUTRA MDT Test cases 8.6.4.5	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2502	-	Rel-12	F	RP-150335	R5s141159	approved	Correction to test case 9.1.5.1, function fl_TC_9_1_5_1_Body() in NAS_EMMInformation.ttcn	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2503	-	Rel-12	B	RP-150335	R5s141198	approved	Addition of Rel-11 LTE-A eMDT test case 8.6.4.8	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2504	-	Rel-12	B	RP-150335	R5s141200	approved	LTE_TDD: Addition of Rel-11 LTE-A eMDT test case 8.6.4.8	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2505	-	Rel-12	F	RP-150335	R5s141219	approved	Corrrection to function f_GERAN_CreatePhyCombinedCellControlCh	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2506	-	Rel-12	B	RP-150335	R5s141228	approved	Addition of Rel-11 EUTRA RRC eMDT test case 8.6.2.10	12.0.0	12.1.0	R5	TEI11_Test

Samsung Exhibit 1025, Page 1265 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2507	-	Rel-12	B	RP-150335	R5s141230	approved	LTE_TDD: Addition of Rel-11 EUTRA RRC eMDT test case 8.6.2.10	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2508	-	Rel-12	B	RP-150335	R5s141233	approved	Addition of GCF WI-162 EUTRA RRC Carrier Aggregation test case 8.2.4.16.1	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2509	-	Rel-12	B	RP-150335	R5s141235	approved	Addition of GCF WI-162 LTE-A Carrier Aggregation RRC test case 8.2.4.16.2	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2510	-	Rel-12	B	RP-150335	R5s141239	approved	LTE_TDD: Addition of GCF WI-191 LTE-A additional special subframe configuration test case 7.1.3.13	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2511	-	Rel-12	F	RP-150335	R5s141241	approved	Correction to common function f_GetTestcaseAttrib_DlCcchMsgInSeparateMacPdu() for eMDT test cases	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2512	-	Rel-12	B	RP-150335	R5s141245	approved	Addition of LTE-A Carrier Aggregation test case 8.2.4.23.2	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2513	-	Rel-12	B	RP-150335	R5s141247	approved	Addition of LTE-A (Rel-11) Carrier Aggregation test case 8.2.2.5.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2514	-	Rel-12	B	RP-150335	R5s141249	approved	Addition of LTE-A (Rel-11) Carrier Aggregation test case 8.2.4.17.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2515	-	Rel-12	B	RP-150335	R5s141251	approved	Addition of LTE-A (Rel-11) Carrier Aggregation test case 8.2.4.21.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2516	-	Rel-12	B	RP-150335	R5s141253	approved	Addition of LTE-A (Rel-11) Carrier Aggregation test case 8.3.1.17.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2517	-	Rel-12	B	RP-150335	R5s141255	approved	Addition of LTE-A (Rel-11) Carrier Aggregation test case 8.3.1.18.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2518	-	Rel-12	B	RP-150335	R5s141257	approved	Addition of LTE-A (Rel-11) Carrier Aggregation test case 8.3.1.22.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2519	-	Rel-12	B	RP-150335	R5s141259	approved	Addition of LTE-A (Rel-11) Carrier Aggregation test case 8.5.1.7.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2520	-	Rel-12	B	RP-150335	R5s141261	approved	Addition of LTE-A (Rel-11) Carrier Aggregation test case 8.2.2.3.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2521	-	Rel-12	B	RP-150335	R5s141263	approved	Addition of LTE-A (Rel-11) Carrier Aggregation test case 8.2.2.4.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2522	-	Rel-12	B	RP-150335	R5s141265	approved	Addition of LTE-A (Rel-11) Carrier Aggregation test case 8.2.4.23.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2523	-	Rel-12	B	RP-150335	R5s141267	approved	LTE_TDD: Addition of GCF WI-156 MFBI Idle Mode test case 6.1.2.21	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2524	-	Rel-12	B	RP-150335	R5s141269	approved	LTE_TDD: Addition of LTE-A Enhanced Minimization of Drive Tests (eMDT) Testcase 8.6.11.1	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2525	-	Rel-12	B	RP-150335	R5s141271	approved	LTE_TDD: Addition of GCF WI-177 EUTRA RRC test Case 8.6.7.1	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2526	-	Rel-12	B	RP-150335	R5s141275	approved	Addition of LTE-A Carrier Aggregation test case 8.2.4.23.1	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2527	-	Rel-12	F	RP-150335	R5s141277	approved	LTE_TDD : Correction to GCF WI-086 EUTRA RRC test case 8.1.3.7	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2528	-	Rel-12	B	RP-150335	R5s141278	approved	Addition of Rel-11 LTE-A Carrier Aggregation MAC test case 7.1.9.1.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2529	-	Rel-12	B	RP-150335	R5s141280	approved	Addition of Rel-11 LTE-A Carrier Aggregation RRC test case 8.2.4.16.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2530	-	Rel-12	B	RP-150335	R5s141282	approved	Addition of Rel-11 LTE-A Carrier Aggregation test case 8.2.4.18.3	12.0.0	12.1.0	R5	TEI11_Test

Samsung Exhibit 1025, Page 1266 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2531	-	Rel-12	B	RP-150335	R5s141284	approved	Addition of Rel-11 LTE-A Carrier Aggregation test case 8.2.4.20.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2532	-	Rel-12	B	RP-150335	R5s141288	approved	Addition of LTE-A (Rel-11) CA Handover from UTRAN test case 8.4.2.7.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2533	-	Rel-12	B	RP-150335	R5s141292	approved	Addition of Rel-11 LTE-A eMDT test case 8.6.2.12	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2534	-	Rel-12	B	RP-150335	R5s141294	approved	LTE_TDD: Addition of Rel-11 LTE-A eMDT test case 8.6.2.12	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2535	-	Rel-12	B	RP-150335	R5s141297	approved	Addition of Rel-11 LTE-A eMDT test case 8.6.4.9	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2536	-	Rel-12	B	RP-150335	R5s141299	approved	LTE_TDD: Addition of Rel-11 LTE-A eMDT test case 8.6.4.9	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2537	-	Rel-12	B	RP-150335	R5s141301	approved	Addition of Rel-11 LTE-A eMDT test case 8.6.6.6	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2538	-	Rel-12	B	RP-150335	R5s141303	approved	LTE_TDD: Addition of Rel-11 LTE-A eMDT test case 8.6.6.6	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2539	-	Rel-12	B	RP-150335	R5s141305	approved	Addition of Rel-11 LTE-A eMDT test case 8.6.8.5	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2540	-	Rel-12	B	RP-150335	R5s141307	approved	Addition of Rel-11 LTE-A eMDT test case 8.6.8.6	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2541	-	Rel-12	B	RP-150335	R5s141309	approved	LTE_TDD: Addition of Rel-11 LTE-A eMDT test case 8.6.8.6	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2542	-	Rel-12	B	RP-150335	R5s141311	approved	Addition of Rel-11 LTE-A eMDT test case 8.6.2.11	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2543	-	Rel-12	B	RP-150335	R5s141313	approved	LTE_TDD: Addition of Rel-11 LTE-A eMDT test case 8.6.2.11	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2544	-	Rel-12	F	RP-150335	R5s141317	approved	Correction to GCF WI-081 EUTRA RRC test case 8.5.1.4 and WI-082 EMM test case 9.2.3.1.9a	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2545	-	Rel-12	B	RP-150335	R5s141319	approved	Addition of LTE-A Carrier Aggregation test case 8.2.4.23.1	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2546	-	Rel-12	F	RP-150335	R5s141324	approved	Correction to function fl_IP_AddrServers_Stop	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2547	-	Rel-12	F	RP-150335	R5s141325	approved	Correction to Importing of Parameters in UTRAN_RAB_Functions for LTE, POS and IMS test suites	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2548	-	Rel-12	F	RP-150335	R5s141327	approved	Correction to GCF WI-082 EUTRA ESM Test cases 10.4.1	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2549	-	Rel-12	F	RP-150335	R5s141331	approved	LTE_TDD : Correction to EUTRA MAC TDD-SSC test cases 7.1.3.12, 7,1,3,12a, 7.1.3.13, 7.1.3.13a	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2550	-	Rel-12	F	RP-150335	R5s141332	approved	Correction to common function f_GERAN_SwitchPowerOff()	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2551	-	Rel-12	F	RP-150335	R5s141334	approved	Correction to WI-086 EUTRA Multi-layer test cases 13.1.2, 13.1.2a, 13.1.3, 13.1.15	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2552	-	Rel-12	F	RP-150335	R5s141338	approved	Correction of LTE-A Carrier Aggregation test cases 8.3.1.18.x	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2553	-	Rel-12	B	RP-150335	R5s141339	approved	Addition of GCF WI-154 IMS Emergency Call test case 11.2.3	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2554	-	Rel-12	F	RP-150335	R5s141345	approved	Correction of GCF WI-154 IMS Emergency Call over EPS test case 11.2.1	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2555	-	Rel-12	F	RP-150335	R5s141349	approved	Correction to f_EUTRA_CA_InitFrequenciesInterBand() function for CA_3A-7A_Rev band combination	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2556	-	Rel-12	F	RP-150335	R5s141352	approved	Correction of GCF WI-178 LTE-A eMBMS-SC test case 17.4.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2557	-	Rel-12	F	RP-150335	R5s141354	approved	Correction of GCF WI-178 LTE-A eMBMS-SC test case 17.4.7	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2558	-	Rel-12	F	RP-150335	R5s141358	approved	Correction of GCF WI-178 LTE-A eMBMS-SC test case 17.4.1	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2559	-	Rel-12	F	RP-150335	R5s141361	approved	Correction to EUTRA multilayer aSRVCC test case 13.4.3.28	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2560	-	Rel-12	F	RP-150398	R5s141362	approved	Correction to EUTRA bSRVCC testcases 13.4.3.19	12.0.0	12.1.0	R5	TEI12_Test
36.523-3	2561	-	Rel-12	F	RP-150335	R5s141363	approved	Correction to function f_SS_HS_DSCH_PDSCH_Cfg_DPCH_Modify_TDD	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2562	-	Rel-12	F	RP-150335	R5s141364	approved	Correction of GCF WI-178 LTE-A eMBMS-SC test case 17.4.2	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2563	-	Rel-12	F	RP-150335	R5s141365	approved	LTE_TDD : Correction to Multilayer test case 13.4.2.4	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2564	-	Rel-12	F	RP-150335	R5s141366	approved	Correction of GCF WI-150 MFBI Testcase 6.1.2.20	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2565	-	Rel-12	F	RP-150335	R5s141367	approved	Correction of QCI value in EPS bearer context no.2	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2566	-	Rel-12	B	RP-150335	R5s141368	approved	Addition of Rel-8 EUTRA Idle Mode LTE<>GERAN test case 6.2.3.29	12.0.0	12.1.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1267 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2567	-	Rel-12	F	RP-150335	R5s141371	approved	Correction to LTE-A CA test cases 8.2.4.16.x, 8.2.4.18.3 and 8.2.4.20.3	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2568	-	Rel-12	F	RP-150398	R5s141372	approved	Correction to EUTRA<>UTRA bSRVCC testcase 13.4.3.20	12.0.0	12.1.0	R5	TEI12_Test
36.523-3	2569	-	Rel-12	F	RP-150335	R5s141373	approved	Correction to LTE-A CA test case 7.1.9.1.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2570	-	Rel-12	F	RP-150335	R5s141374	approved	Correction to GCF WI-164 eMBMS test case 17.1.3	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2571	-	Rel-12	B	RP-150335	R5s141375	approved	Addition of GCF WI-103 ESM test case 10.4.2	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2572	-	Rel-12	F	RP-150335	R5s141384	approved	Correction to LTE-GERAN aSRVCC test cases 13.4.3.26 & 13.4.3.28	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2573	-	Rel-12	B	RP-150335	R5s141385	approved	LTE_TDD : Addition of GCF WI-172 LTE-GERAN aSRVCC test case 13.4.3.26	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2574	-	Rel-12	B	RP-150335	R5s141387	approved	LTE_TDD : Addition of GCF WI-172 LTE-GERAN aSRVCC test case 13.4.3.28	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2575	-	Rel-12	F	RP-150335	R5s141389	approved	Corrections to coordinate XID and IPv6 procedures	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2576	-	Rel-12	F	RP-150398	R5s141393	approved	Correction to multilayer bSRVCC test case 13.4.3.21	12.0.0	12.1.0	R5	TEI12_Test
36.523-3	2577	-	Rel-12	F	RP-150335	R5s141394	approved	Correction to EUTRA RRC Inter-mode test case 8.2.4.15a	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2578	-	Rel-12	B	RP-150335	R5s141395	approved	Addition of Rel-11 LTE-A CA MAC test case 7.1.3.11.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2579	-	Rel-12	B	RP-150335	R5s141397	approved	LTE_TDD: Addition of Rel-11 LTE-A eMDT test case 8.6.8.5	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2580	-	Rel-12	F	RP-150335	R5s141399	approved	Corrections to IMS emergency call test case 11.2.5	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2581	-	Rel-12	F	RP-150335	R5s141400	approved	Correction to GCF WI-082 SMS over SGs test cases 11.1.3, 11.1.4, 11.1.5, 11.1.6	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2582	-	Rel-12	F	RP-150335	R5s150001	approved	Updates to multi-PDNs implementation for CDMA2000-related procedures	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2583	-	Rel-12	B	RP-150335	R5s150003	approved	Addition of Rel-8 EUTRA Idle Mode LTE<>GERAN test case 6.2.3.26	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2584	-	Rel-12	B	RP-150335	R5s150005	approved	Addition of EMM test case 9.2.1.1.29	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2585	-	Rel-12	B	RP-150335	R5s150007	approved	LTE_TDD: Addition of LTE-A Carrier Aggregation MAC test case 7.1.9.1.2	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2586	-	Rel-12	F	RP-150335	R5s150009	approved	Correction to GCF WI-086 EMM test case 9.2.3.3.1	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2587	-	Rel-12	F	RP-150335	R5s150010	approved	Correction to GCF WI-081 Idle mode test cases 6.1.1.4, 6.1.1.6 and 6.1.1.6a.	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2588	-	Rel-12	F	RP-150335	R5s150019	approved	Correction to LTE-GERAN test case 6.2.3.1a	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2589	-	Rel-12	F	RP-150335	R5s150026	approved	Correction of GCF WI-178 LTE-A eMBMS-SC test case 17.4.1, 17.4.1a, 17.4.3, 17.4.3a 17.4.4	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2590	-	Rel-12	F	RP-150335	R5s150031	approved	Corrections for LTE test case execution with IMS-enabled device	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2591	-	Rel-12	F	RP-150335	R5s150034	approved	Correction to EUTRA test cases 8.2.4.14a and 8.2.4.15	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2592	-	Rel-12	F	RP-150335	R5s150036	approved	Corrections for eMDT test case 8.6.2.3a and 8.6.2.10	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2593	-	Rel-12	F	RP-150335	R5s150037	approved	Correction to LTE-A Carrier Aggregation Enhancement test cases	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2594	-	Rel-12	F	RP-150335	R5s150038	approved	Implementation of Prose CR R5-145793	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2595	-	Rel-12	F	RP-150335	R5s150053	approved	Corrections to IMS emergency call test case 11.2.3	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2596	-	Rel-12	F	RP-150335	R5s150057	approved	Corrections to EUTRA Testcases with IMS enabled UE	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2597	-	Rel-12	B	RP-150335	R5s150062	approved	Addition of EUTRA DRX Testcase 7.1.6.3	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2598	-	Rel-12	B	RP-150335	R5s150066	approved	LTE_TDD:Addition of EUTRA DRX Testcase 7.1.6.3	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2599	-	Rel-12	F	RP-150335	R5s150070	approved	Correction to GCF WI-162 LTE-A CA test cases 7.1.9.1.x	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2600	-	Rel-12	F	RP-150335	R5s150071	approved	Correction to GCF WI-087 EUTRA EMM test case 9.2.1.2.1b	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2601	-	Rel-12	F	RP-150335	R5s150074	approved	Correction for IP_PTC for IMS-enabled UEs	12.0.0	12.1.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1268 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2602	-	Rel-12	B	RP-150335	R5s150076	approved	Addition of Rel-11 LTE-A eMDT test case 8.6.4.10	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2603	-	Rel-12	B	RP-150335	R5s150078	approved	LTE_TDD: Addition of Rel-11 LTE-A eMDT test case 8.6.4.10	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2604	-	Rel-12	F	RP-150335	R5s150081	approved	Correction to GCF WI-159 LTE<> 1xRTT testcase 13.4.4.1	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2605	-	Rel-12	F	RP-150335	R5s150082	approved	Multi-PDN related correction to EUTRA RRC test case 8.1.2.8	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2606	-	Rel-12	F	RP-150335	R5s150089	approved	Correction of GCF WI-178 LTE Advanced eMBMS-SC test case 17.4.2 & 17.4.2a	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2607	-	Rel-12	F	RP-150335	R5s150090	approved	Correction of GCF WI-178 LTE Advanced eMBMS-SC test case 17.4.7	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2608	-	Rel-12	B	RP-150335	R5s150092	approved	Addition of RFT-117 EUTRA MFBI Testcase 6.2.3.35	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2609	-	Rel-12	B	RP-150335	R5s150096	approved	LTE_TDD: Addition of LTE-A Carrier Aggregation test case 8.2.2.4.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2610	-	Rel-12	B	RP-150335	R5s150098	approved	LTE_TDD: Addition of LTE-A Carrier Aggregation test case 8.2.2.5.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2611	-	Rel-12	B	RP-150335	R5s150100	approved	LTE_TDD:Addition of LTE-A Carrier Aggregation test case 8.2.4.18.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2612	-	Rel-12	B	RP-150335	R5s150102	approved	LTE_TDD: Addition of LTE-A Carrier Aggregation test case 8.3.1.17.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2613	-	Rel-12	B	RP-150335	R5s150104	approved	LTE_TDD: Addition of LTE-A Carrier Aggregation test case 8.3.1.18.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2614	-	Rel-12	B	RP-150335	R5s150106	approved	LTE_TDD: Addition of LTE-A Carrier Aggregation test case 8.3.1.22.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2615	-	Rel-12	B	RP-150335	R5s150108	approved	LTE_TDD:Addition of LTE-A Carrier Aggregation test case 8.5.1.7.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2616	-	Rel-12	B	RP-150335	R5s150113	approved	LTE_TDD: Addition of LTE-A Carrier Aggregation MAC test case 7.1.9.1.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2617	-	Rel-12	F	RP-150335	R5s150118	approved	Further correction for LTE TC execution with IMS-enabled devices	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2618	-	Rel-12	B	RP-150335	R5s150119	approved	LTE_TDD: Addition of Rel-11 LTE_CA_enh test case 8.4.2.7.3	12.0.0	12.1.0	R5	TEI11_Test
36.523-3	2619	-	Rel-12	F	RP-150335	R5s150121	approved	Addition of GEA4 and A5/4 ciphering algorithms	12.0.0	12.1.0	R5	TEI9_Test
36.523-3	2620	-	Rel-12	F	RP-150335	R5s150122	approved	Correction of GCF WI-87 EUTRA<>GERAN Testcase 6.2.3.28	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2621	-	Rel-12	F	RP-150335	R5s150123	approved	Correction of GCF WI-87 EUTRA<>GERAN Testcase 6.2.3.29	12.0.0	12.1.0	R5	TEI8_Test
36.523-3	2622	-	Rel-12	B	RP-150335	R5s150133	approved	LTE_TDD:Addition of GCF WI-172 TD_LTE<>TDSCDMA Testcase 13.4.3.9	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2623	-	Rel-12	B	RP-150335	R5s150135	approved	LTE_TDD:Addition of GCF WI-172 TD_LTE<>TDSCDMA Testcase 13.4.3.11	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2624	-	Rel-12	B	RP-150335	R5s150137	approved	LTE_TDD:Addition of GCF WI-172 TD_LTE<>TDSCDMA Testcase 13.4.3.13	12.0.0	12.1.0	R5	TEI10_Test
36.523-3	2625	-	Rel-12	F	RP-150334	-	approved	CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (prose), Annex A	12.0.0	12.1.0	R5	TEI12_Test
36.844	0010	-	Rel-13	F	RP-150420	R4-150028	approved	Corrections and Clarifications of UE specifications in TR 36.844 [FS_LTE_FDD_1670_US]	13.1.0	13.2.0	R4	FS_LTE_FDD_1670_US
36.850	0002	-	Rel-11	F	RP-150059	-	approved	CR to TR 36.850 v11.1.0 changing the TR into a pointer to the new TR 36.852-11	11.1.0	11.2.0	R4	TEI11
36.853-12	0001	-	Rel-12	F	RP-150388	R4-150468	approved	Addition of 3 Band Carrier Aggregation (3DL/1UL) of Band 25, Band 41 and Band 41	12.0.0	12.1.0	R4	LTE_CA_B25_B41_B41-Core
36.853-12	0002	-	Rel-12	F	RP-150388	R4-150470	approved	Addition of Coexistence Studies for 3 Band Carrier Aggregation (3DL/1UL) of Band 25, Band 41 and Band 41	12.0.0	12.1.0	R4	LTE_CA_B25_B41_B41-Core

Samsung Exhibit 1025, Page 1269 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.853-12	0003	-	Rel-12	F	RP-150413	R4-150476	approved	Clean-up of 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 2 and Band 12	12.0.0	12.1.0	R4	LTE_CA_B2_B2_B12-Core
36.873	0003	-	Rel-12	F	RP-150362	R1-150929	approved	Change of XPR model standard deviation value and correction of sorting function for normalized delay	12.0.0	12.1.0	R1	FS_LTE_3D_channel
36.903	0152	-	Rel-12	F	RP-150329	R5-150078	approved	Add Test Tolerance Analyses for TS 37.571-1 Test Cases 10.1 and 10.2	12.4.0	12.5.0	R5	TEI10_Test
36.903	0153	-	Rel-12	F	RP-150329	R5-150079	approved	Add Test Tolerance Analyses for TS 37.571-1 Test Cases 10.1A and 10.2A	12.4.0	12.5.0	R5	TEI10_Test
36.903	0154	-	Rel-12	F	RP-150329	R5-150080	approved	Add Test Tolerance Analyses for TS 37.571-1 Test Cases 10.1B and 10.2B	12.4.0	12.5.0	R5	TEI10_Test
36.903	0155	-	Rel-12	F	RP-150329	R5-150081	approved	Add Test Tolerance Analyses for TS 37.571-1 Test Cases 10.1C and 10.2C	12.4.0	12.5.0	R5	TEI10_Test
36.903	0156	-	Rel-12	F	RP-150329	R5-150083	approved	Add Test Tolerance Analyses for TS 37.571-1 Test Cases 10.3B and 10.4B	12.4.0	12.5.0	R5	TEI10_Test
36.903	0157	-	Rel-12	F	RP-150329	R5-150084	approved	Add Test Tolerance Analyses for TS 37.571-1 Test Cases 10.3C and 10.4C	12.4.0	12.5.0	R5	TEI10_Test
36.903	0158	-	Rel-12	F	RP-150324	R5-150219	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 4.3.1.3	12.4.0	12.5.0	R5	TEI8_Test
36.903	0159	-	Rel-12	F	RP-150324	R5-150221	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 4.3.4.3	12.4.0	12.5.0	R5	TEI8_Test
36.903	0160	-	Rel-12	F	RP-150324	R5-150223	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 8.5.2	12.4.0	12.5.0	R5	TEI8_Test
36.903	0161	-	Rel-12	F	RP-150341	R5-150225	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 8.7.3	12.4.0	12.5.0	R5	TEI11_Test
36.903	0162	-	Rel-12	F	RP-150324	R5-150227	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 8.9.1	12.4.0	12.5.0	R5	TEI8_Test
36.903	0163	-	Rel-12	F	RP-150324	R5-150229	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 8.8.1+8.10.1	12.4.0	12.5.0	R5	TEI8_Test
36.903	0164	-	Rel-12	F	RP-150324	R5-150231	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 8.8.2+8.10.2	12.4.0	12.5.0	R5	TEI8_Test
36.903	0165	-	Rel-12	F	RP-150345	R5-150293	approved	Add Test Tolerance analysis for TCs 8.16.9+8.16.10 36.903 CR	12.4.0	12.5.0	R5	TEI12_Test
36.903	0166	-	Rel-12	F	RP-150345	R5-150305	approved	Add Test Tolerance analysis for TCs 8.16.11+8.16.12 36.903 CR	12.4.0	12.5.0	R5	TEI12_Test
36.903	0167	-	Rel-12	F	RP-150345	R5-150307	approved	Add Test Tolerance analysis for TCs 8.16.13+8.16.14 36.903 CR	12.4.0	12.5.0	R5	TEI12_Test
36.903	0168	-	Rel-12	F	RP-150345	R5-150309	approved	Add Test Tolerance analysis for TCs 8.16.15+8.16.16 36.903 CR	12.4.0	12.5.0	R5	TEI12_Test
36.903	0169	-	Rel-12	F	RP-150345	R5-150311	approved	Add Test Tolerance analysis for TCs 9.1.18.1+9.1.19.1 36.903 CR	12.4.0	12.5.0	R5	TEI12_Test
36.903	0170	-	Rel-12	F	RP-150345	R5-150313	approved	Add Test Tolerance analysis for TCs 9.1.18.2+9.1.19.2 36.903 CR	12.4.0	12.5.0	R5	TEI12_Test
36.903	0171	-	Rel-12	F	RP-150345	R5-150315	approved	Add Test Tolerance analysis for TCs 9.1.20.1+9.1.21.1 36.903 CR	12.4.0	12.5.0	R5	TEI12_Test
36.903	0172	-	Rel-12	F	RP-150345	R5-150317	approved	Add Test Tolerance analysis for TCs 9.1.20.2+9.1.21.2 36.903 CR	12.4.0	12.5.0	R5	TEI12_Test
36.903	0173	-	Rel-12	F	RP-150345	R5-150319	approved	Add Test Tolerance analysis for TCs 9.2.23.1+9.2.24.1 36.903 CR	12.4.0	12.5.0	R5	TEI12_Test
36.903	0174	-	Rel-12	F	RP-150345	R5-150325	approved	Add Test Tolerance analysis for TCs 9.2.23.2+9.2.24.2 36.903 CR	12.4.0	12.5.0	R5	TEI12_Test
36.903	0175	-	Rel-12	F	RP-150324	R5-150853	approved	Update Test Tolerance analyses for TS 36.521-3 Test case 5.1.5	12.4.0	12.5.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1270 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.903	0176	-	Rel-12	F	RP-150324	R5-150854	approved	Update Test Tolerance analyses for TS 36.521-3 Test case 5.1.6	12.4.0	12.5.0	R5	TEI8_Test
36.903	0177	-	Rel-12	F	RP-150324	R5-150855	approved	Update Test Tolerance analyses for TS 36.521-3 Test case 5.2.3, 5.2.6	12.4.0	12.5.0	R5	TEI8_Test
36.904	0019	-	Rel-11	F	RP-150341	R5-150217	approved	Test Tolerance Analysis for TS 36.521-1 TC 8.3.1.2.1_D_1+8.3.2.2.1_D_1	11.2.0	11.3.0	R5	TEI11_Test
37.104	0250	-	Rel-12	F	RP-150382	R4-150364	approved	Co-location between Band 42 and Band 43 in TS 37.104	12.6.0	12.7.0	R4	RInImp8-UMTSLTE3500
37.104	0251	-	Rel-12	F	RP-150388	R4-150819	approved	MB and TDD+FDD	12.6.0	12.7.0	R4	LTE_CA_TDD_FDD-Core
37.141	0375	-	Rel-12	F	RP-150382	R4-150365	approved	Co-location between Band 42 and Band 43 in TS 37.141	12.6.0	12.7.0	R4	RInImp8-UMTSLTE3500
37.141	0382	-	Rel-12	F	RP-150388	R4-150820	approved	MB and TDD+FDD	12.6.0	12.7.0	R4	LTE_CA_TDD_FDD-Core
37.571-1	0113	-	Rel-12	F	RP-150326	R5-150051	approved	Updates to RSTD values and terminology following changes in RAN 4	12.1.0	12.2.0	R5	TEI9_Test
37.571-1	0114	-	Rel-12	F	RP-150329	R5-150074	approved	Remove incorrect note from CA RSTD accuracy tests	12.1.0	12.2.0	R5	TEI10_Test
37.571-1	0115	-	Rel-12	F	RP-150329	R5-150082	approved	Uncertainties and Test Tolerances for RSTD test cases 10.1, 10.1A, 10.1B, 10.1C, 10.2, 10.2A, 10.2B, and 10.2C	12.1.0	12.2.0	R5	TEI10_Test
37.571-1	0116	-	Rel-12	F	RP-150329	R5-150085	approved	Uncertainties and Test Tolerances for RSTD test cases 10.3B, 10.3C, 10.4B, and 10.4C	12.1.0	12.2.0	R5	TEI10_Test
37.571-1	0117	-	Rel-12	F	RP-150326	R5-150107	approved	Corrections to table headings in CA RSTD tests	12.1.0	12.2.0	R5	TEI9_Test
37.571-1	0118	-	Rel-12	F	RP-150341	R5-150378	approved	Very minor corrections to references for feICIC test cases, 8.1.5 and 8.1.6	12.1.0	12.2.0	R5	TEI11_Test
37.571-1	0119	-	Rel-12	F	RP-150344	R5-150609	approved	Abbrevation Corrections for BDS in 37.571-1	12.1.0	12.2.0	R5	LCS_BDS-UEConTest
37.571-1	0120	-	Rel-12	F	RP-150344	R5-150833	approved	Addition of BDS ICD reference	12.1.0	12.2.0	R5	LCS_BDS-UEConTest
37.571-1	0121	-	Rel-12	F	RP-150344	R5-150834	approved	Corrections to BDS Test Requirements for Minimum Performance tests	12.1.0	12.2.0	R5	LCS_BDS-UEConTest
37.571-1	0122	-	Rel-12	F	RP-150329	R5-150835	approved	The Io Unit Parameter is Incorrect	12.1.0	12.2.0	R5	TEI10_Test
37.571-1	0123	-	Rel-12	F	RP-150326	R5-150836	approved	Inconsistent Text Referenced	12.1.0	12.2.0	R5	TEI9_Test
37.571-1	0124	-	Rel-12	F	RP-150326	R5-150837	approved	Missing Abbreviations in Specification	12.1.0	12.2.0	R5	TEI9_Test
37.571-1	0125	-	Rel-12	F	RP-150345	R5-150888	approved	New TC: TDD RSTD Measurement Accuracy for Carrier Aggregation for 20MHz+10MHz bandwidth	12.1.0	12.2.0	R5	TEI12_Test
37.571-1	0126	-	Rel-12	F	RP-150329	R5-150911	approved	New TC: TDD RSTD Measurement Reporting Delay for Carrier Aggregation for 20MHz +10MHz Bandwidth	12.1.0	12.2.0	R5	TEI10_Test
37.571-2	0051	-	Rel-12	F	RP-150344	R5-150741	approved	Abbrevation Corrections for BDS in 37.571-2	12.0.0	12.1.0	R5	LCS_BDS-UEConTest
37.571-3	0025	-	Rel-12	F	RP-150329	R5-150075	approved	Remove incorrect note from CA RSTD accuracy tests	12.1.0	12.2.0	R5	TEI10_Test
37.571-3	0026	-	Rel-12	F	RP-150344	R5-150608	approved	Typo in name of parameter pc_BDS_B1I	12.1.0	12.2.0	R5	LCS_BDS-UEConTest
37.571-3	0027	-	Rel-12	F	RP-150326	R5-150838	approved	Missing Abbreviations in Specification	12.1.0	12.2.0	R5	TEI9_Test
37.571-3	0028	-	Rel-12	F	RP-150326	R5-150889	approved	Missing Fine Time Assistance Conditions	12.1.0	12.2.0	R5	TEI9_Test
37.571-3	0029	-	Rel-12	F	RP-150345	R5-150890	approved	Applicability for new 20+10MHz RSTD test cases	12.1.0	12.2.0	R5	TEI12_Test
37.571-4	0046	-	Rel-12	F	RP-150344	R5-150735	approved	Addition of BeiDou Test Model	10.8.0	12.0.0	R5	LCS_BDS-UEConTest
37.571-4	0047	-	Rel-10	F	RP-150337	R5s141359	approved	Correction of errors in implementation of positioning CRs	10.8.0	10.9.0	R5	TEI9_Test
37.571-4	0048	-	Rel-10	B	RP-150337	R5s150027	approved	Addition of GCF WI-166 EUTRA UE Positioning test case 7.3.4.1.4s	10.8.0	10.9.0	R5	TEI9_Test
37.571-4	0049	-	Rel-10	F	RP-150336	-	approved	Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (prose), Annex A	10.8.0	10.9.0	R5	TEI9_Test
37.571-5	0107	-	Rel-12	F	RP-150326	R5-150052	approved	Updates to expectedRSTD values following changes in RAN 4	12.0.0	12.1.0	R5	TEI9_Test
37.571-5	0108	-	Rel-12	F	RP-150329	R5-150106	approved	Change Nprs value in tests 10.3B, 10.3C, 10.4B, 10.4C	12.0.0	12.1.0	R5	TEI10_Test
37.571-5	0109	-	Rel-12	F	RP-150344	R5-150237	approved	LBS Perf: Correction to simulated BDS satellites	12.0.0	12.1.0	R5	LCS_BDS-UEConTest
37.571-5	0110	-	Rel-12	F	RP-150326	R5-150839	approved	Missing Abbreviations in Specification	12.0.0	12.1.0	R5	TEI9_Test

Samsung Exhibit 1025, Page 1271 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
37.571-5	0111	-	Rel-12	F	RP-150329	R5-150840	approved	Missing OTDOA CA Test Cases	12.0.0	12.1.0	R5	TEI10_Test
37.571-5	0112	-	Rel-12	F	RP-150344	R5-150891	approved	Abbreviation Corrections for BDS in 37.571-5	12.0.0	12.1.0	R5	LCS_BDS-UEConTest
37.822	0001	2	Rel-12	F	RP-150356	R3-150308	approved	Inclusion of solution evaluation for MRO Re-establishment scenarios	12.1.0	12.2.0	R3	TEI12

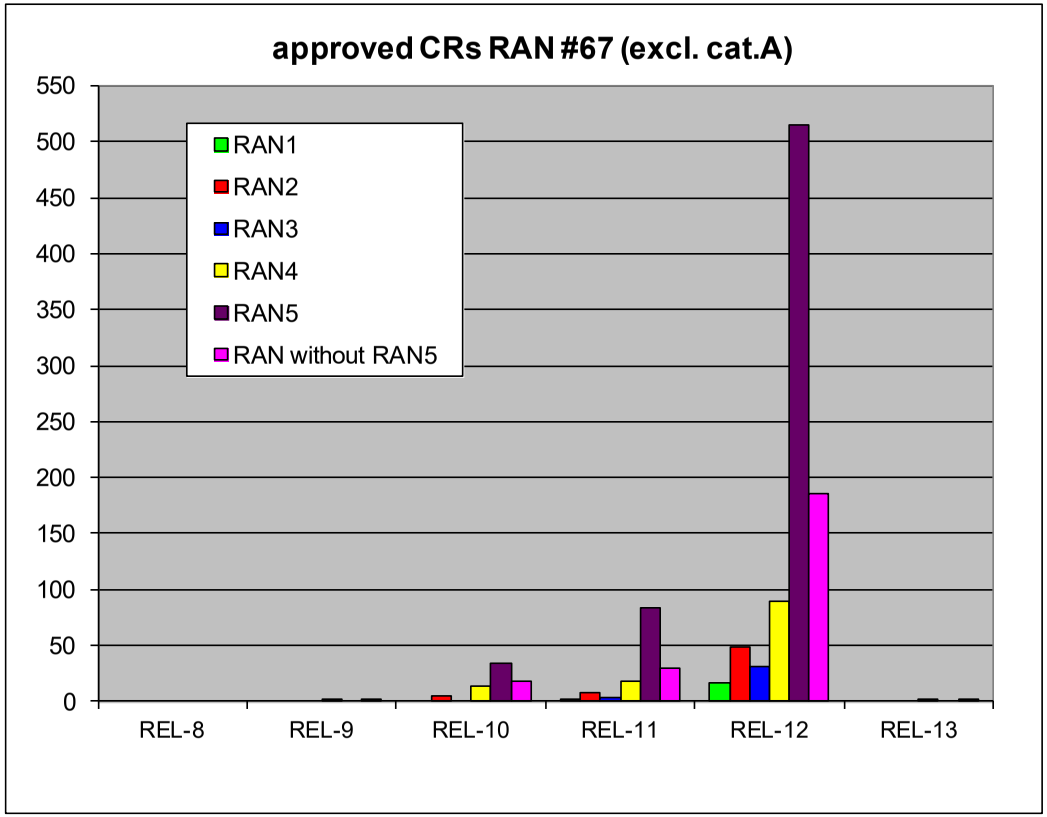


Fig. E-1: Approved CRs (excluding category A CRs) of RAN #67 per WG and release

Samsung Exhibit 1025, Page 1272 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

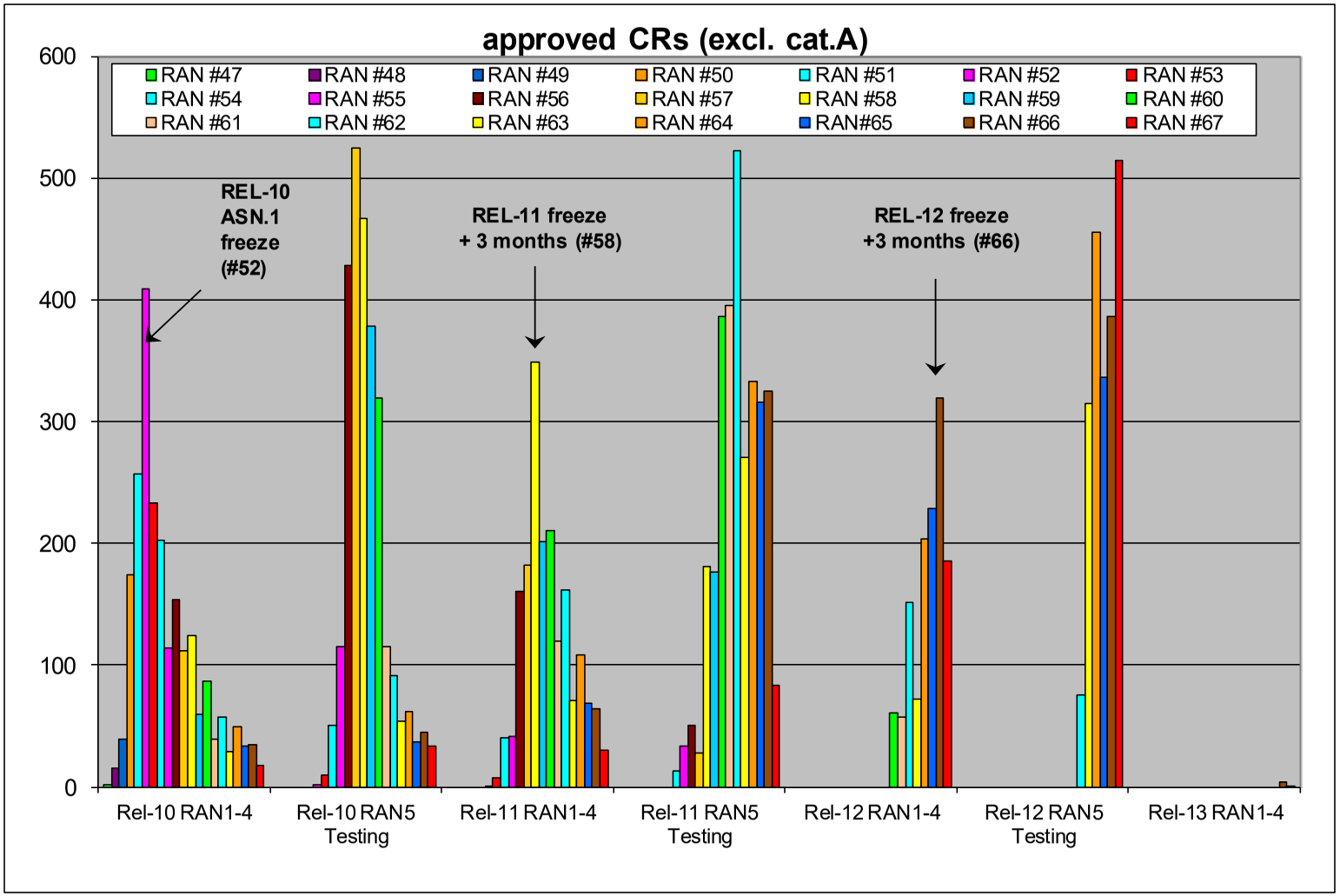


Fig. E-2: Approved CRs (<u>excluding</u> category A CRs) of previous RAN meetings per release
<u>REL freeze</u>: REL-8: RAN #42, REL-9: RAN #46, REL-10: RAN #51, REL-11: RAN #57, REL-12: RAN #65
<u>ASN.1 freeze</u>: REL-8: RAN #43 (713 CRs), REL-9: RAN #47 (355 CRs), REL-10: RAN #52 (apart from Un), REL-11: RAN #59, REL-12: RAN #67

Samsung Exhibit 1025, Page 1273 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

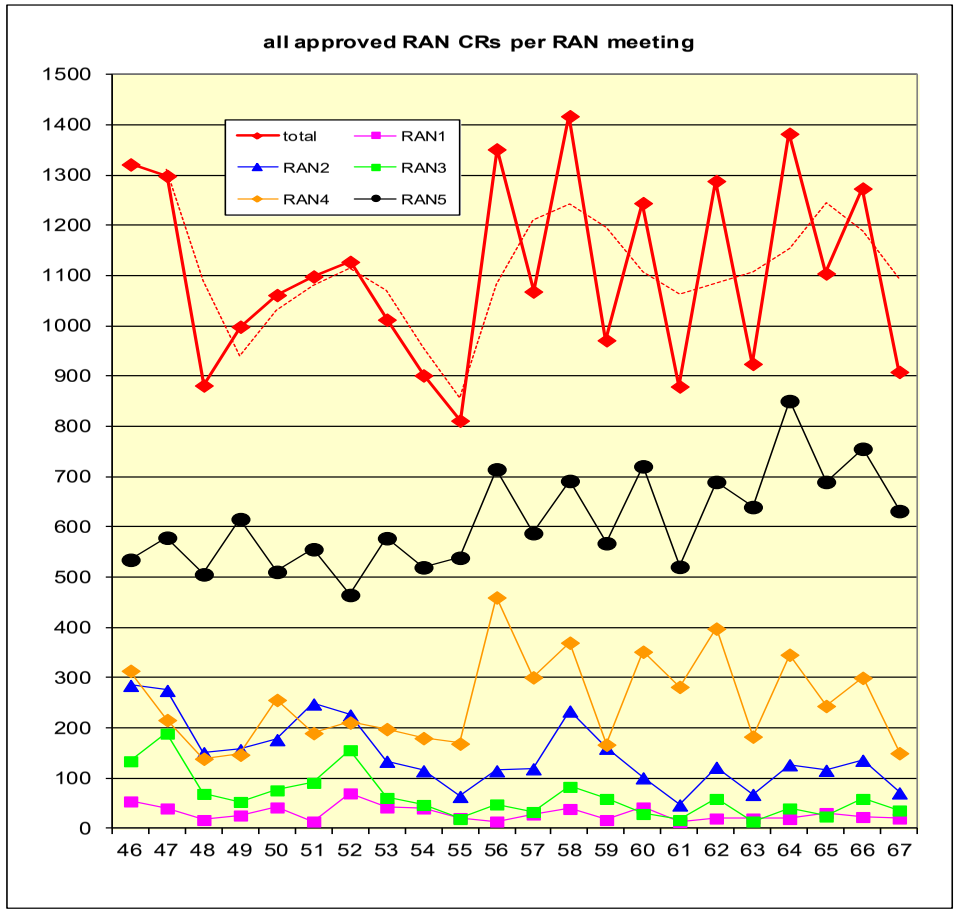


Fig. E-3: Approved CRs (all releases including category A CRs) per RAN WG and per RAN meeting
REL freeze: REL-9: RAN #46, REL-10: RAN #51, REL-11: RAN #57, REL-12: RAN #65
ASN.1 freeze: REL-8: RAN #43, REL-9: RAN #47, REL-10: RAN #52 (apart from Un), REL-11: RAN #59, REL-12: RAN #67

Samsung Exhibit 1025, Page 1274 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex F:
Summary of RAN work items (WI) and study items (SI)

An overview of recent RAN work items and study items (starting from REL-9 and including the new WIs & SIs approved at this meeting) is attached to this report.

This overview is used as input for the 3GPP workplan which lists all 3GPP work and study items.

status after RAN #67:

REL-7:		
REL-7 stage 1 freeze:	Sep.05	TSG #29
REL-7 stage 2 freeze:	Sep. 06	TSG #33
REL-7 freeze:	March 07	TSG #35
REL-7 ASN.1 freeze:	March 08	TSG #39
REL-8:	7 quarters	
REL-8 stage 1 freeze:	Dec.07	TSG #38
REL-8 stage 2 freeze:	June 08	TSG #40
REL-8 freeze:	Dec.08	TSG #42
REL-8 ASN.1 freeze:	March 09	TSG #43
REL-9:	4 quarters	
REL-9 stage 1 freeze:	Dec.08	TSG #42
REL-9 stage 2 freeze:	June 09	TSG #44
REL-9 freeze:	Dec.09	TSG #46
REL-9 ASN.1 freeze:	March 10	TSG #47
REL-10:	5 quarters	
REL-10 stage 1 freeze:	March 10	TSG #47
REL-10 stage 2 freeze:	Sep.10	TSG #49
REL-10 freeze:	March 11	TSG #51
REL-10 ASN.1 freeze:	June 11	TSG #52 (apart from Un for Relays: frozen in Sep.11 at TSG #53)
REL-11:	6 quarters	
REL-11 stage 1 freeze:	Sep.11	TSG #53
REL-11 stage 2 freeze:	March 12	TSG #55
REL-11 freeze:	Sep.12	TSG #57
REL-11 ASN.1 freeze:	March 13	TSG #59

Samsung Exhibit 1025, Page 1275 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

REL-12:	8 quarters	
REL-12 stage 1 freeze:	March 13	TSG #59
REL-12 stage 2 freeze:	Dec.13	TSG #62
REL-12 freeze:	Sep.14	TSG #65
REL-12 ASN.1 freeze:	March 15	TSG #67
REL-13:	5 quarters	
REL-13 stage 1 freeze:	Sep.14	TSG #65
REL-13 stage 2 freeze:	June 15	TSG #68 (planned)
REL-13 freeze:	Dec.15	TSG #70 (planned)
REL-13 ASN.1 freeze:	March 16	TSG #71 (planned)

Samsung Exhibit 1025, Page 1276 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

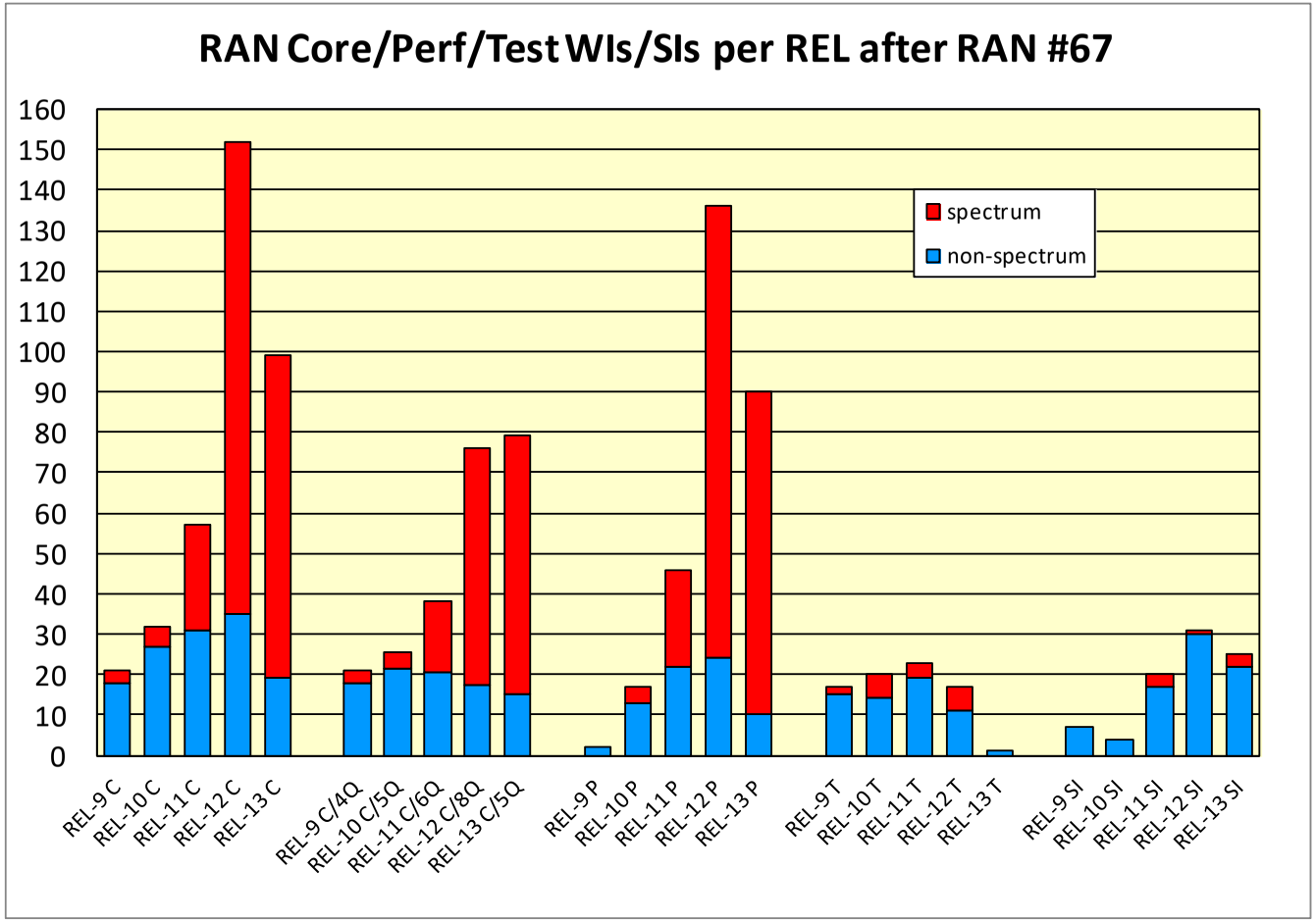


Fig. F-1: Statistics of all approved RAN WIs/SIs of REL-9/10//11/12/13 (status: after RAN #67) split into spectrum and non-spectrum related topics (<u>including</u> already completed WIs/SIs)

Samsung Exhibit 1025, Page 1277 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

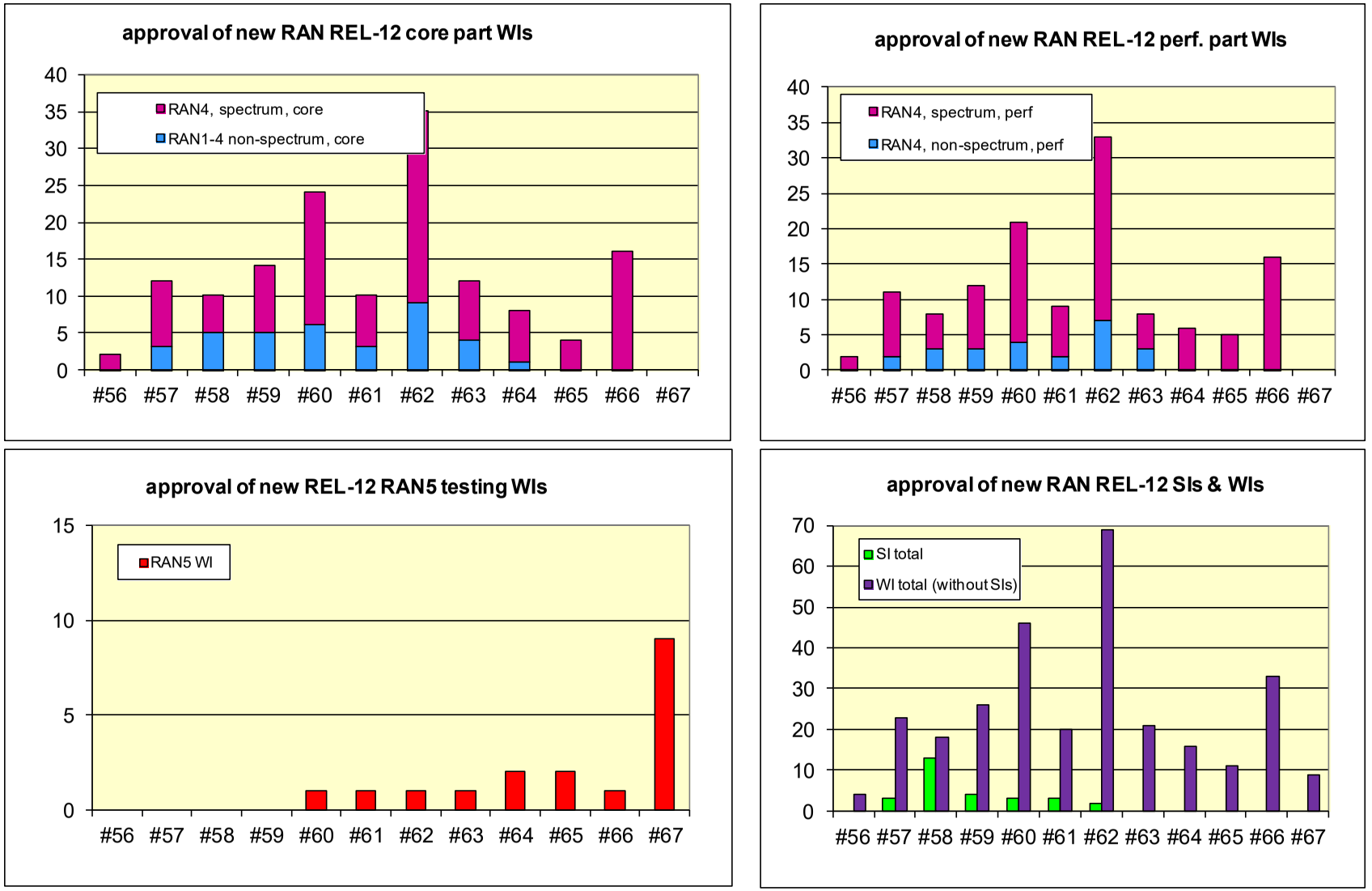


Fig. F-2: Overview of <u>new</u> REL-12 WIs and SIs per RAN meeting (REL-11 freeze: RAN #57, REL-12 freeze: RAN #65) (including WIs started as REL-13 WIs and then completed as REL-12 WIs)

Samsung Exhibit 1025, Page 1278 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614



Fig. F-3: Overview of <u>new</u> REL-13 WIs and SIs per RAN meeting (REL-12 freeze: RAN #65, REL-13 freeze: planned for RAN #70) (including WIs shifted from REL-12 to REL-13)

Samsung Exhibit 1025, Page 1279 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex G:
Actions decided by RAN #67

No Actions allocated.

Samsung Exhibit 1025, Page 1280 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex H:
History

Document history		
Date	**TSG RAN Tdoc**	**Subject**
08.03.2015	-	Skeleton report for RAN #67 provided before the meeting.
13.03.2015	-	Draft report of RAN #67 v1.0 (this version is also submitted as SP-150153 to SA #67 for information)
31.05.2015	RP-150526	Draft report of RAN #67 v2.0

In case of comments/questions/corrections please contact:

Author: **Dr. Joern Krause (3GPP TSG RAN MCC Support)**

ETSI Mobile Competence Centre (MCC)
Tel. +33-492-94 4261
email: Joern.Krause@etsi.org

Samsung Exhibit 1025, Page 1281 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes, No	Late: Tdoc requested after 27.02.15 17:00 CET or submitted after 03.03.15 17:00 CET (07.03.15 noon CET for CR packs)	withdrawn, not treated, noted, revised, approved, postponed	**FLAG M:** flagged by MCC; **FLAG D:** flagged by delegate; **FLAG T:** target date/TU change; **FLAG S:** late submission	-	RP-15xxxx	-	-	Agenda, Report, LSin, LSout, CR, TR, TS, Disc (for discussion & decision), Info (for background information), Template, WID, SID, ExReq, Workplan, ToR	**set**: if multiple CRs included; **new**: new WID/SID; **rev**: updated WID/SID;	set: if all CRs to the same spec; new: LSxx to link LSs; for new WIs/SIs: leading WG			-	acronym		-						
Yes		revised		03.: Appro	RP-150001	Agenda for RAN #67 held in Shanghai, China, 09.03.-12.03.2015	RAN chairman (Qualcomm)	Agenda					-	-	revised in RP-150049	RP-150049							
Yes		revised		04.: Appro	RP-150002	Draft report of RAN #66 held in Maui, USA, 08.12.-11.12.2014	ETSI MCC	Report					-	-	revised in RP-150003	RP-150003							
Yes	Late	revised		04.: Appro	RP-150003	Draft report of RAN #66 held in Maui, USA, 08.12.-11.12.2014	ETSI MCC	Report					-	-	revised in RP-150060	RP-150002, RP-150060							
Yes	Late	noted		07.1: ITU-R	RP-150004	Status Report ITU-R Ad hoc	ITU-R Ad hoc Contact (Telecom Italia)	Report					-	-									
Yes	Late	noted		08.1.1: RA	RP-150005	Status Report RAN WG1	RAN1 chairman (NTT DOCOMO)	Report					-	-									
Yes	Late	noted		08.1.1: RA	RP-150006	List of CRs from RAN WG1	ETSI MCC	Info					-	-									
Yes	Late	noted		08.2.1: RA	RP-150007	Status Report RAN WG2	RAN2 chairman (Ericsson)	Report					-	-									
Yes	Late	noted		08.2.1: RA	RP-150008	List of CRs from RAN WG2	ETSI MCC	Info					-	-									
Yes	Late	noted		08.3.1: RA	RP-150009	Status Report RAN WG3	RAN3 chairman (Huawei)	Report					-	-									
Yes	Late	noted		08.3.1: RA	RP-150010	List of CRs from RAN WG3	ETSI MCC	Info					-	-									
Yes		noted		08.4.1: RA	RP-150011	Status Report RAN WG4	RAN4 chairman (Nokia Networks)	Report					-	-									
Yes	Late	noted		08.4.1: RA	RP-150012	List of CRs from RAN WG4	ETSI MCC	Info					-	-									
Yes		noted	FLAG M	10.7.: Ope	RP-150013	Status Report of RAN4 CA WIs	RAN4 chairman (Nokia Networks)	Report					-	-	MCC: Instead of separate SRs for each CA WI, RAN4 provides a single spreadsheet for REL-12/REL-13 CA WIs tracking completion level, target date and any other essential information.								
Yes	Late	noted		08.5.1: RA	RP-150014	Status Report RAN WG5	RAN5 Chairman (Sprint)	Report					-	-									
Yes	Late	noted		08.5.1: RA	RP-150015	List of CRs from RAN WG5	ETSI MCC	Info					-	-									
Yes		approved		08.5.1: RA	RP-150016	Status Report MCC TF160 (for approval)	ETSI MCC TF160 Leader	Report					-	-									
Yes	Late	revised		18.: Projec	RP-150017	3GPP Work Plan review at Plenary #67 (pre-TSG version)	ETSI MCC	Workplan					-	-	revised in RP-150057	RP-150057							
Yes	Late	noted		18.: Projec	RP-150018	3GPP Support Team Report	ETSI MCC	Report					-	-									
Yes		noted		06.1: LSs f	RP-150019	LS on NGMN's 5G Initiative (2nd LS) (NGMN_LS_141223; to: SA, RAN, CT; cc: -; contact: NGMN Office)	NGMN	LSin					-	-	RAN action requested; LS will be treated under AI 18; no LS answer	NGMN_LS_141223			5G				
Yes		noted		06.1: LSs f	RP-150020	LS on Licensed Shared Access (LSA) related Activities in TC RRS (ETSI TC RRS(14)028019r1; to: SA; cc: RAN, SA5; contact: Intel)	ETSI TC RRS	LSin					-	-	RRS = Reconfigurable Radio Systems; no explicit RAN action requested; no LS answer	ETSI TC RRS(14)028019r1			LSA				
Yes		noted		06.2: LSs f	RP-150021	LS on public safety discovery (S2-150691; to: RAN1, RAN2, SA3, RAN; cc: -; contact: Qualcomm)	SA2	LSin		LS02			REL-13	eProSe-Ext-SA2	no explicit RAN action requested; note: RAN1 answer see RP-150033; LS will be treated under AI 11.3.5; no LS answer	S2-150691, RP-150033							
Yes		noted		06.2: LSs f	RP-150022	LS on support for ProSe one-to-one communication in Release 13 (S6-150076; to: RAN2; cc: SA2, RAN; contact: General Dynamics)	SA6	LSin					REL-13	MCPTT	no RAN action requested; LS will be treated under AI 11.3.5; no LS answer	S6-150076			MCPTT				
Yes		noted		06.2: LSs f	RP-150023	LS on Establishment of new working group TSG SA WG6 (SP-140864; to: OMA, ETSI TC TCCE, 3GPP TSG CT, SA2, SA6, ATIS; cc: TCCA, PCG, RAN, CT1, CT3, CT4, CT6, SA1, SA3, SA4, SA5; contact: SA6 convener)	SA	LSin					REL-13	MCPTT	TCCE = TETRA and Critical Communications Evolution; TCCA = TETRA + Critical Communications Association; no RAN action requested; LS will be treated under AI 11.3.5; no LS answer	SP-140884			MCPTT				
Yes		noted		06.1: LSs f	RP-150024	LS regarding coexistence of Licensed Assisted Access (LAA) and IEEE 802 (IEEE_802_LMSC_150202; to: RAN; cc: RAN1, IEEE 802, IEEE 802.19; contact: Chairman IEEE 802 LMSC)	IEEE 802 LMSC	LSin		LS01			REL-13	FS_LTE_LAA	LMSC = Local and Metropolitan Area Network Standards Committee; RAN #66 received LSin RP-141747; RAN chair presented RP-150055 at IEEE 802 Interim Session on 13.01.2015 in Atlanta, USA; no explicit RAN action requested; LS will be treated under AI 12.4.3; compare RP-150055; LS answer drafted by Ericsson in RP-150444 (final answer in RP-150454)	IEEE_802_LMSC_150202, RP-150055, RP-150444			LAA				
Yes		noted		06.1: LSs f	RP-150025	LS on Request for information sharing between ATIS COAST SYNC and 3GPP RAN on timing requirements for wireless base stations in the United States (ATIS_COAST_SYNC_150122_00007; to: RAN; cc: ATIS; contact: AT&T)	ATIS COAST SYNC	LSin		LS04			-	-	COAST = Copper/Optical Access, Synchronization and Transport Committee; SYNC = Synchronization Subcommittee; RAN action requested; LS answer was prepared by RAN4 in RP-150038 (final answer in RP-150421)	ATIS_COAST_SYNC_150122_00007							
Yes		noted		06.1: LSs f	RP-150026	LS regarding CTIA MIMO OTA Test Plan Development (CTIA_LS_150203; to: RAN4, RAN5; cc: RAN; contact: AT&T)	CTIA MOSG	LSin					REL-13	LTE_MIMO_OTA-Core	CTIA = Cellular Telecommunications & Internet Association; no RAN action requested; LS will be treated under AI 11.2.4; no LS answer	CTIA_LS_150203							
Yes		noted		06.1: LSs f	RP-150027	Reply LS to RP-142316 on OTA Test Requirement Work Plan (CTIA_LS_150202; to: RAN; cc: RAN4; contact: Sprient)	CTIA OTA WG	LSin					REL-13	LTE_UTRA_TRP_TRS-Core	CTIA = Cellular Telecommunications & Internet Association; no RAN action requested; LS will be treated under AI 11.2.1; no LS answer	CTIA_LS_150202, RP-142316							
Yes		noted		06.1: LSs f	RP-150028	LS on current implementation of 700 MHz bandplan with 3G PP specification (ITU-R WP5D/TEMP/567; to: RAN4, RAN; cc: -; contact: ITU-R SG5 Counselor)	ITU-R WP 5D	LSin		LS05			REL-11	LTE_DL_FDD700, LTE_APAC700	bands in 700-800MHz range: FDD: 12, 13, 14, 17 (all 4 from REL-8 LTE-RF), 28 (REL-11 LTE_APAC700); FDD DL: 29 (REL-11 LTE_DL_FDD700); TDD: 44 (REL-11 LTE_APAC700); RAN action requested; LS will be treated under AI 7.2.2; LS answer was prepared by RAN4 in RP-150039 (final answer in RP-150477)	ITU-R WP5D/TEMP/567, RP-150039							
Yes		noted		06.1: LSs f	RP-150029	LS to GCS proponents and transposing organizations on the provision of transposition references and certification C for draft revision 2 of Recommendation ITU-R M.2012 (ITU-R WP5D/TEMP/530; to: RAN, CT, SA, PCG, 3GPP2, ARIB, ATIS, CCSA, ETSI, IEEE, ITRI, TIA, TTA, TTC, WiMAX Forum; cc: -; contact: ITU-R SG5 Counselor)	ITU-R WP 5D	LSin		LS07			-	-	RAN action requested; LS will be treated under AI 7.2.2; 3GPP ITU-R ad hoc prepared an answer in RP-150044 (final RAN answer forwarded for review to SA in RP-150478)	ITU-R WP5D/TEMP/530, RP-150044							

Samsung Exhibit 1025, Page 1282 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		noted		06.3: LSs f	RP-150030	Response LS to S2-150658 on Support of a mix of IPv4 and IPv6 eNBs and Backhauls in eMBMS (R3-150489; to: SA2; cc: CT4, RAN, CT; contact: Alcatel-Lucent)	RAN3	LSin					REL-13	TEI13	LS S2-150658 was not sent to/cc RAN but just to RAN3, CT4; LS S2-150658 and included SA2 CR related to SA2 REL-13 WI MBMS_enh (started at SA #66 and target: SA #69); RP-150030 includes RAN3 endorsed CRs to 36.300, 36.444, 36.443; no RAN action requested; no LS answer	R3-150489, S2-150658							
Yes		noted		06.1: LSs f	RP-150031	LS to ext. organizations and research entities engaged in "5G" development requesting an update on IMT activities (ITU-R WP5D/TEMP/521(Rev.1); to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counsellor)	ITU-R WP5D	LSin		LS06			-	-	RAN action requested; LS will be treated under AI 7.2.2; 3GPP ITU-R ad hoc prepared an answer in RP-150043 (final answer from RAN see RP-150442)	ITU-R WP5D/TEMP/521(Rev.1), RP-150043, RP-150442			5G				
Yes		noted		06.3: LSs f	RP-150032	LS on LTE Rel-12 UE feature list about RAN1 responsible features (R1-150947; to: RAN; cc: RAN2, RAN4; contact: NTT DOCOMO)	RAN1	LSin		LS03			REL-12	-	RAN action requested; LS will be treated under AI 14.; no LS answer	R1-150947							
Yes		noted		06.3: LSs f	RP-150033	Response LS to S2-150691 = RP-150021 on public safety discovery (R1-150948; to: SA2; cc: RAN2, SA3, RAN; contact: Qualcomm)	RAN1	LSin		LS02			REL-13	eProSe-Ext-SA2	no RAN action requested; LS will be treated under AI 11.3.5; no LS answer	R1-150948							
Yes		noted		06.3: LSs f	RP-150034	LS on LTE Rel-12 UE feature list about RAN2 responsible features (R2-150703; to: RAN; cc: RAN1, RAN4; contact: NTT DOCOMO)	RAN2	LSin		LS03			REL-12	-	RAN action requested; LS will be treated under AI 14.; no LS answer	R2-150703							
Yes		noted		06.3: LSs f	RP-150035	LS reply to S6-150076 = RP-150021 on support for ProSe one-to-one communication in Release 13 (R2-150710; to: SA6; cc: SA2, RAN; contact: Intel)	RAN2	LSin					REL-13	MCPTT	no RAN action requested; LS will be treated under AI 11.3.5; no LS answer	R2-150710, RP-150021			MCPTT				
Yes		noted		06.3: LSs f	RP-150036	LS on LTE Rel-12 UE feature list about RAN4 responsible features (R4-151044; to: RAN; cc: RAN1, RAN2; contact: NTT DOCOMO)	RAN4	LSin		LS03			REL-12	-	RAN action requested; LS will be treated under AI 14.; no LS answer	R4-151044, RP-150178							
Yes		noted		06.3: LSs f	RP-150037	LS on impact of optional preconfigured parameters for D2D out of Network coverage mode (R4-151170; to: RAN1, RAN2, RAN5, SA2, RAN; cc: -; contact: Sprint)	RAN4	LSin		LS09			REL-12	LTE_D2D_Prox-Core	no RAN action requested; LS will be treated under AI 10.6.5; no LS answer	R4-151170							
Yes		noted		06.3: LSs f	RP-150038	Response LS to ATIS_COAST_SYNC_150122_00007 = RP-150025 on ATIS CO-AST SYNC and 3GPP RAN timing requirements for wireless base stations (R4-151239; to: RAN; cc: -; contact: NSN)	RAN4	LSin		LS04			REL-12	-	RAN action requested; RP-150038 is a reply proposal from RAN4 to LSin RP-150025; LS will be treated under AI 6.1 together with LSin RP-150025; no answer to RAN4 but RP-140038 is used in RP-150421 to provide the final answer to LSin RP-150025	R4-151239, RP-150025							
Yes		noted		06.3: LSs f	RP-150039	DRAFT Letter to ITU in reply to ITU-R WP5D/TEMP/567 = RP-150028 on CURRENT IMPLEMENTATION OF 700 MHz BAND/PLAN WITHIN 3GPP SPECIFICATION (R4-151242; to: RAN; cc: -; contact: Ericsson)	RAN4	LTIin		LS05			REL-11	LTE_DL_FDD700, LTE_APAC700	RAN action requested; RP-150039 is a reply proposal from RAN4 to answer LSin RP-150028; corresponding REL-11 LTE_APAC700-Core CR is submitted to RAN #67 in R4-151155 (in RP-150384) to align REL-11 with REL-12; LS will be treated under AI 7.2.2; no LS answer to RAN4	R4-151242, RP-150028, R4-151155							
Yes		noted		06.1: LSs f	RP-150040	LS on preliminary draft new Report ITU-R M.[IMT.ABOVE 6 GHz] (ITU-R WP5D/TEMP/534(Rev.1); to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counsellor)	ITU-R WP5D	LSin					-	-	no explicit RAN action requested; LS will be treated under AI 7.2.2; no LS answer	ITU-R WP5D/TEMP/534(Rev.1)			6GHz				
Yes		noted		06.1: LSs f	RP-150041	LS on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT) (ITU-R WP5D/TEMP/577; to: RAN, CT, SA, 3GPP2, 4G Americas, 5G Infrastructure Public Private Partnership (Europe), 5G Innovation Centre, APT Wireless Group, Fifth Generation Mobile Communications Promotion Forum (Japan), ARIB, ATIS, CCSA, CDG, ETSI, EU METIS Project, GSMA, IEEE, IMT-2020 Promotion Group (China), ITRI, NGMN, NYU Wireless, TSDSI, TIA, TTA, TTC, UMTS Forum, WiMax Forum, WWRF; cc: -; contact: ITU-R SG5 Counsellor)	ITU-R WP5D	LSin		LS06			-	-	RAN action requested; LS will be treated under AI 7.2.2; 3GPP ITU-R ad hoc prepared an answer in RP-150043 (final answer from RAN see RP-150442)	ITU-R WP5D/TEMP/577, RP-150043, RP-150442			5G				
Yes		noted		06.3: LSs f	RP-150042	LS on the introduction of the signalling for UL 64 QAM (R2-150733; to: RAN4; cc: RAN, RAN1; contact: Huawei)	RAN2	LSin					REL-12	LTE-L23, TEI12	note: 64 QAM UL functionality for LTE exists in 3GPP specs since REL-8; however, signalling of a UE capability in now introduced for REL-12 (see R2-150713 in RP-150379 and R2-150715 in RP-150377) and RF requirements will be introduced via REL-13 WI LTE_UL64QAM-Core; no RAN action requested; no LS answer	R2-150733, RP-150377, RP-150379							
Yes		noted		06.3: LSs f	RP-150043	Draft letter to ITU in reply to ITU-R WP5D/TEMP/521(Rev.1) = RP-150031 and ITU-R WP5D/TEMP/577 = RP-150041 on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT) (RT-150009; to: RAN; cc: -; contact: Telecom Italia)	3GPP ITU-R ad hoc	LTIin		LS06			-	-	3GPP ITU-R ad hoc prepared this draft answer to the LSin of ITU-R WP5D RP-150031 and RP-150041; LS will be treated under AI 7.2.2; RAN action requested; no LS answer to 3GPP ITU-R ad hoc but RP-150043 is used to provide RP-150442	RT-150009, RP-150031, RP-150041, RP-150442			5G				
Yes		noted		06.3: LSs f	RP-150044	Draft letter to ITU in reply to ITU-R WP5D/TEMP/530 = RP-150029 on 3GPP comments on draft revision 2 of Recommendation ITU-R M.2012 (RT-150010; to: CT, RAN; cc: -; contact: Telecom Italia)	3GPP ITU-R ad hoc	LTIin		LS07			-	-	3GPP ITU-R ad hoc prepared this draft answer to the LSin of ITU-R WP5D RP-150029; LS will be treated under AI 7.2.2; RAN action requested; no LS answer to ITU-R ad hoc	RT-150010, RP-150029							
No		withdrawn		-	RP-150045	Void	-	-					-	-									
No		withdrawn		-	RP-150046	Void	-	-					-	-									
No		withdrawn		-	RP-150047	Void	-	-					-	-									
Yes		revised		13.: New W	RP-150048	Status of time budgets for RAN1/2/3/4 REL-12 & REL-13 WIs/SIs after RAN #67	RAN1/RAN2/RAN3/RAN4 chairmen	Report					REL-12	-	note: The status after RAN #66 was endorsed in RP-142318; revised in RP-150518	RP-142318, RP-150518							
Yes	Late	approved		03.: Appro	RP-150049	Agenda for RAN #67 held in Shanghai, China, 09.03.-12.03.2015	RAN chairman (Qualcomm)	Agenda					-	-	revision of RP-150001	RP-150001							

Samsung Exhibit 1025, Page 1283 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics		contact	contact company	reserved	info
Yes	Late	endorsed		18.: Projec	RP-150050	Hanging paragraphs	ETSI MCC	CR	21.801	0040	-	F	REL-12	TEI12	Toughens up the drafting rules relating to hanging paragraphs; CR is for approval in SA		cc			SA				
Yes	Late	noted		18.: Projec	RP-150051	Tdoc and CR status values	ETSI MCC	Disc					-	-	Discusses and seeks approval for philosophy of status value allocation									
Yes	Late	noted		18.: Projec	RP-150052	Use of multiple WI codes on CRs	ETSI MCC	Disc					-	-	Outlines the working practices and (undocumented) rules									
Yes	Late	approved		10.3: Closs	RP-150053	Correction to the implementation of CR 2471r3 (Clarification for ACK/NACK feedback of CGI measurement)	ETSI MCC	CR	36.133	2824	-	F	REL-12	LTE_TDD_eIMTA-Core	company CR: The modification to the note in Table 8.1.2.3.7.1-1 proposed by CR 2471r3 (RP-141700 or RAN #65) was missed in the implementation of the CR by MCC. This CR corrects this error.		cc			RAN4				
Yes		noted		05.3: Repc	RP-150054	RAN chair's presentation on "3GPP & unlicensed spectrum" at WFA Board of Directors, Feb. 23, 2015	RAN chairman (Qualcomm)	Info					REL-13	FS_LTE_LAA	WFA = WiFi Alliance				LAA					
Yes		noted		05.3: Repc	RP-150055	RAN chair's presentation on "3GPP & unlicensed spectrum" at IEEE 802 Interim Session, 11-16.01.2015, Atlanta, USA	RAN chairman (Qualcomm)	Info		LS01			REL-13	FS_LTE_LAA	compare LSin RP-150024	RP-150024			LAA					
Yes		revised		18.: Projec	RP-150056	Getting ready for "5G"	RAN chairman (Qualcomm)	Disc					-	-	revised in RP-150467	RP-150467			5G					
Yes	Late	noted		18.: Projec	RP-150057	3GPP Work Plan review at Plenary #67 (post-TSG version)	ETSI MCC	Workplan					-	-		RP-150017								
Yes	Late	noted		10.7.: Ope	RP-150058	Way forward on LTE Carrier Aggregation WI handling	ETSI MCC	Disc					-	-	As corresponding email discussion on the RAN_DRAFTS reflector was not able to conclude, this is an attempt to summarize the situation and to propose a way forward									
Yes	Late	approved		08.4.6: RA	RP-150059	CR to TR 36.850 v11.1.0 changing the TR into a pointer to the new TR 36.852-11	ETSI MCC	CR	36.850	0002	-	F	REL-11	TEI11	company CR: This CR is just turning TR 36.850 into a pointer to TR 36.852-11 as the TR numbering scheme was modified; TR 36.852-11 will take over the whole contents of TR 36.850 v11.1.0; future CRs have to be made to TR 36.852-11	RP-150058	y	cc							
Yes	Late	approved		04.: Approv	RP-150060	Report of RAN #66 held in Maui, USA, 08.12.-11.12.2014	ETSI MCC	Report					-	-		RP-150002, RP-150003				RAN4			2/11/2015 18:02	
Yes		noted	FLAG T, M	11.3.8: Op	RP-150061	Status report for WI Perf. part: CRS Interference Mitigation for LTE Homogenous Deployments; rapporteur: Ericsson	RAN4	Report					REL-13	LTE_CRSIM-Perf	MCC: target date change (from June 15 to March 16), error in status report history		y				Mr. Shaohua Li	CCSA	2/15/2015 10:27	Status reports for LTE_CRSIM-Perf are provided
Yes		noted		10.4.1: Op	RP-150062	Status report for WI Perf. part: Further EUL Enhancements, rapporteur: Ericsson	RAN4	Report					REL-12	EDCH_enh-Perf			Perf. part WI completed				Mr. Christopher Callender	Nanjing Ericsson	2/16/2015 9:31	Status report for performance part of F-EUL enhancements
Yes		noted		10.5.1: Op	RP-150063	Status report for WI Perf. part: Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA; rapporteur: Ericsson	RAN4	Report					REL-12	LTE_UTRA_IncMon-Perf							Mr. Christopher Callender	Nanjing Ericsson	2/16/2015 9:34	Status report for LTE_UTRA_IncMon-Perf
Yes		approved		13.2: New	RP-150064	New WID: LTE Advanced dual uplink inter-band Carrier Aggregation FDD-TDD	KDDI	WID	new	RAN4	s (2UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_2UL_FDD_TDD; note: This will be another 2UL basket WI (covering e.g. B1_B42) for FDD-TDD cases while LTE_CA_2UL_R13-Ax covers FDD-FDD and TDD-TDD but TR 36.860-13 will also be used for combinations of LTE_CA_2UL_FDD_TDD		y		LTE		Mr. Hiroki Takeda	KDDI Corporation	2/17/2015 8:59	
Yes		approved		08.4.5: RA	RP-150065	Maximum allowed layers for multiple monitoring for CA	Alcatel-Lucent, Ericsson, Huawei, HiSilicon	CR	36.133	2753	1	A	REL-11	LTE_CA-Core	company contribution to replace cat.A CR R4- 150040 submitted in RP-150383 which is a mirror of REL-10 CR R4-151105 submitted in RP-150383	R4-150040, RP-150383	y	cc			RAN4	Dr. Ren Da	Alcatel-Lucent	2/17/2015 14:26	•In 8.1.2.1.1.1, add the clarification that the maximum 7 layers are effective number of carriers •In 8.1.2.1.1.1, clarify that "one GSM layer
Yes		approved		08.4.5: RA	RP-150066	Maximum allowed layers for multiple monitoring for CA	Alcatel-Lucent, Ericsson, Huawei, HiSilicon	CR	36.133	2754	1	A	REL-12	LTE_CA-Core	company contribution to replace cat.A CR R4-150041 submitted in RP-150383 which is a mirror of REL-10 CR R4-151105 submitted in RP-150383	R4-150041, RP-150383	y	cc			RAN4	Dr. Ren Da	Alcatel-Lucent	2/17/2015 14:28	•In 8.1.2.1.1.1, add the clarification that the maximum 7 layers are effective number of carriers •In 8.1.2.1.1.1, clarify that "one GSM layer
Yes		revised		11.4.2.03:	RP-150067	Revised Work Item Proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 8 and Band 28	SoftBank Mobile	WID	(rev)	RAN4	s (3DL/1UL)		REL-13	LTE_CA_B1_B8_B28	last approved WID: RP-141826; to change TRs from new specs to affected specs	RP-141826, RP-150447					Mr. Kenichi Kihara	SOFTBANK MOE	2/18/2015 0:29	This revision is to change TRs from new specs. to affected specs.
Yes		noted	FLAG T	09.2.1: Co	RP-150068	Status report for WI UE Conformance Test Aspects for UE Over the Air (Antenna) conformance testing methodology - Laptop Equipment Free Space Test, rapporteur: ZTE	RAN5	Report					REL-11	UEAnt_FSTest_UEConTest	MCC: target date changed						Dr. Carolyn Taylor	ZTE Corporation	2/18/2015 16:52	Test: 95%, June 16
Yes		noted	FLAG T	09.4.1: Co	RP-150069	Status report for WI UE Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom, rapporteur: ZTE	RAN5	Report					REL-13	LTE_UTRA_TRP_TRS-UEConTest	MCC: target date changed						Dr. Carolyn Taylor	ZTE Corporation	2/18/2015 16:53	Test: 20%, June 16
Yes		approved		09.4.1: Co	RP-150070	Revised WID: UE Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom	ZTE	WID	rev	RAN5			REL-13	LTE_UTRA_TRP_TRS-UEConTest	last approved WID: RP-140090; revised to align with RAN4 Core part WI in RP-141966	RP-140090, RP-141966					Dr. Carolyn Taylor	ZTE Corporation	2/18/2015 17:01	last approved WID: RP-140090; The revised WID for UE Conformance Test Aspects – LTE UE TRP and TRS and UTRA Hand Phantom is updated to align with RAN WG4 revised WID in RP-141966
Yes		approved		13.3: New	RP-150071	New WI proposal: UE Conformance Test Aspects - Further DL MIMO Enhancement for LTE-Advanced	ZTE	WID	new	RAN5			REL-12	-	new WI for LTE only; leading WG: RAN5; WI code to be used: LTE_eDL_MIMO_enh-UEConTest; tested core part: LTE_eDL_MIMO_enh-Core					LTE		Dr. Carolyn Taylor	ZTE Corporation	2/18/2015 17:03	new WI for LTE-Advanced
Yes		revised		10.3: Closs	RP-150072	Approval of TR 36.852-12 v2.0.0: E-UTRA inter-band Carrier Aggregation	Ericsson	TR	36.852-12	RAN4			REL-12	LTE_CA_B1_B8-Core	RAN4 TR 36.852-12 is provided for approval; note: TR 36.851 was provided to RAN #66 for information (RP-142015), then TR number was changed to TR 36.852-12; all TPs from Rel-12 WIs are implemented in this TR; revised in RP-150498 covering a number of late editorial review comments coming from a check by ETSI Editthelp;	RP-142015, RP-150498					Dr. Muhammad Kazmi	Ericsson LM	2/19/2015 15:02	In RAN#66 in RP-142015, the TR 36.852-12 v1.0.0 was submitted for information. All TPs from Rel-12 WIs are now implemented in the TR. The TR 36.852-12 is therefore proposed to be approved as V12.0.0.

Samsung Exhibit 1025, Page 1284 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		approved		13.2: New	RP-150073	New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 4 and Band 12	T-Mobile USA	WID	new	RAN4	s (4DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B4_B12			LTE		Mr. Nelson Ueng	T-Mobile USA Inc	2/20/2015	0:35	This new WID is to specify band-combination specific requirements for LTE Advanced 4 Band Carrier Aggregation
Yes		approved		13.2: New	RP-150074	New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 4 and Band 12	T-Mobile USA	WID	new	RAN4	s (4DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B12			LTE		Mr. Nelson Ueng	T-Mobile USA Inc	2/20/2015	0:42	This new WID is to specify band-combination specific requirements for LTE Advanced 4 Band Carrier Aggregation
Yes		approved		13.2: New	RP-150075	New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 4 and Band 4	T-Mobile USA	WID	new	RAN4	s (4DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B2_B4_B4			LTE		Mr. Nelson Ueng	T-Mobile USA Inc	2/20/2015	0:45	This new WID is to specify band-combination specific requirements for LTE Advanced 4 Band Carrier Aggregation
Yes		noted	FLAG M	09.3.1: Co	RP-150076	Status report for WI UE Conformance Test Aspects for Further REL-12 Configurations for LTE Advanced Carrier Aggregation: Microsoft	RAN5	Report					REL-12	LTE_CA_Rel12-UEConTest	MCC: WI covers REL-12 inter-band 2DL, REL-12 intra-band contiguous 2DL and REL-12 intra-band non-contiguous 2DL WIs; are all these REL-12 CA covered? It seems remaining combinations are intended to be moved to LTE_CA_Rel12_3DL-UEConTest, even if 2DL only		WI completed			Mr. Jussi Kuusisto	MICROSOFT EU	2/20/2015	13:06	Test: 100%, Mar. 15
Yes		approved		09.3.1: Co	RP-150077	Revised WID: UE Conformance Test Aspects - Further REL-12 Configurations for LTE Advanced Carrier Aggregation	Microsoft Corporation	WID	rev	RAN5			REL-12	LTE_CA_Rel12-UEConTest	last approved WID: RP-140621; removal of 2 CA configurations that are no longer in REL-12 in order to complete the WI; to be approved before the SR and completion of the WI	RP-140621				Mr. Jussi Kuusisto	MICROSOFT EU	2/20/2015	13:14	Last approved WID: RP-140621; removal of 2 CA configurations that no longer are in Rel-12 in order to complete the WI. To be approved before the SR and completion of the WI
Yes		noted		09.3.2: Co	RP-150078	Status report for WI UE Conformance Test Aspects for Further REL-12 Configurations for LTE Advanced Carrier Aggregation with 3DL: Microsoft	RAN5	Report					REL-12	LTE_CA_Rel12_3DL-UEConTest						Mr. Jussi Kuusisto	MICROSOFT EU	2/20/2015	13:18	Test: 12%, Dec. 15
Yes		approved		09.3.2: Co	RP-150079	Revised WID: UE Conformance Test Aspects - Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL	Microsoft Corporation	WID	rev	RAN5			REL-12	LTE_CA_Rel12_3DL-UEConTest	last approved WID: RP-142231; aligning the content of CA configurations within the REL-12 scope, decided at RAN#66; addition of 2 supporting companies.	RP-142231				Mr. Jussi Kuusisto	MICROSOFT EU	2/20/2015	13:23	last approved WID: RP-142231. Alining the content of CA configurations within the Release 12 scope, decided at RAN#66. Addition of 2 supporting companies.
Yes		noted		12.3.2: Op	RP-150080	Status report for SI on Study on Indoor Positioning Enhancements for UTRA and LTE; rapporteur: NextNav	RAN1	Report					REL-13	FS_UTRA_LTE_iPos_enh			y			Mr. Jerome Vogedes	NextNav	2/20/2015	15:41	
Yes		noted	FLAG M	10.6.8: Op	RP-150081	Status report for WI Core part: Group Call eMBMS congestion management for LTE, rapporteur: Alcatel-Lucent	RAN3	Report					REL-12	GCSE_LTE-MBMS_CM-Core	MCC: 2 alternative CRs in RP-150354 and RP-150355		Core part WI completed			Mr. Hakon Helmers	Alcatel-Lucent	2/20/2015	16:26	Core: 100%, March 15
Yes		noted		10.6.8: Op	RP-150082	Selection of M2AP solution for suspension notification	Alcatel-Lucent	Disc					REL-12	GCSE_LTE-MBMS_CM-Core						Mr. Hakon Helmers	Alcatel-Lucent	2/20/2015	16:44	
Yes		withdrawn		13.2: New	RP-150083	New WID: LTE Advanced 3 Band Carrier Aggregation (3DL) of Band 1, Band 5 and Band 40	SK Telecom	WID	new	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B5_B40; merged with RP-150085 (see RP-150418)	RP-150418	y	LTE		Mr. Yunesung Kim	SK Telecom	2/21/2015	7:43	LTE Advanced 3 Band Carrier Aggregation (3DL) of Band 1, Band 5 and Band 40
Yes		withdrawn		13.2: New	RP-150084	New WID: LTE Advanced 3 Band Carrier Aggregation (3DL) of Band 3, Band 5 and Band 40	SK Telecom	WID	new	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B5_B40; merged with RP-150085 (see RP-150418)	RP-150418	y	LTE		Mr. Yunesung Kim	SK Telecom	2/21/2015	7:44	LTE Advanced 3 Band Carrier Aggregation (3DL) of Band 3, Band 5 and Band 40
Yes		revised		13.2: New	RP-150085	New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 5 and Band 40	SK Telecom	WID	(new)	RAN4	s (4DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B5_B40; could include also RP-150083 and RP-150084; revised in RP-150418	RP-150418	y	LTE		Mr. Yunesung Kim	SK Telecom	2/21/2015	7:44	LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 1, Band 3, Band 5 and Band 40
Yes		revised		11.4.3.1: C	RP-150086	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 5 and Band 30	AT&T	WID	(rev)	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B2_B5_B30	last approved WID: RP-142199; revised in RP-150448	RP-142199, RP-150448				Mr. Marc Grant	AT&T GNS Belgi	2/23/2015	7:59	Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 5 and Band 30
Yes		revised		11.4.3.2: C	RP-150087	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 12 and Band 30	AT&T	WID	(rev)	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B2_B12_B30	last approved WID: RP-142198; revised in RP-150449	RP-142198, RP-150449				Mr. Marc Grant	AT&T GNS Belgi	2/23/2015	8:01	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 12 and Band 30
Yes		revised		11.4.3.3: C	RP-150088	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 29 and Band 30	AT&T	WID	(rev)	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B2_B29_B30	last approved WID: RP-142200; revised in RP-150450	RP-142200, RP-150450				Mr. Marc Grant	AT&T GNS Belgi	2/23/2015	8:02	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 29 and Band 30
Yes		revised		11.4.3.4: C	RP-150089	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 5 and Band 30	AT&T	WID	(rev)	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B4_B5_B30	last approved WID: RP-142202; revised in RP-150451	RP-142202, RP-150451				Mr. Marc Grant	AT&T GNS Belgi	2/23/2015	8:04	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 5 and Band 30
Yes		revised		11.4.3.5: C	RP-150090	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 12 and Band 30	AT&T	WID	(rev)	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B4_B12_B30	last approved WID: RP-142201; revised in RP-150452	RP-142201, RP-150452				Mr. Marc Grant	AT&T GNS Belgi	2/23/2015	8:05	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 12 and Band 30
Yes		revised		11.4.3.6: C	RP-150091	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30	AT&T	WID	(rev)	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B4_B29_B30	last approved WID: RP-142203; note: CA_B2_B4_B29 is already specified in a REL-12 WI; CA_B2_B4_B30 already covered in RP-150090; revised in RP-150419	RP-142203, RP-150419	y			Mr. Marc Grant	AT&T GNS Belgi	2/23/2015	8:06	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30
No		withdrawn		09.3.5: Co	RP-150092	Status report for UE Conformance Test Aspects WLAN3GPP Radio Interworking; rapporteur: Intel	RAN5	Report					REL-12	UTRA_LTE_WLAN_Interw-UEConTest			y			Mr. Graham Brand	Intel Corporation	2/23/2015	14:38	
Yes		approved		10.6.5: Op	RP-150093	TR 36.877 v2.0.0 LTE Device to Device Proximity Services: User Equipment (UE) radio transmission and reception	Qualcomm Incorporated	TR	36.877	RAN4			REL-12	LTE_D2D_Prox-Core	RAN4 TR 36.877 is submitted for approval; v1.0.0 was noted at RAN #66 in RP-141897	RP-141897				Dr. Peter Gaal	Qualcomm Incorp	2/23/2015	23:36	RAN4 TR 36.877 is submitted for 1-step approval
Yes		noted		10.6.5: Op	RP-150094	Status report for WI: LTE Device to Device Proximity Services; rapporteur: Qualcomm	RAN1	Report					REL-12	LTE_D2D_Prox			Core part WI completed			Dr. Peter Gaal	Qualcomm Incorp	2/23/2015	23:45	

Samsung Exhibit 1025, Page 1285 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		noted		11.3.5: Op	RP-150095	Status report for WI: Enhanced LTE Device to Device Proximity Services; rapporteur: Qualcomm	RAN2	Report					REL-13	LTE_eD2D_Prox						Dr. Peter Gaal	Qualcomm Incorp	2/23/2015 23:50	
Yes		noted		14.: UE ca	RP-150096	Introduction of new UE categories	Qualcomm Incorporated	Disc					REL-12	TEI12			y			Dr. Peter Gaal	Qualcomm Incorp	2/23/2015 23:54	
No		withdrawn		09.3.5: Co	RP-150097	Status report for UE Conformance Test Aspects: WLAN3GPP Radio Interworking, rapporteur: Intel	RAN5	Report					REL-12	UTRA_LTE_WLAN_interw-UEConTest			y			Mr. Graham Brand	Intel Corporation	2/23/2015 23:59	
Yes		noted		09.3.5: Co	RP-150098	Status report for UE Conformance Test Aspects: WLAN3GPP Radio Interworking, rapporteur: Intel	RAN5	Report					REL-12	UTRA_LTE_WLAN_interw-UEConTest			y			Mr. Graham Brand	Intel Corporation	2/24/2015 0:04	
No		withdrawn		12.4.04: O	RP-150099	Void	NTT DOCOMO, INC.	Report					REL-13	FS_LTE_TDD_add_config			y		SDL			2/24/2015 4:20	Status report for
Yes		revised	FLAG D	11.3.2: Op	RP-150100	Status report for WI Further LTE Physical Layer Enhancements for MTC: rapporteur: Ericsson	RAN1	Report					REL-13	LTE_MTCe2_L1	Huawei: The Q4 2015 RAN1 TU budget can be discussed in a later RAN meeting when we have a more complete picture of what is needed to complete all rel-13 items; revised in RP-150495	RP-150495				Mr. Johan Bergman	Ericsson AB	2/24/2015 7:05	
Yes		revised		11.3.2: Op	RP-150101	Revised WID: Further LTE Physical Layer Enhancements for MTC	Ericsson	WID	(rev)	RAN1			REL-13	LTE_MTCe2_L1	last approved WID: RP-141865; revised in RP-150492	RP-141865, RP-150492				Mr. Johan Bergman	Ericsson AB	2/24/2015 7:05	last approved WID: RP-141865
Yes		noted		11.3.2: Op	RP-150102	Motivation for Revised WID Further LTE Physical Layer Enhancements for MTC	Ericsson	Disc	(motiv)				REL-13	LTE_MTCe2_L1						Mr. Johan Bergman	Ericsson AB	2/24/2015 7:05	
Yes		revised		13.2: New	RP-150103	New WI proposal: LTE Advanced dual uplink inter-band Carrier Aggregation Class A4	Nokia Corporation	WID	(new)	RAN4	s (2UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_2UL_R13-A4; revised in RP-150410	RP-150410		LTE		Mr. Petri Vasenkari	Nokia Corporatio	2/24/2015 9:40	New WI for LTE only covering 2UL interband CA Class A4 CA configurations for REL-13. This WI is only for WG RAN4 Core: 40%, Dec. 15
Yes		noted		11.2.1: Op	RP-150104	Status report for WI Core part: LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Requirements, rapporteur: Nokia Corporation	RAN4	Report					REL-13	LTE_UTRA_TRP_TRS-Core						Mr. Petri Vasenkari	Nokia Corporatio	2/24/2015 9:59	
Yes		revised		13.2: New	RP-150105	New WI proposal: LTE Advanced 3DL/2UL inter-band Carrier Aggregation	Nokia Corporation, LG Electronics	WID	(new)	RAN4	s (3DL/2UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_3DL_2UL; revised in RP-150439	RP-150439		LTE		Mr. Petri Vasenkari	Nokia Corporatio	2/24/2015 12:56	New WI for LTE only. This WID is only for WG RAN4.
Yes		noted		11.5.1: Op	RP-150106	Status Report for WI 2GHz FDD LTE Band for Region 1; rapporteur: DISH Network	RAN4	Report					REL-13	LTE_1980_2170_REG1						Mr. John Kim	Dish Network	2/24/2015 13:05	Core part: 35% Perf part: 0%
Yes		revised		11.5.1: Op	RP-150107	Revised WID: 2GHz FDD LTE Band for Region 1	DISH Network	WID	(rev)	RAN4	s		REL-13	LTE_1980_2170_REG1	last approved WID: RP-141710; captures the recent RAN4 agreement on the band plan and updates rapporteurship; revised in RP-150424	RP-141710, RP-150424				Mr. John Kim	Dish Network	2/24/2015 13:09	last approved WID: RP-141710; Captures the recent RAN4 agreement on the band plan and updates rapporteurship
Yes		not treated		13.1.3: Ne	RP-150108	Motivation for New SI: E-UTRAN support for Licensed Shared Access (LSA)	Nokia Networks	Disc	motiv				REL-13	-		RP-150109			LSA	Dr. Krzysztof Kordybach	Nokia Networks	2/24/2015 13:19	
Yes		not treated		13.1.3: Ne	RP-150109	New SI proposal for information: Study on E-UTRAN support for Licensed Shared Access (LSA)	Nokia Networks	SID	new	RAN3			REL-13	-	new SI for LTE only; leading WG: RAN3; WI code to be used: FS_LTE_LSA; SI RP-141857 was not treated at RAN #66; for information?	RP-141857, RP-150108		LTE	LSA	Dr. Krzysztof Kordybach	Nokia Networks	2/24/2015 13:19	A new SI for LTE only, for information; leading WG: RAN3;
Yes		noted		11.2.3: Op	RP-150110	Status report for WI Core part: SON for AAS-based deployments, rapporteur: Nokia Networks	RAN3	Report					REL-13	UTRA_LTE_SON_AAS-Core						Dr. Krzysztof Kordybach	Nokia Networks	2/24/2015 13:23	Core: 25%, Jun. 15
Yes		revised		13.2: New	RP-150111	New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 4 and Band 7	Rogers Communications	WID	(new)	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B4_B4_B7_BWset; revised in RP-150429	RP-150429		LTE		Mr. Paul Nebesny	Rogers Commun	2/24/2015 14:51	New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 4 and Band 7
Yes		revised		13.2: New	RP-150112	New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 7 and Band 12	Rogers Communications	WID	(new)	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B4_B7_B12_BWset; revised in RP-150430	RP-150430		LTE		Mr. Paul Nebesny	Rogers Commun	2/24/2015 14:54	New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 7 and Band 12
Yes		revised		13.2: New	RP-150113	New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 7 and Band 12	Rogers Communications	WID	(new)	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B7_B12; revised in RP-150431	RP-150431		LTE		Mr. Paul Nebesny	Rogers Commun	2/24/2015 14:57	New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 7 and Band 12
Yes		revised		13.2: New	RP-150114	New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 4 and Band 7	Rogers Communications	WID	(new)	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B7; revised in RP-150432	RP-150432		LTE		Mr. Paul Nebesny	Rogers Commun	2/24/2015 15:01	New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 4 and Band 7
Yes		approved		11.4.1.13:	RP-150115	Revised WID: LTE Advanced inter-band Carrier Aggregation of Band 25 and Band 26	Sprint	WID	rev	RAN4	s (2DL/1UL)		REL-13	LTE_CA_B25_B26	last approved WID: RP-142020; revised to add 2 bandwidth combination sets; both of the added bandwidth combination sets are subsets of bandwidth combination set 0	RP-142020						2/24/2015 23:03	LTE_CA_B25_B26 WID revised to add 2 BW Combination Sets. Both of the added BW Combination Sets are subsets of BW Combination Set 0
Yes		approved		10.7.2.1: C	RP-150116	TR 36.833-5-41 v2.0.0 on LTE-Advanced intra-band contiguous Carrier Aggregation (CA) in Band 41 for 3 downlinks (3DL)	Alcatel-Lucent	TR	36.833-5-41	RAN4			REL-12	LTE_CA_C_B41_3DL-Perf	RAN4 TR 36.833-5-41 is provided for approval; v1.0.0 was noted at RAN #65 in RP-141426; wrong Tdoc request by Sprint	RP-141426					2/24/2015 23:07	TR 36.833-5-41 v1.0.0 submitted for final approval.
Yes		approved		10.7.3.1: C	RP-150117	TR 36.833-6-41 v2.0.0 on LTE-Advanced intra-band non-contiguous Carrier Aggregation (CA) in Band 41 for 3 downlinks (3DL)	Alcatel-Lucent	TR	36.833-6-41	RAN4			REL-12	LTE_CA_NC_B41_3DL-Perf	RAN4 TR 36.833-6-41 is provided for approval; v1.0.0 was noted at RAN #65 in RP-141427; wrong Tdoc request by Sprint	RP-141427					2/24/2015 23:09	TR 36.833-6-41 v1.0.0 submitted for approval
Yes		noted		11.4.5.1: C	RP-150118	TR 36.833-5-42 v1.0.0: LTE Advanced Carrier Aggregation in Band 42 for 3DL	CATT	TR	36.833-5-42	RAN4			REL-13	LTE_CA_C_B42_3DL-Core	RAN4 TR 36.833-5-42 is provided for information		y			Miss Yuexia Song	CATT	2/25/2015 1:07	Technical report version 1.0.0 for LTE_CA_C_B42_3DL
Yes		approved		12.4.01: O	RP-150119	Revised SID: Study on LTE FDD in the bands 1980-2010MHz and 2170-2200MHz	KT	SID	rev	RAN4	s		REL-13	FS_LTE_1980_2170_Korea	last approved SID: RP-141154; target date is changed to RAN #68	RP-141154				Mr. Chungwoo Hwang	KT Corp.	2/25/2015 5:15	This contribution is revised SID for FS_LTE_1980_2170_Korea. Target Completion date is
Yes		noted	FLAG T	12.4.01: O	RP-150120	Status Report of SI on Study on LTE FDD in the bands 1980-2010 MHz and 2170-2200 MHz; rapporteur: KT	RAN4	Report	36.861				REL-13	FS_LTE_1980_2170_Korea	MCC: target date changed to RAN#68					Mr. Chungwoo Hwang	KT Corp.	2/25/2015 5:18	Status Report for FS_LTE_1980_2170_Korea. Target Completion Date changed to RAN#68
Yes		approved		13.2: New	RP-150121	New WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 3 and Band 42	NTT DOCOMO, INC.	WID	new	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B42			LTE				2/25/2015 7:11	Proposal for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 3 and Band 42
Yes		approved		13.2: New	RP-150122	New WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 19 and Band 42	NTT DOCOMO, INC.	WID	new	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B19_B42			LTE				2/25/2015 7:22	Proposal for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 19 and Band 42

Samsung Exhibit 1025, Page 1286 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		approved		13.2: New	RP-150123	New WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 21 and Band 42	NTT DOCOMO, INC.	WID	new	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B21_B42			LTE				2/25/2015 7:25	Proposal for WI of LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 21 and Band 42
Yes		approved		13.2: New	RP-150124	New WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 19 and Band 42	NTT DOCOMO, INC.	WID	new	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B19_B42			LTE				2/25/2015 7:26	Proposal for New WI of LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 19 and Band 42
Yes		approved		13.2: New	RP-150125	New WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 19, Band 21 and Band 42	NTT DOCOMO, INC.	WID	new	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B19_B21_B42			LTE				2/25/2015 7:27	Proposal for New WI of LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 19, Band 21 and Band 42
Yes		noted		09.2.3: Co	RP-150126	Status report for WI UE Conformance Test Aspects - HSDPA Multiflow Data Transmission; rapporteur: Qualcomm	RAN5	Report					REL-11	HSDPA_MFTX-UEConTest			WI completed					2/25/2015 7:29	Test: 100%, March 15
Yes		noted		11.1.1: Op	RP-150127	Status report for WI HSPA Dual-Band UL carrier aggregation; rapporteur: Qualcomm	RAN4	Report					REL-13	HSUPA_DB_MC								2/25/2015 7:33	Core: 10%, Dec 15 Perf: 0%, Mar 16
Yes		noted		11.1.2: Op	RP-150128	Status report for WI Support of EVS over UTRAN CS; rapporteur: Qualcomm	RAN2	Report					REL-13	EVSoCS_UTRAN-Core								2/25/2015 7:36	Core: 10%, Sep 15
Yes		approved		11.1.1: Op	RP-150129	Revised WID: HSPA Dual-Band UL carrier aggregation	Qualcomm Incorporated	WID	rev	RAN4			REL-13	HSUPA_DB_MC	last approved WID: RP-142237; revised to add RRM aspects/specs	RP-142237					2/25/2015 7:41	Last approved WID: RP-142237 Adding RRM aspects/specs
Yes		revised		13.3: New	RP-150130	New WI proposal: UE Conformance Test Aspects - DCH Enhancements for UMTS	Qualcomm Incorporated	WID	(new)	RAN5			REL-12	-	new WI for UTRA only; leading WG: RAN5; WI code to be used: UTRA_DCHenh-UEConTest; tested core part: UTRA_DCHenh-Core; revised in RP-150412	RP-150412		UTRA				2/25/2015 7:44	new WI for UTRA only; leading WG: RAN5
Yes		approved		13.3: New	RP-150131	New WI proposal: UE Conformance Test Aspects – LTE Device-to-Device Proximity Services	Qualcomm Incorporated	WID	new	RAN5			REL-12	-	new WI for LTE only; leading WG: RAN5 ; WI code to be used: LTE_D2D_Prox-UEConTest; tested core part: LTE_D2D_Prox-Core			LTE				2/25/2015 7:48	new WI for LTE only; leading WG: RAN5
Yes		noted		09.2.2: Co	RP-150132	Status report for WI on UE Conformance Test Aspects - Further Enhancements to CELL-FACH: rapporteur: Ericsson	RAN5	Report					REL-11	Cell_FACH_enh-UEConTest			WI completed			Mr. Leif Mattisson	Ericsson LM	2/25/2015 9:03	Test: 100%, March-15
Yes		noted		09.2.4: Co	RP-150133	Status report for WI on UE Conformance Test Aspects - Single radio voice call continuity from UTRAN/GERAN to E-UTRAN: rapporteur: Ericsson	RAN5	Report					REL-11	rSRVCC-UEConTest			WI completed			Mr. Leif Mattisson	Ericsson LM	2/25/2015 9:04	Test: 100%, March-15
Yes		approved		13.3: New	RP-150134	New WI proposal: UE Conformance Test Aspects - L-band for Supplemental Downlink in E-UTRA and UTRA	Ericsson	WID	new	RAN5			REL-12	-	new WI for UTRA & LTE; leading WG: RAN5; WI code to be used: LTE_UTRA_SDL_BandL-UEConTest; tested core part: LTE_UTRA_SDL_BandL-Core			UTRA, LTE		Mr. Leif Mattisson	Ericsson LM	2/25/2015 9:06	New WI for LTE and UTRA; leading WG: RAN5
Yes		approved		13.3: New	RP-150135	New WI proposal: UE Conformance Test Aspects - Low cost & enhanced coverage MTC UE for LTE	Ericsson	WID	new	RAN5			REL-12	-	new WI for LTE only; leading WG: RAN5; WI code to be used: LC_MTC_LTE-UEConTest; tested core part: LC_MTC_LTE-Core			LTE		Mr. Leif Mattisson	Ericsson LM	2/25/2015 9:07	New WI for LTE only; leading WG: RAN5
Yes		approved		13.3: New	RP-150136	New WI proposal: UE Conformance Test Aspects - Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL	Ericsson	WID	new	RAN5			REL-12	-	new WI for LTE only; leading WG: RAN5; WI code not yet allocated (maybe LTE_CA_Rel12_2UL-UEConTest) as scope of the WI unclear; tested core parts (?): LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A5-Core; note: This would be the 3rd basket WI for REL-12 CA testing WIs, the first basket is proposed to be completed at RAN #67 shifting parts into the 2nd ongoing basket (reason for this unclear, danger that 2nd basket is handled in the same way and WI titles do no longer reflect what is in the basket);		y	LTE		Mr. Leif Mattisson	Ericsson LM	2/25/2015 9:08	New WI for LTE only; leading WG: RAN5
Yes		approved		13.3: New	RP-150137	New WI proposal: UE Conformance Test Aspects - Codec for Enhanced Voice Services (EVS)	Ericsson	WID	new	RAN5			REL-12	-	new WI for IMS (UTRA & LTE); leading WG: RAN5; WI code to be used: EVS_codec-UEConTest; tested core part: SA4 REL-12 WI EVS_codec		y	UTRA, LTE		Mr. Leif Mattisson	Ericsson LM	2/25/2015 9:09	New WI for IMS (LTE and UTRA); leading WG: RAN5
Yes		noted	FLAG M	12.4.09: O	RP-150138	Status report for SI LTE DL 4 Rx antenna ports, rapporteur: Ericsson	RAN4	Report					REL-13	FS_LTE_4Rx_AP_DL	MCC: TR has to be approved before completing the SI		y	SI completed		Ms. Maomao Chen	Ericsson GmbH,	2/25/2015 11:26	Completion level: 100%, March 2015
Yes		revised		12.4.09: O	RP-150139	Revised SID: Study on LTE DL 4 Rx antenna ports	Ericsson	SID	(rev)	RAN4			REL-13	FS_LTE_4Rx_AP_DL	last approved SID: RP-142299; revised to add TR name and completion date; revised in RP-150457	RP-142299, RP-150457	y			Ms. Maomao Chen	Ericsson GmbH,	2/25/2015 11:29	Revised SID with TR name and complete date added
Yes		noted		12.4.04: O	RP-150140	Considerations of introducing possible additional TDD configuration(s)	NEC	Disc					REL-13	FS_LTE_TDD_add_config		RP-150402			SDL	Dr. Kevin Lin	NEC Corporation	2/25/2015 11:29	
Yes	Late	approved		12.4.09: O	RP-150141	TR 36.867 v1.0.0, Study on LTE DL 4 Rx antenna ports	Ericsson	TR	36.867	RAN4			REL-13	FS_LTE_4Rx_AP_DL	RAN4 TR is provided for 1-step approval; note: SI was started in Dec.14 (forgetting to indicate the TR in the SID), so TR number needs to be allocated during RAN #67		y			Ms. Maomao Chen	Ericsson GmbH,	2/25/2015 11:35	The TR of Study on WI objectives for LTE DL 4 Rx AP for 1-step approval.
Yes		revised		13.1.4: Ne	RP-150142	New Work Item: LTE DL 4 Rx antenna ports	Ericsson	WID	(new)	RAN4			REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_4Rx_AP_DL; follow-up WI of REL-13 SI FS_LTE_4Rx_AP_DL (see AI 12.4.9); revised in RP-150427	RP-150143, RP-150427		LTE	4RX	Ms. Maomao Chen	Ericsson GmbH,	2/25/2015 11:37	New WID for LTE DL 4Rx AP

Samsung Exhibit 1025, Page 1287 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		noted		13.1.4: Ne	RP-150143	Motivation paper for new WI on LTE DL 4 Rx antenna ports	Ericsson	Disc	motiv				REL-13	-		RP-150142			4RX	Ms. Maomao Chen	Ericsson GmbH,	2/25/2015 11:38	Motivation paper for LTE DL 4Rx AP
Yes		revised		13.2: New	RP-150144	New Work Item Proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 7, Band 20 and Band 38	Vodafone	WID	(new)	RAN4	s (3DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B7_B20_B38; revised in RP-150433	RP-150433		LTE		Mr. Tim Frost	VODAFONE Gro	2/25/2015 17:08	New 3DL LTE CA combination
Yes		noted		08.4.2: RA	RP-150145	Pcell support requirements for LTE CA combinations	Vodafone, TeliaSonera, Orange, Telecom Italia, Deutsche Telekom, NTT DOCOMO, INC., CHTTL, Dish Network	Disc					REL-12	LTE_CA_TEI12		RP-150476				Mr. Tim Frost	VODAFONE Gro	2/25/2015 17:14	Proposal on Pcell support
Yes		not treated		12.4.04: O	RP-150146	Benefits/drawbacks and ecosystem aspects for additional TD-LTE configuration	Vodafone	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config					SDL	Mr. Tim Frost	VODAFONE Gro	2/25/2015 17:37	Includes a TP for SI Technical Report
Yes		revised		12.4.04: O	RP-150147	Scenarios, use cases and frequency bands for additional TD-LTE configuration	Vodafone	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	Scenarios to be captured in TP RP-150399; frequency bands to be captured in TP RP-150401	RP-150399, RP-150401			SDL	Mr. Tim Frost	VODAFONE Gro	2/25/2015 17:38	
Yes		revised		13.2: New	RP-150148	New WID on AWS-Extension Band for LTE	Ericsson	WID	(new)	RAN4	s		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_AWS_EXT; AWS = Advanced Wireless Services; to specify a band plan as follow-up of REL-13 SI FS_LTE_AWS_EXT (see TR 36.849); this is a paired band 1710-1780MHz / 2110-2200MHz with fixed duplex spacing; interoperability by means of CA is also proposed; revised in RP-150428	RP-150150, RP-150195, RP-150428		LTE	AWS	Ms. Erika Tejedor	Ericsson LM	2/25/2015 17:50	This WID proposes to specify a band plan for following the outcome of the SI on AWS-Extension band for LTE (see TR 36.849). This is a paired band 1710 - 1780 MHz / 2110 - 2200 MHz with fixed duplex spacing. Interoperability by means of CA is also proposed
Yes		noted	FLAG T	10.6.2: Op	RP-150149	Status Report: Perf. part: Low cost & enhanced coverage MTC UE for LTE; rapporteur: Vodafone	RAN4	Report					REL-12	LC_MTC_LTE-Perf	Core part was completed at RAN #66; MCC: target date change					Mr. Tim Frost	VODAFONE Gro	2/25/2015 17:51	Performance part only. Core part completed at RP#66.
Yes		noted		13.2: New	RP-150150	Motivation for WID on AWS-Extension Band for LTE	Ericsson	Disc	motiv				REL-13	-		RP-150148			AWS	Ms. Erika Tejedor	Ericsson LM	2/25/2015 17:53	This contribution includes the motivation for the WID on AWS-Extension Band for LTE
Yes		noted		12.4.04: O	RP-150151	Status report for SI on Study on possible additional configuration for LTE TDD, rapporteur: NTT DOCOMO , INC.	RAN	Report					REL-13	FS_LTE_TDD_add_config	note: This is a RAN SI				SDL		2/25/2015 22:50	This contribution is status report for SI on Study on possible additional configuration for LTE TDD
Yes		revised		12.4.04: O	RP-150152	TR skeleton 36.825 v0.0.1 for Feasibility study on possible additional configuration for LTE TDD	CATT	TR	36.825	RAN			REL-13	FS_LTE_TDD_add_config	RAN TR is provided for agreement; includes TR skeleton; RP-150152 was agreed durung the ad hoc and later revised in RP-150487 to capture agreements of RAN #67	RP-150487			SDL		2/25/2015 23:51	This contribution contains the TR skeleton for FS_LTE_TDD_add_config
Yes		not treated		12.4.04: O	RP-150153	Revised SID: Study on possible additional configuration for LTE TDD	CATT, CATR, NTT DoCoMo	SID	rev	RAN			REL-13	FS_LTE_TDD_add_config	last approved SID: RP-142248	RP-142248			SDL		2/25/2015 23:57	revised SID for FS_LTE_TDD_add_config
Yes		noted		10.6.1: Op	RP-150154	Status report for WI Perf Part: Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation; rapporteur: CATT	RAN4	Report					REL-12	LTE_TDD_eIMTA-Perf								2/26/2015 0:00	Performance status report for LTE_TDD_eIMTA
Yes		noted		08.2.1: RA	RP-150155	Way forward on RAN2 capacity increase	LG Electronics	Disc					REL-13	-	moved from AI 13.1.2 to AI 8.2.1				capacity	Mr. Seung June Yi	LG Electronics In	2/26/2015 2:28	
Yes		revised		13.1.2: Ne	RP-150156	New WI proposal: Dual Connectivity enhancements for LTE	NTT DOCOMO, INC.	WID	(new)	RAN2			REL-13	-	new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_dualC_enh; follow-up WI of REL-12 WI LTE_SC_enh_dualC; revised in RP-150415	RP-150157, RP-141781, RP-150211, RP-150415		LTE	DualC	DualC		2/26/2015 3:24	New WI for LTE only; leading WG: RAN2;
Yes		noted		13.1.2: Ne	RP-150157	Work Plan for LTE Dual Connectivity enhancement	NTT DOCOMO, INC.	Disc					REL-13	-		RP-150156	y		DualC	DualC		2/26/2015 3:26	Related to RP-150156
Yes		revised	FLAG M	12.4.10: O	RP-150158	Status Report for SI: Study on performance enhancements for high speed scenario in LTE	RAN4	Report					REL-13	FS_LTE_high_speed	MCC: a SI has no Core part; revised in RP-150517	RP-150517				Mr. Teshima Kunihiko	NTT DOCOMO If	2/26/2015 4:20	Core part: 5%, Sep. 2015
Yes		approved		12.4.10: O	RP-150159	Revised SID: Study on performance enhancements for high speed scenario in LTE	NTT DOCOMO, INC., Huawei, HiSilicon	SID	rev	RAN4			REL-13	FS_LTE_high_speed	last approved SID: RP-142307	RP-142307				Mr. Teshima Kunihiko	NTT DOCOMO If	2/26/2015 4:22	last approved SID: RP-142307
Yes		noted		10.6.4: Op	RP-150160	Status Report for WI Perf Part:: Dual Connectivity for LTE; rapporteur:	RAN4	Report					REL-12	LTE_SC_enh_dualC						Mr. Teshima Kunihiko	NTT DOCOMO If	2/26/2015 4:31	Core: 100%, Dec. 14, Perf.: 45%, Jun. 15
Yes		noted		14.: UE ca	RP-150161	Introduction of new UE category	KDDI	Disc					REL-12	TEI12			y			Mr. Hiroki Takeda	KDDI Corporation	2/26/2015 4:52	
Yes		noted		11.3.1: Op	RP-150162	Status report for Core part: Enhanced signalling for inter-eNB CoMP for LTE; rapporteur: Samsung	RAN3	Report					REL-13	COMP_LTE_keNB_sig-Core								2/26/2015 8:24	Status report for Core part: Enhanced signalling for inter-eNB CoMP for LTE
Yes		noted	FLAG T	12.4.07: O	RP-150163	Status report for SI Study on Extension of Dual Connectivity in E-UTRAN; rapporteur: Samsung	RAN3	Report					REL-13	FS_LTE_dualC_ext	MCC: target date change							2/26/2015 8:30	Status Report for Study on Extension of Dual Connectivity in E-UTRAN
Yes		not treated		13.1.1: Ne	RP-150164	Motivation of Feasibility Study on LTE-based V2X Services	LG Electronics	Disc	motiv				REL-13	-		RP-150165			V2X	Mr. Youngdae Lee	LG Electronics F	2/26/2015 8:34	
Yes		revised		13.1.1: Ne	RP-150165	New SI proposal: Feasibility Study on LTE-based V2X Services	LG Electronics	SID	(new)	RAN1			REL-13	-	new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_V2X; revised in RP-150499	RP-150164, RP-141958, RP-150499		LTE	V2X	Mr. Youngdae Lee	LG Electronics F	2/26/2015 8:34	
Yes		noted		13.1.2: Ne	RP-150166	Motivation of RAN aspects of Application specific Congestion control for Data Communication	LG Electronics	Disc	motiv				REL-13	-		RP-141945, RP-150167			ACDC	Mr. Youngdae Lee	LG Electronics F	2/26/2015 8:38	
Yes		revised		13.1.2: Ne	RP-150167	New WI Proposal: RAN aspects of Application specific Congestion control for Data Communication	LG Electronics	WID	(new)	RAN2			REL-13	-	new WI for; leading WG: RAN2; WI code to be used: ACDC-RAN; note: ACDC is a REL-13 WI in SA; revised in RP-150422	RP-150166, RP-150422		UTRA, LTE	ACDC	Mr. Youngdae Lee	LG Electronics F	2/26/2015 8:38	
Yes		not treated		12.4.04: O	RP-150168	Coexistence and simulation methodology on additional configuration for LTE TDD	ZTE	Disc					REL-13	FS_LTE_TDD_add_config					SDL	Mr. Zhongda Du	ZTE Corporation	2/26/2015 8:56	
Yes		not treated		13.1.1: Ne	RP-150169	Discussion on Self-backhaul Nodes for Dense Cell Deployment	ZTE	Disc					REL-13	-	no related SI/WI proposal? for LTE only; LPN = low power node		y			Mr. Zhongda Du	ZTE Corporation	2/26/2015 8:59	
Yes		approved		12.4.07: O	RP-150170	Revised SID: Study on Extension of Dual Connectivity in E-UTRAN	Samsung	SID	rev	RAN3			REL-13	FS_LTE_dualC_ext	last approved SID: RP-142257; revised to change the title and WI code, correct some format and typo	RP-142257						2/26/2015 9:02	Change the title and WI code, correct some format and typo.
Yes		approved		13.2: New	RP-150171	New WID: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 5 and Band 7	Nokia Networks	WID	new	RAN4	s (2DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B5_B7_BWset; note: LTE_CA_B5_B7 was a REL-12 WI			LTE		Dr. Hisashi Onozawa	Nokia Networks J	2/26/2015 9:07	Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 5 and Band 7 (2DL/1UL)

Samsung Exhibit 1025, Page 1288 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		revised		13.2: New	RP-150172	New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 7 and Band 8	Nokia Networks	WID	(new)	RAN4	s (4DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B7_B8; revised in RP-150435	RP-150435		LTE		Dr. Hisashi Onozawa	Nokia Networks	J 2/26/2015 9:09	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 7 and Band 8 is proposed.
Yes		noted	FLAG T	10.6.3: Op	RP-150173	Status report for WI Perf. part: E-UTRA Small cell enhancements - Physical layer aspects, rapporteur: Huawei	RAN4	Report					REL-12	LTE_SC_enh_L1_Perf	MCC: target date changed					Dr. David Mazzarese	Huawei Technolc	2/26/2015 9:44	Perf: 80%. Target date shifted to June 2015.
Yes		approved		12.2.3: Op	RP-150174	Revised SID: Study on Network-Assisted Interference Cancellation and Suppression for UMTS, rapporteur: Huawei	Huawei, HiSilicon	SID	rev	RAN1			REL-13	FS_UTRA_NAICS	last approved SID: RP-142250; TR will be submitted for information at RAN #68 and for approval at RAN #69; TR number is added	RP-142250				Dr. David Mazzarese	Huawei Technolc	2/26/2015 9:48	Core: 20%, Sep. 15
Yes		noted		12.2.3: Op	RP-150175	Status report for SI: Study on Network-Assisted Interference Cancellation and Suppression for UMTS, rapporteur: Huawei	RAN1	Report					REL-13	FS_UTRA_NAICS						Dr. David Mazzarese	Huawei Technolc	2/26/2015 9:50	last approved WID: RP-142250. The TR will be submitted for information at RAN#68 and for approval at RAN#69. TR number is added.
Yes		noted		12.4.06: O	RP-150176	Status report for SI: Study on Support of single-cell point-to-multipoint transmission in LTE, rapporteur: Huawei	RAN2	Report					REL-13	FS_LTE_SC_PTM						Dr. David Mazzarese	Huawei Technolc	2/26/2015 9:53	Core: 30%, June 15
Yes		approved		12.4.06: O	RP-150177	Revised SID: Study on Support of single-cell point-to-multipoint transmission in LTE, rapporteur: Huawei	Huawei, HiSilicon	SID	rev	RAN2			REL-13	FS_LTE_SC_PTM	last approved SID: RP-142205; editorial corrections	RP-142205				Dr. David Mazzarese	Huawei Technolc	2/26/2015 9:56	last approved WID: RP-142205. Editorial corrections.
Yes		noted		14.: UE ca	RP-150178	Handling of Rel-12 UE features (RAN4 part)	NTT DOCOMO, INC., SoftBank Mobile, T-Mobile USA, CMCC, Orange, Deutsche Telekom, TeliaSonera, Lightsquared, Telecom Italia, Telefónica	Disc		LS03			REL-12	TEI12	provides views on which Rel-12 RAN4 UE features should be mandatory or optional; compare LSin RP-150036; Tdoc is moved from AI 8.4.2 to AI 14.	RP-150036	y					2/26/2015 12:17	This paper provides views on which Rel-12 RAN4 UE features should be mandatory or optional.
Yes		noted		10.6.6: Op	RP-150179	Status Report for WI Perf. part: Network Assisted Interference Cancellation and Suppression for LTE; rapporteur: MediaTek	RAN4	Report					REL-12	LTE_NAICS-Perf			y					2/26/2015 13:20	
Yes		noted		13.1.2: Ne	RP-150180	Motivation for new SI proposal: LTE-WLAN Radio Level Integration	Qualcomm Incorporated	Disc	motiv				REL-13	-		RP-150262			WLAN			2/26/2015 13:34	
Yes		noted		13.1.2: Ne	RP-150181	Motivation for new WI proposal: RAN enhancements for extended DRX in LTE	Qualcomm Incorporated	Disc	motiv				REL-13	-		RP-150182			DRX			2/26/2015 13:34	
Yes		revised		13.1.2: Ne	RP-150182	New WI proposal: RAN enhancements for extended DRX in LTE	Qualcomm Incorporated	WID	(new)	RAN2			REL-13	-	new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_eDRX; WI was rejected at RAN #66 in RP-142277; no Perf. part; revised in RP-150493	RP-150181, RP-142277, RP-150493		LTE	DRX			2/26/2015 13:37	new WI for LTE only; leading WG: RAN2
Yes		not treated		13.1.2: Ne	RP-150183	Motivation for new WI proposal: Multi-Profile UE E-UTRA capability	Qualcomm Incorporated	Disc	motiv				REL-13	-		RP-150184						2/26/2015 13:38	
Yes		not treated		13.1.2: Ne	RP-150184	New WI proposal: Multi-Profile UE E-UTRA capability	Qualcomm Incorporated	WID	new	RAN2			REL-13	-	new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_multi_UEcap; WI was withdrawn at RAN #65 in RP-141996	RP-141996, RP-150183		LTE				2/26/2015 13:39	new WI for LTE only; leading WG: RAN2
Yes		noted		12.4.04: O	RP-150185	Consideration on possible additional configuration for LTE TDD	CMCC	Disc					REL-13	FS_LTE_TDD_add_config		RP-150399			SDL			2/26/2015 15:25	
Yes		rejected		12.4.05: O	RP-150186	Scope of Study on Enhanced Multiuser Transmissions and Network Assisted Interference Cancellation for LTE	Alcatel-Lucent	SID	rev	RAN1			REL-13	FS_LTE_MUTX_NAC	last approved SID: RP-142315; note: rapporteur of this SI is Mediatek, compare RP-140214	RP-142315, RP-150214				Mr. Matthew Baker	Alcatel-Lucent	2/26/2015 15:30	
Yes		noted		12.3.1: Op	RP-150187	Status Report for SI: Study on Multi-RAT Joint Coordination; rapporteur: CMCC	RAN3	Report					REL-13	FS_MultiRAT_JC								2/26/2015 15:31	Jun-15
Yes		noted		10.7.4.1: C	RP-150188	Status Report for WI Perf Part: E-UTRA UE demodulation/CSI performance requirements for multiple Carrier Aggregation configurations; rapporteur: CMCC	RAN4	Report					REL-12	LTE_CA_Multi-Perf			Perf. part WI completed					2/26/2015 15:35	Perf. Part: 100%; March, 2015
Yes		revised		12.3.1: Op	RP-150189	Revised SID: Study on Multi-RAT Joint Coordination	CMCC	SID	(rev)	RAN3			REL-13	FS_MultiRAT_JC	last approved SID: RP-132086; revised in RP-150417	RP-132086, RP-150417						2/26/2015 15:41	last approved SID: RP-132086
Yes		not treated		13.1.1: Ne	RP-150190	Motivation for New SI: Uplink Enhancements for LTE	CMCC	Disc	motiv				REL-13	-		RP-150191						2/26/2015 15:47	
Yes		not treated		13.1.1: Ne	RP-150191	New SID Proposal: Study on Uplink Enhancements for LTE	CMCC	SID	new	RAN1			REL-13	-	new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_EUL; SI was postponed at RAN #66 in RP-141843	RP-150190, RP-141843, RP-150293		LTE				2/26/2015 15:50	New SI for LTE; Leading WG: RAN1;
Yes		noted		13.1.2: Ne	RP-150192	Motivation for New SI: Consideration on MDT Further Enhancements	CMCC	Disc	motiv				REL-13	-		RP-150193			MDT			2/26/2015 15:52	
Yes		revised		13.1.2: Ne	RP-150193	New SID Proposal: Study on further Enhancements of Minimization of Drive Tests for E-UTRAN	CMCC	SID	(new)	RAN2			REL-13	-	new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_eMDT2; SI was rejected at RAN #66 in RP-142242; revised in RP-150472	RP-142242, RP-150192, RP-150472		LTE	MDT			2/26/2015 15:54	New SI for LTE; Leading WG: RAN2
Yes		revised		13.2: New	RP-150194	New WID Proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 8	CMCC	WID	(new)	RAN4	s (C)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_C_B8; revised in RP-150416	RP-150416		LTE				2/26/2015 15:56	
Yes		noted		13.2: New	RP-150195	Canadian Considerations for AWS Extension Band Plan	Rogers Communications	Disc					REL-13	-	recently published Canadian Government band plans for AWS3 and AWS4; provided for information	RP-150148	y		AWS	Mr. Paul Nebesny	Rogers Commun	2/26/2015 16:37	Recently published Canadian Government band plans for AWS3 and AWS4.
Yes		noted	FLAG M	12.2.2: Op	RP-150196	Status report for SI Study on Small Data Transmission Enhancements for UMTS, rapporteur: Ericsson	RAN1	Report					REL-13	FS_UTRA_SDATA	MCC: why does a SI have a Core part completion level?					Dr. Peter von Wrycza	Ericsson LM	2/26/2015 16:50	
Yes	Late	noted		12.2.2: Op	RP-150197	TR 25.705 v1.0.0 on Study on Small Data Transmission Enhancements for UMTS, for information	Ericsson	TR	25.705	RAN1			REL-13	FS_UTRA_SDATA	RAN1 TR 25.705 is submitted for information					Dr. Peter von Wrycza	Ericsson LM	2/26/2015 16:58	RAN1 TR 25.705 is submitted for information
Yes		revised		13.2: New	RP-150198	New WI proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 4DL	CATT	WID	(new)	RAN4	s (C 4DL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_C_B42_4DL; revised in RP-150438	RP-150438		LTE		Miss Yuexia Song	CATT	2/27/2015 0:30	this is a new WID on LTE advanced intra-band carrier aggregation in Band 42 for 4 DL CCs
Yes		noted		13.1.: New	RP-150199	Discussion on regulatory aspects in using LTE uplink spectrum in Korea	TTA	Disc					REL-13	-	In recent RAN meetings, there were some discussions on the regulatory aspects of using LTE UL spectrum for flexible duplex, i.e., network sends DL traffic to UEs via UL spectrum. This contribution provides some observations and discussions on Korean regulations related to the flexible duplex operations; shifted from AI 13.1.1 to AI 13.1	RP-150248			flex_dupl ex	Ms. Hyeyoung Esthel Lee	TTA	2/27/2015 0:42	In recent RAN meetings, there were some discussions on the regulatory aspects of using LTE UL spectrum for flexible duplex, i.e., network sends DL traffic to UEs via UL spectrum. This contribution provides some observations and discussions on [illegible]
Yes		revised		13.1.2: Ne	RP-150200	New WI Proposal: Multicarrier Load Distribution of UEs in LTE	Verizon, China Telecom, NTT DOCOMO, Inc, ZTE, Alcatel-Lucent	WID	(new)	RAN2			REL-13	-	new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_MC_load; WI was rejected at RAN #66 in RP-142279; revised in RP-150446	RP-142279, RP-150201, RP-150446		LTE		Dr. Yee Sin Chan	Verizon UK Ltd	2/27/2015 0:51	new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_MC_load; this WI proposal was postponed at RAN #66 in [illegible]
Yes		noted		13.1.2: Ne	RP-150201	Motivation paper for New WI: Multicarrier Load distribution of UEs in LTE	Verizon, China Telecom, NTT DOCOMO, Inc, ZTE, Alcatel-Lucent	Disc	motiv				REL-13	-		RP-150200				Dr. Yee Sin Chan	Verizon UK Ltd	2/27/2015 0:54	

Samsung Exhibit 1025, Page 1289 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		approved		13.3: New	RP-150202	New WI proposal: UE Conformance Test Aspects - Smart Congestion Mitigation in E-UTRAN	NTT DOCOMO, INC.	WID	new	RAN5			REL-12	-	new WI for LTE only; leading WG: RAN5; WI code to be used: SCM_LTE-UEConTest; tested core part: SCM_LTE-Core			LTE				2/27/2015 2:08	new WI for LTE only; leading WG: RAN5; follow-up WI of WI SCM_LTE-Core
Yes		noted		11.3.4: Op	RP-150203	Revised Work Plan for LTE Carrier Aggregation Enhancement Beyond 5 Carriers	NTT DOCOMO, INC., Nokia Corporation, Nokia Networks	Disc					REL-13	LTE_CA_enh_b5C	revised work plan for WI: LTE_CA_enh_b5C; revision of RP-141997	RP-141997						2/27/2015 2:18	Revised work plan for WI: LTE_CA_enh_b5C; Revision of RP-141997
Yes		noted		11.3.7: Op	RP-150204	Status report for WI Perf. Part: Performance requirements of MMSE-IRC receiver for LTE BS; rapporteur: China Telecom	RAN4	Report					REL-13	LTE_MMSE_IRC_BS-Perf								2/27/2015 2:22	Perf.: 10%, Jun. 16
Yes		noted		09.3.4: Co	RP-150205	Status report for WI: UE Conformance Test Aspects - LTE Coverage Enhancements, rapporteur: China Telecom	RAN5	Report					REL-12	Cov_Enh_LTE-UEConTest								2/27/2015 2:24	5%, Sep.15
Yes		approved		11.3.7: Op	RP-150206	Revised WID: Performance requirements of MMSE-IRC receiver for LTE BS	China Telecom	WID	rev	RAN4			REL-13	LTE_MMSE_IRC_BS-Perf	last approved WID: RP-142223; a new TR is added	RP-142223					2/27/2015 2:27	last approved WID: RP-142223; The change is that a new TR is [illegible]
Yes		revised		14.: UE ca	RP-150207	Way forward on new UE categories in Rel-12 and 13	NTT DOCOMO, INC.	Disc					REL-12	TEI12	revised in RP-150367	RP-142230, RP-150367	y					2/27/2015 2:33	Related to RP-142230
Yes		revised		12.4.04: O	RP-150208	Deployment scenarios on additional TDD configurations	NTT DOCOMO, INC.	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	Capturing both synchronized and un-synchronized (with guardband) configuration in RP-150400 and Japanese bands to be captured in RP-150401	RP-150400, RP-150401			SDL			2/27/2015 2:40	
Yes		noted		14.: UE ca	RP-150209	Merged LTE Rel-12 UE feature list and leftover issues	NTT DOCOMO, INC.	Disc					REL-12	TEI12								2/27/2015 2:46	
Yes		noted		12.4.04: O	RP-150210	Evaluation methodology for possible additional TDD configuration(s)	Huawei, HiSilicon	Disc					REL-13	FS_LTE_TDD_add_config					SDL	Dr. David Mazzarese	Huawei Technolc	2/27/2015 2:47	
Yes		noted		13.1.2: Ne	RP-150211	Motivation for New WI: Dual Connectivity enhancements for LTE	NTT DOCOMO, INC.	Disc	motiv				REL-13	-	related to new WI RP-150156; revision of RP-141780	RP-141780, RP-150156			DualC			2/27/2015 3:20	Motivation paper of new WI proposal, RP-150156; Revision of RP-141780
Yes		noted		13.1.4: Ne	RP-150212	Considerations on the 4Rx Work Item Scope	Qualcomm Incorporated	Disc					REL-13	-	presentation on why it is important to allow opportunistic fallback to 2 Rx operation	RP-150142	y		4RX	Mr. Valentin Gheorghiu	Qualcomm Japar	2/27/2015 3:27	In this paper we discuss the scope of the 4Rx WI and present our view on why it is important to
Yes		noted		12.4.05: O	RP-150213	Status report for SI Study on Enhanced Multiuser Transmissions and Network Assisted Interference Cancellation for LTE; rapporteur: MediaTek	RAN1	Report					REL-13	FS_LTE_MUTX_NAIC			y	SI stopped				2/27/2015 3:37	
Yes		rejected		12.4.05: O	RP-150214	Revised SID: Study on Enhanced Multiuser Transmissions and Network Assisted Interference Cancellation for LTE	Mediatek	SID	rev	RAN1			REL-13	FS_LTE_MUTX_NAIC	last approved SID: RP-142315; wrong title in Tdoc request (note: It is not possible to modify the title of approved SIs). compare RP-140186; instead of a SI revision a new SI was proposed in RP-150456	RP-142315, RP-150186, RP-150456	y					2/27/2015 3:39	
Yes		noted		12.4.05: O	RP-150215	Proposed Work Plan for Enhanced Multiuser Transmissions and Network Assisted Interference Cancellation	Mediatek	Disc					REL-13	FS_LTE_MUTX_NAIC			y					2/27/2015 3:41	
Yes		noted		12.4.07: O	RP-150216	TR 36.875 v1.0.0 on Extension of Dual Connectivity in E-UTRAN	Samsung	TR	36.875	RAN3			REL-13	FS_LTE_dualC_ext	RAN3 TR 36.875 is provided for information							2/27/2015 3:42	TR36.875 v1.0.0 on Extension of Dual Connectivity in E-UTRAN
Yes		revised		18.: Projec	RP-150217	5G Standardization Work Plan	NTT DOCOMO, INC.	Disc					-	-	revised in RP-150440	RP-150440			5G			2/27/2015 3:44	
Yes		noted		12.4.04: O	RP-150218	Scenarios and evaluation assumption for DL-only TDD	NTT DOCOMO, INC.	Disc					REL-13	FS_LTE_TDD_add_config		RP-150402	y		SDL			2/27/2015 3:47	
Yes		not treated		13.1.1: Ne	RP-150219	New SID Proposal: Study on channel model for frequency spectrum above 6 GHz	Samsung	SID	new	RAN1			REL-13	-	new SI for LTE only; leading WG: RAN1 (?); WI code to be used: FS_LTE_b6GHz_channel_model; no motivation paper; compare WI proposal RP-150308	RP-150308		d1	LTE	6GHz			2/27/2015 4:12	
Yes		not treated		13.1.1: Ne	RP-150220	New SID Proposal: Study on further evolution beyond LTE-Advanced using frequency spectrum above 6 GHz	Samsung	SID	new	RAN1			REL-13	-	new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_b6GHz; SI was postponed at RAN #66 in RP-142196	RP-150221, RP-142196			LTE	6GHz			2/27/2015 4:14	
Yes		not treated		13.1.1: Ne	RP-150221	Motivation for study on further evolution beyond LTE-Advanced using frequency spectrum above 6 GHz	Samsung	Disc	motiv				REL-13	-		RP-150220				6GHz			2/27/2015 4:15	
Yes		noted		18.: Projec	RP-150222	Timeline of RAN work for 5G	Samsung	Disc					-	-					5G			2/27/2015 4:16	
Yes		noted		12.2.1: Op	RP-150223	Status report for SI: Downlink Enhancements for UMTS, rapporteur: Huawei	RAN2	Report					REL-13	FS_UTRA_EDL						Dr. David Mazzarese	Huawei Technolc	2/27/2015 4:56	Core: 80%, March 2015
Yes		approved		12.2.1: Op	RP-150224	Revised SID: Downlink Enhancements for UMTS, rapporteur: Huawei	Huawei	SID	rev	RAN2			REL-13	FS_UTRA_EDL	last approved SID: RP-141901; target date corrected to June 2015 (RAN #68) and TR information added	RP-141901				Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:01	last approved SID: RP-141901. Correct target date to June 2015 (RAN68) and TR information.
Yes		noted		12.2.1: Op	RP-150225	TR 25.706 v1.0.0 on Downlink Enhancements for UMTS, for information	Huawei	TR	25.706	RAN2			REL-13	FS_UTRA_EDL	RAN2 TR 25.706 is submitted for information		y			Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:06	RAN2 TR 25.706 is submitted for information
Yes		noted	FLAG D	12.4.08: O	RP-150226	Status report for SI: Study on further enhancements of small cell higher layer aspects for LTE, rapporteur: Huawei	RAN3	Report					REL-13	FS_LTE_SC_enh2_hilayer	Huawei: time unit change					Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:10	SI: 10%, Sept 2015
Yes		noted		12.2.4: Op	RP-150227	Status report for SI: Study on RAN sharing enhancements for UMTS, rapporteur: Huawei	RAN3	Report					REL-13	FS_RSE_UTRA_GUSH						Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:14	SI: 10%, June 2015
Yes		revised		08.4.2: RA	RP-150228	Way forward on RAN4 related WI/SI	NTT DOCOMO, INC.	Disc					REL-13	-			y					2/27/2015 5:15	How to handle RAN4 related WI/SI is discussed.
Yes		noted		10.6.7: Op	RP-150229	Status report for WI Perf Part.: Performance requirements of interference cancellation and suppression receiver for SU-MIMO, rapporteur: Huawei	RAN4	Report					REL-12	LTE_SUMIMO_RX-Perf				Perf. part WI completed		Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:17	Perf.: 100%, March 2015
Yes		not treated		12.4.04: O	RP-150230	Consideration of unsynchronized operation for TD-LTE	NTT DOCOMO, INC.	Disc					REL-13	FS_LTE_TDD_add_config	Impact of unsynchronization on spectrum efficiency is discussed				SDL			2/27/2015 5:24	Impact of unsynchronization on spectrum efficiency is discussed.
Yes		noted		11.2.2: Op	RP-150231	Status report for WI: Base Station (BS) RF requirements for Active Antenna System (AAS), rapporteur: Huawei	RAN4	Report					REL-13	AAS_BS_LTE_UTRA						Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:44	Core: 75%, Dec. 14 Perf.: 20%, June 15
Yes		noted		11.3.6: Op	RP-150232	Status report for WI: Core part: UE core requirements for uplink 64 QAM, rapporteur: Huawei	RAN4	Report					REL-13	LTE_UL64QAM-Core						Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:49	Core: 10%, Sept 2015
Yes		approved		11.4.2.25:	RP-150233	Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 28, Band 40 and Band 40, rapporteur: Huawei	Huawei	WID	rev	RAN4	s (3DL/1UL)		REL-13	LTE_CA_B28_B40_B40	last approved WID: RP-142206; correction of the Maximum aggregated bandwidth for LTE_CA_B28_B40_B40; revised WID was also submitted to RAN4 #74	RP-142206				Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:52	Correction of the Maximum aggregated bandwidth for LTE_CA_B28_B40_B40. Revised WID was submitted in RAN4-74.
Yes		approved		11.4.2.07:	RP-150234	Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 7 and Band 28, rapporteur: Huawei	Huawei	WID	rev	RAN4	s (3DL/1UL)		REL-13	LTE_CA_B1_B7_B28	last approved WID: RP-142208; correction of the Maximum aggregated bandwidth for LTE_CA_B1_B7_B28; revised WID was also submitted to RAN4 #74	RP-142208				Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:55	Correction of the Maximum aggregated bandwidth for LTE_CA_B1_B7_B28. Revised WID was submitted in RAN4-74.
Yes		revised		11.4.4.1: D	RP-150235	Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A1 in REL-13, rapporteur: Huawei	Huawei	WID	(rev)	RAN4	s (2UL)		REL-13	LTE_CA_2UL_R13-A1	last approved WID: RP-141935; adding CA_2A-12A and deleting CA_1A-26A; revised in RP-150407	RP-141935, RP-150407				Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:56	Add CA_2A-12A and delete CA_1A-26A
Yes		revised		13.1.1: Ne	RP-150236	New Work Item proposal: LTE bandwidth flexibility enhancements	Huawei, China Unicom, HiSilicon	WID	(new)	RAN1			REL-13	-	new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_flex_BW; WI was postponed at RAN #66 in RP-141911; revised in RP-150513	RP-150237, RP-141911, RP-150513			LTE	Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:59	new WI for LTE only; leading WG: RAN1; Revision of RP-141911.

Samsung Exhibit 1025, Page 1290 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		not treated		13.1.1: Ne	RP-150237	Motivation for new work item on LTE bandwidth flexibility enhancements	Huawei, China Unicom, HiSilicon	Disc	motiv				REL-13	-		RP-150236				Dr. David Mazzarese	Huawei Technolc	2/27/2015	6:01	Motivation for new WI proposal RP-150236
Yes		noted		13.1.2: Ne	RP-150238	Motivation for a Rel-13 study on latency reduction in LTE	Huawei, HiSilicon	Disc	motiv				REL-13	-		RP-150309			LATRED	Dr. David Mazzarese	Huawei Technolc	2/27/2015	6:03	Motivation for a study on latency reduction
Yes		postponed		13.1.4: Ne	RP-150239	New Work Item proposal: Positioning enhancements for E-UTRA	Huawei, HiSilicon	WID	new	RAN4			REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LCSenh_LTE; follow-up WI of Rel-13 SI FS_LCSenh_LTE completed in Dec.14	RP-150240		LTE	Position	Dr. David Mazzarese	Huawei Technolc	2/27/2015	6:08	new WI for LTE only; leading WG: RAN4; Follow-up of Rel-12 study FS_LCSenh_LTE
Yes		noted		13.1.4: Ne	RP-150240	Motivation of Rel-13 New Work Item proposal: Positioning enhancements for E-UTRA	Huawei, HiSilicon	Disc	motiv				REL-13	-		RP-150239			Position	Dr. David Mazzarese	Huawei Technolc	2/27/2015	6:09	Motivation for new WI proposal in RP-150239
Yes		revised		13.2: New	RP-150241	New work item proposal: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 5 and Band 29	Bell Mobility, TELUS, Huawei	WID	(new)	RAN4	s (4DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B5_B29; revised in RP-150436	RP-150436		LTE		Dr. David Mazzarese	Huawei Technolc	2/27/2015	6:15	new WI for LTE only; leading WG: RAN4
Yes		noted		14.: UE ca	RP-150242	Way forward on new DL UE categories	Huawei, HiSilicon	Disc					REL-12	LTE_CA-Core, LTE_SC_enh_L1, TEI12	related CRs in RP-150298 and RP-150299	RP-150298, RP-150299	y			Dr. David Mazzarese	Huawei Technolc	2/27/2015	6:21	
Yes		noted		08.2.1: RA	RP-150243	Proposal to increase the RAN2 capacity	Huawei, HiSilicon	Disc					REL-13	-	moved from AI 18. to AI 8.2.1				capacity	Dr. David Mazzarese	Huawei Technolc	2/27/2015	6:23	
Yes		noted		18.: Projec	RP-150244	Views on the timeline of 5G standardization and channel modeling activities in RAN	Huawei, HiSilicon	Disc					-	-					5G	Dr. David Mazzarese	Huawei Technolc	2/27/2015	6:24	
Yes		approved		13.3: New	RP-150245	New WID Proposal: UE Conformance Test Aspects - Performance Requirements of Interference Cancellation and Suppression Receiver for SU-MIMO for E-UTRA	Huawei, HiSilicon	WID	new	RAN5			REL-12	-	new WI for LTE only; leading WG: RAN5; WI code to be used: LTE_SUMIMO_RX-UEConTest; tested: LTE_SUMIMO_RX-Perf (note: There was no Core part for this)		y	LTE		Dr. David Mazzarese	Huawei Technolc	2/27/2015	6:27	new WI for LTE only; leading WG: RAN5;
Yes		approved		13.2: New	RP-150246	New WID: LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 42 for 3DL	Huawei, Etisalat	WID	new	RAN4	s (NC 3DL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_NC_B42_3DL			LTE		Dr. David Mazzarese	Huawei Technolc	2/27/2015	7:05	new WI for LTE only; leading WG: RAN4;
Yes		not treated		12.4.04: O	RP-150247	Solutions to mitigate raised concerns on DL only configuration	NTT DOCOMO, INC.	Disc					REL-13	FS_LTE_TDD_add_config					SDL			2/27/2015	7:13	Some solutions to mitigate the raised concerns on DL only configuration.
Yes		revised		13.1.: New	RP-150248	New SID: Study on regulatory aspects for flexible duplex for E-UTRAN	LG Electronics	SID	(new)	RAN			REL-13	-	new SI for LTE only; leading WG: RAN; WI code to be used: FS_LTE_flex_duplex_reg; SI was postponed at RAN #66 in RP-142278; revised in RP-150470	RP-142278, RP-150249, RP-150250, RP-150199, RP-150470		LTE	flex_dupl ex			2/27/2015	8:01	
Yes		noted		13.1.: New	RP-150249	Motivation for new SID: Study on regulatory aspects for flexible duplex for E-UTRAN	LG Electronics, China Telecom, Huawei, HiSilicon	Disc	motiv				REL-13	-		RP-150248			flex_dupl ex			2/27/2015	8:03	Motivation document for Flexible duplex regulation study item
Yes		noted		13.1.: New	RP-150250	Further discussion on regulatory aspects related to flexible duplex operation for E-UTRAN	LG Electronics, China Telecom, Huawei, HiSilicon, IAESI	Disc					REL-13	-		RP-150248	y		flex_dupl ex			2/27/2015	8:06	Discussion on regulatory aspects related to flexible duplex study item
Yes		noted		12.4.04: O	RP-150251	Co-existence Considerations for Additional Configuration for LTE TDD	Nokia Corporation, Nokia Networks	Disc					REL-13	FS_LTE_TDD_add_config			y		SDL	Ms. Sari Nielsen	Nokia Corporatio	2/27/2015	8:08	This document discusses co-existence aspects of additional configuration for LTE TDD and how to avoid any co-existence issues.
Yes		noted		12.4.04: O	RP-150252	General discussion on possible new TDD configurations	CATT	Disc					REL-13	FS_LTE_TDD_add_config		RP-150399, RP-150402			SDL			2/27/2015	8:32	General discussion on FS_LTE_TDD_add_config
Yes		noted		12.4.04: O	RP-150253	RAN4 methodologies for co-existence study	CATT	Disc					REL-13	FS_LTE_TDD_add_config					SDL			2/27/2015	8:34	Description of RAN4 co-existence study methodologies
Yes		noted		12.4.04: O	RP-150254	Evaluation on the benefits and drawbacks for possible additional LTE TDD configuration	CATT	Disc					REL-13	FS_LTE_TDD_add_config		RP-150402			SDL			2/27/2015	8:36	Discuss several aspects on the benefit/drawback evaluation for additional TDD configuration
Yes		noted		12.4.04: O	RP-150255	Methods of utilizing unused TDD spectrum	CATT	Disc					REL-13	FS_LTE_TDD_add_config	3 methods of utilizing unused TDD spectrum	RP-150401			SDL			2/27/2015	8:37	Discuss three methods of utilizing unused TDD spectrum
Yes		not treated		13.1.1: Ne	RP-150256	New work item proposal on support of CSI-RS in DwPTS	CATT	WID	new	RAN1			REL-13	-	new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_CSIRS_DwPTS; no motivation paper; WI was postponed at RAN #66 in RP-141953	RP-141953		LTE				2/27/2015	8:41	New WID for support of CSI-RS in DwPTS
Yes		noted		13.1.2: Ne	RP-150257	Motivation for DL/UL PCell separation	CATT	Disc	motiv				REL-13	-		RP-150258						2/27/2015	8:43	Motivation for DL/UL Pcell separation
Yes		postponed		13.1.2: Ne	RP-150258	New study item proposal: Study on DL/UL PCell separation in LTE	CATT	SID	new	RAN2			REL-13	-	new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_PCell_sep; SI was not treated at RAN #66 in RP-141952	RP-141952, RP-150257		LTE				2/27/2015	8:45	New SID for DL/UL Pcell separation
Yes		noted		14.: UE ca	RP-150259	On Rel-12 UE eIMTA UE capabilities	CATT	Disc					REL-12	LTE_TDD_eIMTA	discussion on eIMTA feature 7-1 for Rel-12 UEs		y					2/27/2015	8:47	Discussion on eIMTA feature 7-1 for Rel-12 UEs
Yes		noted		11.2.4: Op	RP-150260	Status report for WI Core Part: Radiated requirements for the verification of multi-antenna reception performance of UEs; rapporteur: Intel	RAN4	Report					REL-13	UTRA_LTE_MIMO_OTA-Core						Dr. Mo-han Fong	Intel Corporation	2/27/2015	9:00	Core: 5%, Dec. 15

Samsung Exhibit 1025, Page 1291 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		approved		11.2.4: Op	RP-150261	Revised WID: Radiated requirements for the verification of multi-antenna reception performance of UEs	Intel Corporation	WID	rev	RAN4			REL-13	UTRA_LTE_MIMO_OTA-Core	last approved WID: RP-142221; updated WI acronym.	RP-142221				Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:03	last approved WID: RP-142221. Update to reflect RAN Secretary's guidance on the
Yes		revised		13.1.2: Ne	RP-150262	New SI proposal: Study on LTE-WLAN Radio Level Integration and Interworking Enhancement	Intel Corporation, China Telecom, Qualcomm Incorporated	SID	(new)	RAN2			REL-13	-	new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_WLAN_radio; SI was rejected at RAN#66 in RP-142280; revised in RP-150481	RP-142280, RP-150180, RP-150307, RP-150481		LTE	WLAN	Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:14	new SI for LTE only; leading WG: RAN2; this SI proposal was postponed at RAN#66 in RP-142280
Yes		revised		13.1.1: Ne	RP-150263	New SID Proposal: study on interference coordination for semi-static spectrum refarming between UMTS and LTE	China Unicom	SID	(new)	RAN1			REL-13	-	new SI for UTRA & LTE; leading WG: RAN1; WI code to be used: FS_UTRA_LTE_ICSSR; revised in RP-150468	RP-150266, RP-150468		UTRA, LTE				2/27/2015 9:21	
Yes		noted		12.3.1: Op	RP-150264	TR 37.870 v1.0.0 on Study on Multi-RAT Joint Coordination, for information	CMCC	TR	37.870	RAN3			REL-13	FS_MultiRAT_JC	RAN3 TR 37.870 is submitted for information							2/27/2015 9:21	RAN3 TR 37.870 is submitted for information
Yes		noted		13.1.4: Ne	RP-150265	Motivation for new WI: Interference mitigation for downlink control channels of LTE	Intel Corporation, ZTE	Disc	motiv				REL-13	-		RP-150267				Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:22	Discussion paper related to the new WI proposal on Interference
Yes		not treated		13.1.1: Ne	RP-150266	Motivation for New SI Interference coordination for SSR between UMTS and LTE	China Unicom	Disc	motiv				REL-13	-		RP-150263						2/27/2015 9:23	
Yes		revised		13.1.4: Ne	RP-150267	New WI: Interference mitigation for downlink control channels of LTE	Intel Corporation, ZTE	WID	(new)	RAN4			REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_IM_DLCCH; SI was rejected at RAN #66 in RP-142314 where it was proposed to be a RAN1-led SI, now proposed to be a RAN4-led WI; no Core part; revised in RP-150474	RP-150265, RP-142314, RP-150474		LTE		Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:26	new WI for LTE only; leading WG: RAN4; this was a SI proposal targeted for RAN1 at RAN#66 in RP-142314. It is now proposed to be a RAN4-led WI.
Yes		revised		13.1.3: Ne	RP-150268	New SID Proposal: Study on HSPA and LTE Joint Operation	China Unicom	SID	(new)	RAN3			REL-13	-	new SI for UTRA & LTE; leading WG: RAN3; WI code to be used: FS_UTRA_LTE_JOP; SI was rejected at RAN #66 in RP-141889; revised in RP-150471	RP-141889, RP-150273, RP-150471		UTRA, LTE				2/27/2015 9:27	
No		withdrawn		11.4.2.22	RP-150269	TR 36.853-13 v0.3.0: Rel-13 Inter-band Carrier Aggregation (3DL/1UL)	ZTE	TR	36.853-13	RAN4			REL-13	LTE_CA_B8_B41_B41-Core	Tdoc was withdrawn as it is too early to submit this RAN4 TR and TR should be in v1.0.0.		y			Mr. Zhongda Du	ZTE Corporation	2/27/2015 9:27	
Yes		revised		13.1.4: Ne	RP-150270	New WID: MSR BS configurations for LTE for common antenna case	ZTE	WID	(new)	RAN4			REL-13	-	new WI for LTE only?; leading WG: RAN4; WI code to be used: not allocated as affected system was unclear; original title: New MB-MSR BS configurations for common antenna case; no motivation paper; focus seems to be on RF requirements for LTE BS or MSR BS in case of common antenna with multi-band operation but WID in a bad shape (no Core/Perf part relation of specs & no system impact and just 1 supporting company); multiple versions of RP-150270 exist so revised in RP-150464	RP-150464	y	LTE		Mr. Zhongda Du	ZTE Corporation	2/27/2015 9:28	
Yes		revised		12.4.03: O	RP-150271	Status report for SI Study on Licensed-Assisted Access using LTE; rapporteur: Ericsson	RAN1	Report					REL-13	FS_LTE_LAA	revised in RP-150414	RP-150414			LAA	Mr. Daniel Larsson	Ericsson LM	2/27/2015 9:29	
Yes		noted		11.3.4: Op	RP-150272	Status report for LTE Carrier Aggregation Enhancement Beyond 5 Carriers, rapporteur: Nokia Corporation	RAN1	Report					REL-13	LTE_CA_enh_b5C						Mr. Klaus Hugl	Nokia Corporatio	2/27/2015 9:29	Core part: 10 %, Dec. 2015 RAN4 Perf. part: 0 %, June 2016
Yes		noted		13.1.3: Ne	RP-150273	Motivation for New SI: HSPA and LTE Joint Operation	China Unicom	Disc	motiv				REL-13	-		RP-150268						2/27/2015 9:29	
Yes		noted		13.1.4: Ne	RP-150274	Motivation for new SI: Measurement gap enhancement for LTE	Intel Corporation	Disc	motiv				REL-13	FS_LTE_meas_gap		RP-150276				Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:30	Discussion paper related to the new SI proposal on
Yes		noted		11.3.4: Op	RP-150275	Motivation for WID Revision: LTE Carrier Aggregation Enhancement Beyond 5 Carriers	Nokia Corporation, NTT DoCoMo Inc., Nokia Networks	Disc	(motiv)				REL-13	LTE_CA_enh_b5C		RP-150277				Mr. Klaus Hugl	Nokia Corporatio	2/27/2015 9:32	last approved WID: RP-142286
Yes		revised		13.1.4: Ne	RP-150276	New SI proposal: Study on Measurement gap enhancement for LTE	Intel Corporation	SID	(new)	RAN4			REL-13	-	new SI for LTE only; leading WG: RAN4; WI code to be used: FS_LTE_meas_gap; SI was postponed at RAN#66 in RP-142261; revised in RP-150475	RP-150274, RP-1412261, RP-150475		LTE		Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:35	new SI for LTE only; leading WG: RAN4; this SI proposal was postponed at RAN#66 in RP-142261
Yes		approved		11.3.4: Op	RP-150277	Revised WID: LTE Carrier Aggregation Enhancement Beyond 5 Carriers	Nokia Corporation, NTT DoCoMo Inc., Nokia Networks	WID	rev	RAN1			REL-13	LTE_CA_enh_b5C	last approved WID: RP-142286	RP-142286, RP-150275				Mr. Klaus Hugl	Nokia Corporatio	2/27/2015 9:35	last approved WID: RP-142286
Yes		revised		12.4.03: O	RP-150278	[DRAFT] LS on Licensed-Assisted Access (to: ETSI BRAN; cc: -; contact: Ericsson)	Ericsson	LSout		LS08			REL-13	FS_LTE_LAA	revised in RP-150445	RP-150445			LAA	Mr. Daniel Larsson	Ericsson LM	2/27/2015 9:36	
Yes		not treated		13.1.1: Ne	RP-150279	Motivation for Study on Physical Layer Enhancements of Coordinated Scheduling for LTE large CoMP clusters	Ericsson	Disc	motiv				REL-13	-		RP-150280				Mr. Daniel Larsson	Ericsson LM	2/27/2015 9:40	Approval
Yes		not treated		13.1.1: Ne	RP-150280	New SI: Study on Physical Layer Enhancements of Coordinated Scheduling for LTE large CoMP clusters	Ericsson	SID	new	RAN1			REL-13	-	new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_CSched_COMP; SI was not treated at RAN #66 in RP-141819	RP-150279, RP-141819		LTE		Mr. Daniel Larsson	Ericsson LM	2/27/2015 9:42	
Yes		noted		13.1.2: Ne	RP-150281	Motivation for new WI: eDRX for LTE	Mediatek	Disc	motiv				REL-13	-		RP-150182			DRX			2/27/2015 9:45	Motivation doc, related to RP-150182
Yes		revised		13.2: New	RP-150282	New WI proposal: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 5	Samsung	WID	(new)	RAN4	s (2DL/1UL)		REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B5_BWset; note: LTE_CA_B3_B5 was a REL-11 WI; revised in RP-150425	RP-150425		LTE		Mr. Xutao Zhou	Samsung Telec	2/27/2015 9:48	Add new bandwidth combination set for CA_B3_B5
Yes		not treated		13.1.2: Ne	RP-150283	New WI proposal: Mobility Enhancements for LTE	Mediatek	WID	new	RAN2			REL-13	-	new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_mob_enh; WI was not treated at RAN #66 in RP-142047; compare RP-150313	RP-142047, RP-150284	d2	LTE	mobility			2/27/2015 9:50	Update of RP-142047
Yes		not treated		13.1.2: Ne	RP-150284	Motivation for New WI: Mobility Enhancements for LTE	Mediatek	Disc	motiv				REL-13	LTE_mob_enh		RP-150283			mobility			2/27/2015 9:52	Update of RP-142047
Yes		approved		11.4.1.08	RP-150285	Revised WID: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 5 and Band 40	Samsung	WID	rev	RAN4	s (2DL/1UL)		REL-13	LTE_CA_B5_B40	last approved WID: RP-141888; revised to add new bandwidth combination set	RP-141888	y			Mr. Xutao Zhou	Samsung Telec	2/27/2015 9:52	Add new bandwidth combination set
Yes		noted		18.: Projec	RP-150286	Discussion on 5G timeline in RAN	CATR	Disc					-	-					5G			2/27/2015 10:13	This contribution provides a
Yes		not treated		12.4.04: O	RP-150287	Views on the eco-system impact of possible additional TDD configuration(s)	CATR	Disc					REL-13	FS_LTE_TDD_add_config			y		SDL			2/27/2015 10:18	This contribution provides a brief discussion on the eco-system
Yes		approved		13.1.2: Ne	RP-150288	New WI proposal: Multiflow Enhancements for UTRA	Nokia Networks, Nokia Corporation, Huawei, HiSilicon, China Unicom	WID	new	RAN2			REL-13	-	new WI for UTRA only; leading WG: RAN2; WI code to be used: HSDPA_MFTX_enh; WI was postponed at RAN #66 in RP-142219; no motivation paper; has only Core part	RP-142219		UTRA				2/27/2015 10:34	new WI for UTRA only; leading WG: RAN2
Yes		noted		11.3.3: Op	RP-150289	Status report for WI Core Part: RAN Aspects of RAN Sharing Enhancements for LTE; rapporteur: NEC	RAN3	Report					REL-13	RSE-LTE_RAN-Core			y			Mr. Hans van der Veen	NEC EUROPE L	2/27/2015 10:46	
Yes		noted		13.1.3: Ne	RP-150290	Motivation for Proposed SI: RAN Aspects of Downlink Traffic Differentiation for UPCON	NEC	Disc	motiv				REL-13	-		RP-150291			UPCON	Mr. Hans van der Veen	NEC EUROPE L	2/27/2015 10:49	
Yes		postponed		13.1.3: Ne	RP-150291	Proposed SI: Study on RAN Aspects of Downlink Traffic Differentiation for UPCON	NEC	SID	new	RAN3			REL-13	-	new SI for UTRA & LTE; leading WG: RAN3; WI code to be used: FS_UTRA_LTE_UPCON; UPCON = User Plane Congestion management (is an S.A REL-13 WI)	RP-142287, RP-150290		UTRA, LTE	UPCON	Mr. Hans van der Veen	NEC EUROPE L	2/27/2015 11:12	new SI for UTRA and LTE; leading WG: RAN3

Samsung Exhibit 1025, Page 1292 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics		contact	contact company	reserved	info
Yes		withdrawn		12.4.04: O	RP-150292	TP for TR36.825: Use Case: FDD-TDD Carrier Aggregation	KT	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	a use case is provided when LTE TDD carrier is used as secondary carrier in FDD-TDD Carrier Aggregation				SDL		Mr. Chungwoo Hwang	KT Corp.	2/27/2015 12:22	This contribution provides Text Proposal (Informative) to be included in TR 36.825. Use case is provided when LTE TDD
Yes		not treated		13.1.1: Ne	RP-150293	Motivation for Uplink Enhancements for Heterogeneous and Small Cell Networks	Huawei, HiSilicon	Disc	motiv				REL-13	-	Further analysis of potential gains of LTE uplink enhancements for HetNet; revision of RP-142004; related to SI RP-150191	RP-142004, RP-150191					Dr. David Mazzarese	Huawei Technolc	2/27/2015 12:30	Further analysis of potential gains of LTE uplink enhancements for HetNet;
Yes		not treated		13.1.2: Ne	RP-150294	New SI: Study on Partial control of Cell Management for UEs in LTE (PaCMan)	Nokia Networks, Nokia Corporation	SID	new	RAN2			REL-13	-	new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_PaCMan; SI was not treated at RAN #66 in RP-142005	RP-142005, RP-150295		LTE			Mr. Tero Henttonen	Nokia Networks	2/27/2015 12:47	New SI for LTE only; Leading WG: RAN2
Yes		not treated		13.1.2: Ne	RP-150295	Motivation for New SI on Partial control of Cell Management for UEs in LTE (PaCMan)	Nokia Networks, Nokia Corporation	Disc	motiv				REL-13	-		RP-150294					Mr. Tero Henttonen	Nokia Networks	2/27/2015 12:48	
Yes		postponed		13.1.2: Ne	RP-150296	New WI: Improved Mobility for Synchronous LTE Networks (MobSync)	Nokia Networks, Nokia Corporation	WID	new	RAN2			REL-13	-	new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_mob_sync_netw; WI was not treated at RAN #66 in RP-142215	RP-150297, RP-142215		LTE	mobility		Mr. Tero Henttonen	Nokia Networks	2/27/2015 12:51	New WI for LTE only; Leading WG: RAN2
Yes		noted		13.1.2: Ne	RP-150297	Motivation for new WI: Improved Mobility via Synchronous Handovers in LTE Networks	Nokia Networks, Nokia Corporation	Disc	motiv				REL-13	-		RP-150296			mobility		Mr. Tero Henttonen	Nokia Networks	2/27/2015 12:52	
Yes		revised		14.: UE ca	RP-150298	CR to 36.306 on new DL UE categories	Huawei, HiSilicon	CR	36.306	0268	-	C	REL-12	LTE_CA-Core, LTE_SC_enh_L1, TEI12	company contribution not related to RAN2 Tdocs; revised in RP-150458	RP-150242, RP-150458	cc			RAN2	Dr. David Mazzarese	Huawei Technolc	2/27/2015 14:06	company contribution not related to RAN2 Tdocs
Yes		revised		14.: UE ca	RP-150299	CR to 36.331 on new DL UE categories	Huawei, HiSilicon	CR	36.331	1799	-	C	REL-12	LTE_CA-Core, LTE_SC_enh_L1, TEI12	company contribution not related to RAN2 Tdocs; revised in RP-150459	RP-150242, RP-150459	cc			RAN2	Dr. David Mazzarese	Huawei Technolc	2/27/2015 14:08	company contribution not related to RAN2 Tdocs
Yes		revised		12.4.04: O	RP-150300	Considerations on TDD allocations in CEPT region and the need for a new TDD DL only configuration	Orange	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config		RP-150401			SDL		Ms. Fatima Karim-peters	ORANGE	2/27/2015 14:36	
Yes		not treated		12.4.04: O	RP-150301	Simulation Assumptions for Evaluating Additional Configurations for LTE TDD	Ericsson	Disc					REL-13	FS_LTE_TDD_add_config			y		SDL				2/27/2015 14:47	In this contribution, we discuss the simulation assumptions for evaluating additional
Yes		not treated		13.1.1: Ne	RP-150302	Future eMBMS enhancements for LTE	Ericsson	Disc					REL-13	-	discusses the most urgent areas of future MTC enhancements	RP-142029, RP-150303	y						2/27/2015 14:52	This paper discusses the most urgent areas of future MTC enhancements
No	Late	withdrawn		13.1.1: Ne	RP-150303	New WI proposal: eMBMS enhancements for LTE	Ericsson	WID	new	RAN1			REL-13	-	new WI for LTE only; leading WG: RAN1; WI code not yet allocated as if related to MTC then why is this missing in the title?; note: MBMS_LTE_enh was a REL-10 WI	RP-150302	y	LTE					2/27/2015 14:55	Justification and objectives of the New WI on eMBMS enhancements for LTE.
Yes		revised		13.1.3: Ne	RP-150304	New WI: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network	Ericsson	WID	(new)	RAN3			REL-13	-	new WI for UTRA only; leading WG: RAN3; WI code to be used: CSPS_Coord-UTRA; note: CSPS_Coord is an SA2 REL-13 WI; revised in RP-150500	RP-150306, RP-150500		UTRA			Mr. Martin Israelsson	Ericsson LM	2/27/2015 14:56	new WI for UTRAN only; leading WG: RAN3
Yes		noted		18.: Projec	RP-150305	5G timing in RAN	Ericsson	Disc					-	-					5G				2/27/2015 14:57	The paper discussed the 5G
Yes		noted		13.1.3: Ne	RP-150306	Motivation for New WI: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network	Ericsson	Disc	motiv				REL-13	-		RP-150304					Mr. Martin Israelsson	Ericsson LM	2/27/2015 14:58	
Yes		noted		13.1.2: Ne	RP-150307	Architecture Options for LTE-WLAN Radio Level Integration	Ericsson	Disc					REL-13	-		RP-150262	y		WLAN				2/27/2015 15:00	This paper discusses architecture options for LTE-WLAN Radio Level Integration
Yes		not treated		13.1.1: Ne	RP-150308	New WI: Channel modelling for frequency bands 6-100 GHz	Nokia Networks	WID	new	RAN1			REL-13	-	new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_6_100GHz_channel_model; compare SI proposal RP-150219; no motivation paper; for information?	RP-150219	d1	LTE	6GHz				2/27/2015 15:13	
Yes		revised		13.1.2: Ne	RP-150309	New SI proposal: Study on Latency reduction techniques for LTE	Ericsson	SID	(new)	RAN2			REL-13	-	new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_LATRED; SI was postponed at RAN #66 in RP-142025; note: REL-10 WI LTE_LATRED-Core was terminated in RP-091449 at RAN #50; revised in RP-150465 as multiple versions of RP-150309 exist	RP-142025, RP-150310, RP-150238, RP-150465		LTE	LATRED		Dr. Riikka Susitaival	Ericsson LM	2/27/2015 15:31	new SI for LTE; leading WG: RAN2; this SI proposal was postponed at RAN #66 in RP-142025
Yes		noted		13.1.2: Ne	RP-150310	Motivation for new SI: Study on Latency reduction techniques for LTE	Ericsson	Disc	motiv				REL-13	-		RP-150309			LATRED		Dr. Riikka Susitaival	Ericsson LM	2/27/2015 15:32	
Yes		revised		13.1.2: Ne	RP-150311	New WID proposal: Signalling Reduction for Idle-Active Transitions in LTE	Ericsson, Intel Corporation	WID	(new)	RAN2			REL-13	-	new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_SigRed_Trans; WI was not treated at RAN #66 in RP-142030; no Perf. part, no impacted specs; revised in RP-150426	RP-150312, RP-142030, RP-150426		LTE			Dr. Riikka Susitaival	Ericsson LM	2/27/2015 15:36	new WI for LTE; leading WG: RAN2; this WI proposal was postponed at RAN #66 in RP-142030
Yes		noted		13.1.2: Ne	RP-150312	Motivation for new WI: Signalling Reduction for Idle-Active Transitions in LTE	Ericsson	Disc	motiv				REL-13	-		RP-150311					Dr. Riikka Susitaival	Ericsson LM	2/27/2015 15:38	
Yes		not treated		13.1.2: Ne	RP-150313	New SI proposal: Study on Mobility Enhancements for LTE	Ericsson	SID	new	RAN2			REL-13	-	new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_mob_enh; SI was postponed at RAN #66 in RP-142036; compare RP-150283	RP-142036, RP-150314	d2	LTE	mobility		Dr. Riikka Susitaival	Ericsson LM	2/27/2015 15:40	new SI for LTE; leading WG: RAN2; this SI proposal was postponed at RAN #66 in RP-142036
Yes		not treated		13.1.2: Ne	RP-150314	Motivation for new SI: Study on Mobility Enhancements for LTE	Ericsson	Disc	motiv				REL-13	-		RP-150313			mobility		Dr. Riikka Susitaival	Ericsson LM	2/27/2015 15:42	
Yes	Late	noted		13.1.: New	RP-150315	Mission Critical Air Ground Air Communications: Summary of discussions	Orange	Report					REL-13	-	report of email discussion on the RAN reflector between RAN #66 and RAN #67; Orange will draft a corresponding summary in RP-150423	RP-150423	y		A2G		Ms. Fatima Karim-peters	ORANGE	2/27/2015 15:46	
Yes		noted		18.: Projec	RP-150316	Considerations on 5G Standardization	CMCC	Disc					-	-					5G				2/27/2015 15:50	
Yes		noted		12.4.03: O	RP-150317	LAA Use Cases	BlackBerry UK Limited	Disc					REL-13	FS_LTE_LAA			y		LAA		Mr. Gordon Young	BlackBerry UK Li	2/27/2015 15:52	
Yes		approved		11.4.1.03:	RP-150318	Revised WID proposal: LTE Advanced Carrier Aggregation of Band 3 and Band 31	Orange; Huawei	WID	rev	RAN4	s (2DL/1UL)		REL-13	LTE_CA_B3_B31	last approved WID RP-141337	RP-141337					Ms. Fatima Karim-peters	ORANGE	2/27/2015 15:55	last approved WID RP-141337
Yes	Late	approved		11.4.5.1:	RP-150319	Revised WID for LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 3DL	CATT	WID	rev	RAN4	s (C 3DL)		REL-13	LTE_CA_C_B42_3DL	last approved WID: RP-141677	RP-141677								
Yes		approved		08.5.3: RA	RP-150320	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-99 Conformance Testing(TEI_Test)	RAN5	CR	set			F	REL-11	TEI_Test			y							
Yes		approved		08.5.3: RA	RP-150321	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-7 Conformance Testing(TEI7_Test)	RAN5	CR	set			F	REL-11	TEI7_Test			y							
Yes		approved		08.5.3: RA	RP-150322	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 1)	RAN5	CR	set			F	REL-8	TEI8_Test										
Yes		approved		08.5.3: RA	RP-150323	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 2)	RAN5	CR	set			F	REL-8	TEI8_Test										
Yes		approved		08.5.3: RA	RP-150324	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 3)	RAN5	CR	set			F	REL-8	TEI8_Test										
Yes		approved		08.5.3: RA	RP-150325	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-9 Conformance Testing(TEI9_Test) (Batch 1)	RAN5	CR	set			F	REL-9	TEI9_Test										
Yes		approved		08.5.3: RA	RP-150326	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-9 Conformance Testing(TEI9_Test) (Batch 2)	RAN5	CR	set			F	REL-9	TEI9_Test										
Yes		approved		08.5.3: RA	RP-150327	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 1)	RAN5	CR	set			F	REL-10	TEI10_Test										

Samsung Exhibit 1025, Page 1293 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		approved		08.5.3: RA	RP-150328	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 2)	RAN5	CR	set			F	REL-10	TEI10_Test									
Yes		approved		08.5.3: RA	RP-150329	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 3)	RAN5	CR	set			F	REL-10	TEI10_Test									
Yes		approved		08.5.3: RA	RP-150330	CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A	RAN5	CR	34.123-3	3327	-	F	REL-11	TEI8_Test									y
Yes		approved		08.5.4: Ap	RP-150331	CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (**TTCN**), Annex A	RAN5	CR	34.123-3	set	-	F/B	REL-11	TEI7_Test, TEI8_Test, TEI9_Test, TEI10_Test	TTCN batch; 28 Test Cases								y
Yes		approved		08.5.3: RA	RP-150332	CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (prose), Annex A	RAN5	CR	34.229-3	0283	-	F	REL-10	TEI8_Test									y
Yes		approved		08.5.3: RA	RP-150333	CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (**TTCN**), Annex A	RAN5	CR	34.229-3	set	-	F/B	REL-10	TEI8_Test, TEI9_Test	TTCN batch; 29 Test Cases								y
Yes		approved		08.5.3: RA	RP-150334	CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (prose), Annex A	RAN5	CR	36.523-3	2625	-	F	REL-12	TEI8_Test									y
Yes		approved		08.5.4: Ap	RP-150335	CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (**TTCN**), Annex A	RAN5	CR	36.523-3	set	-	F/B	REL-11	TEI8_Test, TEI9_Test, TEI10_Test, TEI11_Test	TTCN batch; 121 Test Cases								y
Yes		approved		08.5.3: RA	RP-150336	CR to 37.751-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (prose), Annex A	RAN5	CR	37.571-4	0049	-	F	REL-10	TEI9_Test									y
Yes		approved		08.5.3: RA	RP-150337	CR to 37.571-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (**TTCN**), Annex A	RAN5	CR	37.571-4	set	-	F/B	REL-10	TEI9_Test	TTCN batch; 2 Test Cases								y
Yes		approved		09.2.2: Co	RP-150338	RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – Further Enhancements to CELL-FACH (Cell_FACH_enh-UEConTest)	RAN5	CR	set			F	REL-11	Cell_FACH_enh-UEConTest									
Yes		approved		09.2.3: Co	RP-150339	RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – HSDPA Multiflow Data Transmission (HSDPA_MFTX-UEConTest))	RAN5	CR	set			F	REL-11	HSDPA_MFTX-UEConTest									
Yes		approved		09.2.4: Co	RP-150340	RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – Single radio voice call continuity from UTRAN/GERAN to E-UTRAN (rSRVCC-UEConTest)	RAN5	CR	set			F	REL-11	rSRVCC-UEConTest									
Yes		approved		09.2.5: Co	RP-150341	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-11 Conformance Testing (TEI11_Test)	RAN5	CR	set			F	REL-11	TEI11_Test									
Yes		approved		09.3.1: Co	RP-150342	RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – Further REL-12 Configurations for LTE Advanced Carrier Aggregation (LTE_CA_Rel12-UEConTest)	RAN5	CR	set			F	REL-12	LTE_CA_Rel12-UEConTest									
Yes		approved		09.3.2: Co	RP-150343	RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL (LTE_CA_Rel12_3DL-UEConTest)	RAN5	CR	set			F	REL-12	LTE_CA_Rel12_3DL-UEConTest									
Yes		approved		09.3.3: Co	RP-150344	RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects - BeiDou Navigation Satellite System (BDS) Positioning Support for LTE and UMTS (LCS_BDS-UEConTest)	RAN5	CR	set			F	REL-12	LCS_BDS-UEConTest									
Yes		approved		09.3.6: Co	RP-150345	RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-12 Conformance Testing (TEI12_Test)	RAN5	CR	set			F	REL-12	TEI12_Test									
Yes	Late	noted	FLAG S	12.4.02: O	RP-150346	Status report for SI Study on Elevation Beamforming/Full-Dimension (FD) MIMO for LTE; rapporteur: Nokia Networks	RAN1	Report					REL-13	FS_LTE_EBF_FDMIMO	MCC: late Tdoc request								
Yes		approved		08.3.6: RA	RP-150347	Rel-11 CRs from RAN3	RAN3	CR	set				REL-11	TEI11	note: R3-150301 REL-11 CR was already submitted to RAN #66 in RP- 142083 (R3-142978) with a cat.A CR, while the cat.A CR could be implemented the REL-11 CR could not be implemented as based on wrong spec version								y
Yes		approved		08.3.7: RA	RP-150348	Correction of the usage of the MultibandInfoList IE	RAN3	CR	set				REL-11	TEI11									
Yes		approved		10.1: Closi	RP-150349	Further EUL enhancements	RAN3	CR	set				REL-12	EDCH_enh-Core									
Yes		approved		10.2: Closi	RP-150350	Add missing new SIB for IncMon	RAN3	CR	25.423	1861	1	F	REL-12	LTE_UTRA_IncMon-Core									
Yes		approved		10.3: Closi	RP-150351	Dual Connectivity for LTE CRs	RAN3	CR	set				REL-12	LTE_SC_enh_dualC-Core									
Yes		approved		10.3: Closi	RP-150352	Correction of reloading PWS alerts	RAN3	CR	36.413	1285	1	F	REL-12	REP_WMD-RFR_PWS-Core									
Yes		approved		10.6.5: Op	RP-150353	ProSe CRs	RAN3	CR	set				REL-12	LTE_D2D_Prox-Core									
Yes		rejected	FLAG M	10.6.8: Op	RP-150354	Support for eMBMS congestion management, via new procdure	RAN3	CR	36.443	0102	-	B	REL-12	GCSE_LTE-MBMS_CM-Core	MCC: Technically endorsed by RAN3. Alternative solution to CR0101r1 to complete the WI								
Yes		approved	FLAG M	10.6.8: Op	RP-150355	Support for eMBMS congestion management, via MBMS scheduling information procedure	RAN3	CR	36.443	0101	1	B	REL-12	GCSE_LTE-MBMS_CM-Core	MCC: Technically endorsed by RAN3. Alternative solution to CR0102 to complete the WI								
Yes		approved		10.8: REL-	RP-150356	TEI12 CRs	RAN3	CR	set				REL-12	TEI12									
Yes	Late	noted	FLAG S	09.3.3: Co	RP-150357	Status report for SI UE Conformance Test Aspects - BeiDou Navigation Satellite System (BDS) Positioning Support for LTE and UMTS; rapporteur: CATT	RAN5	Report					REL-12	LCS_BDS-UEConTest	MCC: late Tdoc request/submission								
Yes		approved		08.1.3: RA	RP-150358	CRs to 36.213 to clarify common search reception related to MBMS	RAN1	CR	set				REL-8	LTE-Phys, TEI11									
Yes		approved		08.1.6: RA	RP-150359	CRs to 36.213 on TM10 CSI-IM Interference Measurements	RAN1	CR	set				REL-11	COMP_LTE_DL-Core									
Yes		approved		10.1: Closi	RP-150360	CR to 25.214 to clarify UMTS Heterogeneous Network Enhancements	RAN1	CR	25.214	0735	1	F	REL-12	UTRA_HetNet_enh-Core									
Yes		approved		10.8: REL-	RP-150361	CRs to 25.215, 25.225 & 36.214 on new E-UTRA RSRQ measurement definition	RAN1	CR	set				REL-12	TEI12									
Yes		approved		12.1: Closi	RP-150362	CR to 36.873 to reduce C-to-I XPR Geometric Variance for the 3D Channel Model	RAN1	CR	36.873	0003	-	F	REL-12	FS_LTE_3D_channel									
Yes		approved		10.3: Closi	RP-150363	CR to 36.213 on correction for TDD-FDD CA	RAN1	CR	36.213	0494	1	F	REL-12	LTE_CA_TDD_FDD-Core									
Yes		approved		10.3: Closi	RP-150364	CRs to 36.211 & 36.213 on corrections for Small Cell enhancements	RAN1	CR	set				REL-12	LTE_SC_enh_L1-Core									
Yes		approved		10.3: Closi	RP-150365	CR to 36.213 on corrections for Dual Connectivity feature	RAN1	CR	36.213	0504	1	F	REL-12	LTE_SC_enh_dualC-Core									
Yes		approved		10.6.5: Op	RP-150366	CRs to 36.201, 36.211, 36.212, 36.213 & 36.214 to introduce D2D feature	RAN1	CR	set				REL-12	LTE_D2D_Prox-Core									
Yes	Late	noted		14.: UE ca	RP-150367	Way forward on new UE categories in Rel-12 and 13	NTT DOCOMO, INC., AT&T, MediaTek, ACER, ASUS, CHT, HTC, ITRI, LGE, Panasonic, Sharp, Hitachi	Disc					REL-12	TEI12	revision of RP-150207	RP-142230, RP-150207								

Samsung Exhibit 1025, Page 1294 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		approved		08.2.3: RA	RP-150368	RAN2 agreed CRs on various REL-8 Work Items	RAN2	CR	set				REL-8	LTE-L23, TEI10, TEI11, RANimp-ANSS, TEI12									
Yes		approved		08.2.4: RA	RP-150369	RAN2 agreed CR on Correction of GLONASS system time	RAN2	CR	36.355	0126	2	F	REL-9	LCS_LTE, TEI12									
Yes		approved		08.2.5: RA	RP-150370	RAN2 agreed CRs on Various REL-10 Work Items	RAN2	CR	set				REL-10	eICIC_LTE-Core, TEI10, TEI11, TEI12, LTE_SC_enh_dualC-Core	note: Merged REL-12 cat.A CR and REL-12 cat.F CR to LTE_SC_enh_dualC-Core included									
Yes		approved		08.2.6: RA	RP-150371	RAN2 agreed CRs on Various REL-11 Work Items	RAN2	CR	set				REL-11	LTE_CA_enh-Core, TEI11, TEI12									
Yes		approved		10.1: Closi	RP-150372	RAN2 agreed CRs on Core part: Further Enhanced Uplink (EUL) enhancements	RAN2	CR	set				REL-12	EDCH_enh-Core									
Yes		approved		10.3: Closi	RP-150373	RAN2 agreed CRs on Closed LTE REL-12 Work Items	RAN2	CR	set				REL-12	UTRA_LTE_WLAN_interw-Core, LTE_SC_enh_dualC-Core, LTE_UTRA_incMon-Core, LC_MTC_LTE-Core, LTE_NAICS-Core	Note: The CRs in R2-150722, R2-150723 and R2-150724 were originally from RAN3									
Yes		approved		10.6.5: Op	RP-150374	RAN2 agreed CRs on LTE Device to Device Proximity Services	RAN2	CR	set				REL-12	LTE_D2D_Prox-Core									
Yes		approved		10.6.8: Op	RP-150375	RAN2 agreed CRs on Introduction of MBMS congestion management for Public Safety Group Call	RAN2	CR	set				REL-12	GCSE_LTE-MBMS_CM-Core									
Yes		approved		10.8: REL-	RP-150376	RAN2 agreed CRs on Small Technical Enhancements and Improvements for Rel-12	RAN2	CR	set				REL-12	TEI12									
Yes		approved		10.8: REL-	RP-150377	RAN2 agreed CRs on ASN.1 corrections	RAN2	CR	set				REL-12	TEI12		RP-150042							
Yes		approved		14.: UE ca	RP-150378	RAN agreed CRs on UE capability for modified MPR behavior	RAN2	CR	36.306	set			REL-8	LTE-L23, TEI10									
Yes		approved		14.: UE ca	RP-150379	RAN agreed CR on Introduction of UL64QAM based on split of DL and UL categories	RAN2	CR	36.306	0261	1	F	REL-8	LTE-L23, TEI12	Note: The corresponding signalling CR to TS 36.331 which was originally in R2-150714 CR1769r1 was merged into R2-150715 CR1768r1 on REL-12 ASN.1 review.	RP-150042							
Yes	Late	noted		15.: Inter	RP-150380	MCPTT Project Plan Proposal	SA WG2 Chairman, US Department of Commerce (Rapporteur), UK Home Office (Rapporteur), CESG	Disc					REL-13	MCPTT	A project plan to propose at SA, CT and RAN plenaries in March.	SP-150004			MCPTT				
Yes		approved		08.4.4: RA	RP-150381	RAN4 CRs to Rel-9 WIs	RAN4	CR	36.101	set			REL-9	TEI9									
Yes		approved		08.4.5: RA	RP-150382	RAN4 CRs to Rel-10 WIs	RAN4	CR	set				REL-10	eICIC_LTE-Perf, LTE_CA-Core, LTE_CA-Perf, RInImp8-UMTSLTE3500, TEI10, LTE_eDL_MIMO-Core									
Yes		revised	FLAG M	08.4.5: RA	RP-150383	RAN4 CRs to Maximum allowed layers for multiple monitoring for CA	RAN4	CR	36.133	set			REL-10	LTE_CA-Core	MCC: company CR RP-140065 replaces R4-150040 of RP-150383 and company CR RP-150066 replaces R4-150041 of RP-150383	RP-150065, RP-150066								
Yes		approved		08.4.6: RA	RP-150384	RAN4 CRs to Rel-11 WIs	RAN4	CR	set				REL-11	Cell_FACH_enh-Perf, eCIC_enh_LTE-Perf, LCS_LTE-NBPS-Perf, LTE_APAC700-Core, LTE_Interf_Rej-Perf, LTE_Relay2-Core, TEI11									
Yes		approved		10.1: Closi	RP-150385	RAN4 CRs to Closed UTRA only related WIs	RAN4	CR	set				REL-12	EDCH_enh-Core, UTRA_hetnet_enh-Core, TEI12	Note: By mistake also TEI12 CRs were packed in RP-150387 although they should have been submitted to AI 10.8								
Yes		approved		10.2: Closi	RP-150386	RAN4 CRs to Closed UTRA & LTE related WIs	RAN4	CR	set				REL-12	LTE_UTRA_hcmon-Core									
Yes		approved		10.3: Closi	RP-150387	RAN4 CRs to Closed LTE only related WIs	RAN4	CR	set				REL-12	LC_MTC_LTE-Core, LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A5-Core, LTE_CA_NC_2UL-Core, LTE_CA_2UL-A1-Perf, LTE_CA_2UL-A2-Perf, LTE_CA_2UL-A3-Perf, LTE_CA_2UL-A4-Perf, LTE_CA_2UL-A5-Perf, LTE_D2D_Prox-Core, LTE_SC_enh_dualC-Core, MBMS_LTE_OS-Core, TEI12	Note: By mistake also TEI12 CRs were packed in RP-150387 although they should have been submitted to AI 10.8		y						
Yes		approved		10.3: Closi	RP-150388	RAN4 CRs to Closed LTE carrier aggregation only related WIs	RAN4	CR	set				REL-12	LTE_CA_B1_B19_B21-Core, LTE_CA_B1_B3_B20-Core, LTE_CA_B1_B3_B5-Core, LTE_CA_B1_B3_B8-Core, LTE_CA_B1_B42_B42-Core, LTE_CA_B1_B5_B7-Core, LTE_CA_B1_B7_B20-Core, LTE_CA_B19_B42_B42-Core, LTE_CA_B2_B12_B12-Core, LTE_CA_B2_B12_B30-Core, LTE_CA_B2_B2_B13-Core, LTE_CA_B2_B29_B30-Core, LTE_CA_B2_B4_B12-Core, LTE_CA_B2_B4_B13-Core, LTE_CA_B2_B4_B5-Core, LTE_CA_B2_B5_B12-Core, LTE_CA_B2_B5_B30-Core, LTE_CA_B3_B3_B7-Core, LTE_CA_B3_B42_B42-Core, LTE_CA_B3_B7_B20-Core, LTE_CA_B3_B7_B7-Core, LTE_CA_B4_B12_B12-Core, LTE_CA_B4_B12_B30-Core, LTE_CA_B4_B29_B30-Core, LTE_CA_B4_B4_B13-Core, LTE_CA_B4_B5_B12-Core, LTE_CA_B4_B5_B30-Core, LTE_CA_B7_B8_B20-Core, LTE_CA_C_B40_3DL_BW-Core, LTE_CA_C_B41_3DL-Core, LTE_CA_NC_B41_3DL-Core, LTE_CA_B2_B4_B4-Core,									
Yes		approved		10.4.1: Op	RP-150389	RAN4 CRs to Open UTRA only related WIs - Perf part	RAN4	CR	25.133	1398	-	F	REL-12	EDCH_enh-Perf									
Yes		approved		10.6.2: Op	RP-150390	RAN4 CRs to Low cost & enhanced coverage MTC UE for LTE: Perf. Part	RAN4	CR	36.101	set			REL-12	LC_MTC_LTE-Perf									
Yes		approved		10.7.1.1: C	RP-150391	RAN4 CRs to LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 42 and Band 42	RAN4	CR	set				REL-12	LTE_CA_B3_B42_B42-Core, LTE_CA_B3_B42_B42-Perf									
Yes		approved		10.7.4.1: C	RP-150392	RAN4 CRs to E-UTRA UE performance requirements for multiple Carrier Aggregation configurations: Perf. Part	RAN4	CR	set				REL-12	LTE_CA_Multi-Perf									
Yes		approved		10.6.4: Op	RP-150393	RAN4 CRs to Dual Connectivity for LTE: Perf. Part	RAN4	CR	set				REL-12	LTE_SC_enh_dualC-Perf									
Yes		approved		10.6.3: Op	RP-150394	RAN4 CRs to E-UTRA Small cell enhancements - Physical layer aspects: Perf. Part	RAN4	CR	set				REL-12	LTE_SC_enh_L1-Perf									

Samsung Exhibit 1025, Page 1295 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		approved		10.6.7: Op	RP-150395	RAN4 CRs to Performance requirements of interference cancellation and suppression receiver for SU-MIMO: Perf. Part	RAN4	CR	36.101	set			REL-12	LTE_SUMIMO_RX-Perf									
Yes		approved		10.6.1: Op	RP-150396	RAN4 CRs to Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation: Perf. Part	RAN4	CR	set				REL-12	LTE_TDD_eIMTA-Perf									
Yes	Late	noted		13.1.2: Ne	RP-150397	Consideration on LTE-WLAN interworking architecture	Qualcomm Incorporated	Disc					REL-13	-		RP-150262			WLAN				
Yes		approved		09.3.6: Co	RP-150398	CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (**TTCN**), Annex A	RAN5	CR	36.523-3	set	-	F/B	REL-12	TEI12_Test	TTCN batch; 3 Test Cases								
Yes	AH	revised		12.4.04: O	RP-150399	TP for TR 36.825 section 4.1	CMCC	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	revision of RP-150147; for section 4.1; revised in RP-150403	RP-150147, RP-150185, RP-150252, RP-150403							
Yes	AH	revised		12.4.04: O	RP-150400	TP for TR 36.825 on Deployment scenarios – synchronization aspects	NTT DOCOMO, INC.	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	for section 6.; revised in RP-150404	RP-150208, RP-150404							
Yes	AH	revised		12.4.04: O	RP-150401	Text proposal to TR 36.825: Frequency bands	Orange	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	for section 4.2; wrong TR number on TP; revised in RP-150460	RP-150147, RP-150208, RP-150255, RP-150300, RP-150460							
Yes	AH	revised		12.4.04: O	RP-150402	Text proposal for Section 5 and 6 of TR 36.825	NEC	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	for section 5 and 6; revised in RP-150461	RP-150140, RP-150218, RP-150252, RP-150254, RP-150461							
Yes	AH	approved		12.4.04: O	RP-150403	TP for TR 36.825 section 4.1	CMCC	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	revision of RP-150399; for section 4.2; wrong TR number on TP	RP-150147, RP-150185, RP-150399							
Yes	AH	revised		12.4.04: O	RP-150404	TP for TR 36.825 on Deployment scenarios – synchronization aspects	NTT DOCOMO, INC.	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	revision of RP-150400; revised in RP-150462	RP-150400, RP-150462							
Yes	AH	approved		12.4.04: O	RP-150405	Report of ad hoc on REL-13 Study on possible additional configuration for LTE TDD	Nokia Networks (ad hoc convener)	Report					REL-13	FS_LTE_TDD_add_config	for RAN approval								
No	AH	withdrawn		12.4.04: O	RP-150406	Void	-	-					-	-	see RP-150487 for the TR 36.825 v0.1.0								
Yes	Late	revised		11.4.4.1: C	RP-150407	Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A1 in REL-13, rapporteur: Huawei	Huawei	WID	(rev)	RAN4	s (2UL)		REL-13	LTE_CA_2UL_R13-A1	last approved WID: RP-141935; revision of RP-150235 adding also TDD-TDD; revised in RP-150411 as multiple versions of RP-150407 exist	RP-141935, RP-150235, RP-150411							
Yes	Late	approved		11.4.4.2: C	RP-150408	Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A2 in REL-13	Qualcomm Incorporated	WID	rev	RAN4	s (2UL)		REL-13	LTE_CA_2UL_R13-A2	last approved WID: RP-141975; adding TDD-TDD	RP-141975							
Yes	Late	approved		11.4.4.3: C	RP-150409	Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A3 in REL-13	Ericsson	WID	rev	RAN4	s (2UL)		REL-13	LTE_CA_2UL_R13-A3	last approved WID: RP-142010; adding TDD-TDD	RP-142010							
Yes	Late	approved		13.2: New	RP-150410	New WI proposal: LTE Advanced dual uplink inter-band Carrier Aggregation Class A4	Nokia Corporation	WID	new	RAN4	s (2UL)		REL-13	-	revision of RP-150103 to add TDD-TDD; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_2UL_R13-A4	RP-150103		LTE					
Yes	Late	approved		11.4.4.1: C	RP-150411	Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A1 in REL-13, rapporteur: Huawei	Huawei	WID	rev	RAN4	s (2UL)		REL-13	LTE_CA_2UL_R13-A1	last approved WID: RP-141935; revision of RP-150407	RP-141935, RP-150235, RP-150407							
Yes	Late	approved		13.3: New	RP-150412	New WI proposal: UE Conformance Test Aspects - DCH Enhancements for UMTS	Qualcomm Incorporated	WID	new	RAN5			REL-12	-	revision of RP-150130; new WI for UTRA only; leading WG: RAN5; WI code to be used: UTRA_DCHenh-UEConTest; tested core part: UTRA_DCHenh-Core;	RP-150130		UTRA				2/25/2015 7:44	new WI for UTRA only; leading WG: RAN5
Yes		approved		11.4.2.09:	RP-150413	Clean-up of 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 2 and Band 12	RAN4	CR	36.853-12	0003	-	F	REL-12	LTE_CA_B2_B2_B12-Core	LTE_CA_B2_B2_B13 is a REL-13 WI. By accident TP(s) with coexistence studies of harmonics and intermodulation products for TE_CA_B2_B2_B12 were included in the Rel-12 TR 36.853 (now called TR 36.853-12) before approving it at RAN #66; this CR removes this REL-13 material from the REL-12 TR									
Yes	Late	noted	FLAG S	12.4.03: O	RP-150414	Status report for SI Study on Licensed-Assisted Access using LTE; rapporteur: Ericsson	RAN1	Report					REL-13	FS_LTE_LAA	revision of RP-150271; MCC: late submission	RP-150271							
Yes	Late	revised		13.1.2: Ne	RP-150415	New WI proposal: Dual Connectivity enhancements for LTE	NTT DOCOMO, INC.	WID	(new)	RAN2			REL-13	-	revision of RP-150156; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_dualC_enh; follow-up WI of REL-12 WI LTE_SC_enh_dualC; revised in RP-150490	RP-150157, RP-141781, RP-150211, RP-150156, RP-150490		LTE		DualC		DualC		
Yes	Late	revised		13.2: New	RP-150416	New WID Proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 8	CMCC	WID	(new)	RAN4	s (C)		REL-13	-	revision of RP-150194; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_C_B8; revised in RP-150437	RP-150194, RP-150437		LTE					
Yes	Late	rejected		12.3.1: Op	RP-150417	Revised SID: Study on Multi-RAT Joint Coordination	CMCC	SID	rev	RAN3			REL-13	FS_MultiRAT_JC	last approved SID: RP-132086; revision of RP-150189	RP-132086, RP-150189							
Yes	Late	revised		13.2: New	RP-150418	New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 5 and Band 40	SK Telecom	WID	(new)	RAN4	s (4DL/1UL)		REL-13	-	revision of RP-150085 (also including RP-150083 and RP-150084 aspects); new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B5_B40; revised in RP-150434	RP-150085, RP-150434		LTE					
Yes	Late	revised		11.4.3.6: C	RP-150419	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30	AT&T	WID	(rev)	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B4_B29_B30	revision of RP-150091; last approved WID: RP-142203; revised in RP-150453	RP-142203, RP-150091, RP-150453							
Yes	Late	approved	FLAG S	12.1: Closi	RP-150420	CR for Corrections and Clarifications of UE specifications in TR 36.844	RAN4	CR	36.844	0010	-	F	Rel-13	FS_LTE_FDD_1670_US	MCC: late submission; note: FS_LTE_FDD_1670_US was a REL-13 SI								
Yes		approved		06.1: LSs f	RP-150421	Response LS to ATIS_COAST_SYNC_150122_00007 = RP-150025 on ATIS COAST SYNC and 3GPP RAN timing requirements for wireless base stations (to: ATIS COAST SYNC; cc: -; contact: Nokia Networks)	RAN	LSout		LS04			REL-12	-	reply to RP-150025 based on RP-150038	RP-150025, RP-150038							
Yes		revised		13.1.2: Ne	RP-150422	New WI Proposal: RAN aspects of Application specific Congestion control for Data Communication	LG Electronics	WID	(new)	RAN2			REL-13	-	revision of RP-150167; new WI for; leading WG: RAN2; WI code to be used: ACDC-RAN; note: ACDC is a REL-13 WI in SA; revised in RP-150466	RP-150166, RP-150167, RP-150466		UTRA, LTE	ACDC	Mr. Youngdae Lee	LG Electronics F	2/26/2015 8:38		
Yes		revised		13.1.: New	RP-150423	3GPP TSG RAN views regarding Mission Critical Air Ground Air Communications	Orange	Disc					REL-13	-	based on RP-150315; revised in RP-150506	RP-150315, RP-150506			A2G				
Yes		approved		11.5.1: Op	RP-150424	Revised WID: 2GHz FDD LTE Band for Region 1	DISH Network	WID	rev	RAN4	s		REL-13	LTE_1980_2170_REG1	revision of RP-150107; last approved WID: RP-141710;	RP-141710, RP-150107				Mr. John Kim	Dish Network	2/24/2015 13:09	last approved WID: RP-141710; Captures the recent RAN4 agreement on the band plan and updates rapporteurship

Samsung Exhibit 1025, Page 1296 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		approved		13.2: New	RP-150425	New WI proposal: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 5	Samsung	WID	new	RAN4	s (2DL/1UL)		REL-13	-	revision of RP-150282; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B5_BWset; note: LTE_CA_B3_B5 was a REL-11 WI	RP-150282		LTE		Mr. Xutao Zhou	Samsung Telecо	2/27/2015 9:48	Add new bandwidth combination set for CA_B3_B5
Yes		postponed		13.1.2: Ne	RP-150426	New WID proposal: Signalling Reduction for Idle-Active Transitions in LTE	Ericsson, Intel Corporation	WID	new	RAN2			REL-13	-	revision of RP-150311; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_SigRed_Trans; WI was not treated at RAN #66 in RP-142030; no Perf. part	RP-150312, RP-142030, RP-150311		LTE		Dr. Riikka Susitaival	Ericsson LM	2/27/2015 15:36	new WI for LTE; leading WG: RAN2; this WI proposal was postponed at RAN #66 in RP-142030
Yes		approved		13.1.4: Ne	RP-150427	New Work Item: LTE DL 4 Rx antenna ports	Ericsson	WID	new	RAN4			REL-13	-	revision of RP-150142; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_4Rx_AP_DL; follow-up WI of REL-13 SI FS_LTE_4Rx_AP_DL (see AI 12.4.9)	RP-150143, RP-150142		LTE	4RX	Ms. Maomao Chen	Ericsson GmbH,	2/25/2015 11:37	New WID for LTE DL 4Rx AP
Yes		approved		13.2: New	RP-150428	New WID on AWS-Extension Band for LTE	Ericsson	WID	new	RAN4	s		REL-13	-	revision of RP-150148; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_AWS_EXT; AWS = Advanced Wireless Services; to specify a band plan as follow-up of REL-13 SI FS_LTE_AWS_EXT (see TR 36.849); this is a paired band 1710-1780MHz / 2110-2200MHz with fixed duplex spacing; interoperability by means of CA is also proposed	RP-150150, RP-150195, RP-150148		LTE	AWS	Ms. Erika Tejedor	Ericsson LM	2/25/2015 17:50	This WID proposes to specify a band plan for following the outcome of the SI on AWS-Extension band for LTE (see TR 36.849). This is a paired band 1710 - 1780 MHz / 2110 - 2200 MHz with fixed duplex spacing. Interoperability b means of CA is also proposed
Yes		approved		13.2: New	RP-150429	New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 4 and Band 7	Rogers Communications	WID	new	RAN4	s (3DL/1UL)		REL-13	-	revision of RP-150111; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B4_B4_B7_BWset	RP-150111		LTE		Mr. Paul Nebesny	Rogers Commun	2/24/2015 14:51	New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 4 and Band 7
Yes		approved		13.2: New	RP-150430	New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 7 and Band 12	Rogers Communications	WID	new	RAN4	s (3DL/1UL)		REL-13	-	revision of RP-150112; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B4_B7_B12_BWset	RP-150112		LTE		Mr. Paul Nebesny	Rogers Commun	2/24/2015 14:54	New WI: Additional bandwidth combination set for LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 4, Band 7 and Band 12
Yes		approved		13.2: New	RP-150431	New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 7 and Band 12	Rogers Communications	WID	new	RAN4	s (3DL/1UL)		REL-13	-	revision of RP-150113; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B7_B12	RP-150113		LTE		Mr. Paul Nebesny	Rogers Commun	2/24/2015 14:57	New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 7 and Band 12
Yes		approved		13.2: New	RP-150432	New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 4 and Band 7	Rogers Communications	WID	new	RAN4	s (3DL/1UL)		REL-13	-	revision of RP-150114; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B7	RP-150114		LTE		Mr. Paul Nebesny	Rogers Commun	2/24/2015 15:01	New WI: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 2, Band 4 and Band 7
Yes		approved		13.2: New	RP-150433	New Work Item Proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 7, Band 20 and Band 38	Vodafone	WID	new	RAN4	s (3DL/1UL)		REL-13	-	revision of RP-150144; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B7_B20_B38	RP-150144		LTE		Mr. Tim Frost	VODAFONE Gro	2/25/2015 17:08	New 3DL LTE CA combination
Yes		approved		13.2: New	RP-150434	New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 5 and Band 40	SK Telecom	WID	new	RAN4	s (4DL/1UL)		REL-13	-	revision of RP-150418 (also including RP-150083 and RP-150084 aspects); new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B5_B40	RP-150085, RP-150418		LTE					
Yes		approved		13.2: New	RP-150435	New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 7 and Band 8	Nokia Networks	WID	new	RAN4	s (4DL/1UL)		REL-13	-	revision of RP-150172; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B7_B8	RP-150172		LTE		Dr. Hisashi Onozawa	Nokia Networks	J2/26/2015 9:09	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 7 and Band 8 is proposed.
Yes		approved		13.2: New	RP-150436	New work item proposal: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 5 and Band 29	Bell Mobility, TELUS, Huawei	WID	new	RAN4	s (4DL/1UL)		REL-13	-	revision of RP-150241; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B5_B29	RP-150241		LTE		Dr. David Mazzarese	Huawei Technolc	2/27/2015 6:15	new WI for LTE only; leading WG: RAN4
Yes		approved		13.2: New	RP-150437	New WID Proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 8	CMCC	WID	new	RAN4	s (C)		REL-13	-	revision of RP-150416; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_C_B8	RP-150194, RP-150416		LTE					
Yes		approved		13.2: New	RP-150438	New WI proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 4DL	CATT	WID	new	RAN4	s (C 4DL)		REL-13	-	revision of RP-150198; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_C_B42_4DL	RP-150198		LTE		Miss Yuexia Song	CATT	2/27/2015 0:30	this is a new WID on LTE advanced intra-band carrier aggregation in Band 42 for 4 DL CCs
Yes		revised		13.2: New	RP-150439	New WI proposal: LTE Advanced 3DL/2UL Inter-band Carrier Aggregation	Nokia Corporation, LG Electronics	WID	(new)	RAN4	s (3DL/2UL)		REL-13	-	revision of RP-150105; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_3DL_2UL; revised in RP-150479	RP-150105, RP-150479		LTE		Mr. Petri Vasenkari	Nokia Corporatio	2/24/2015 12:56	New WI for LTE only. This WID is only for WG RAN4.
Yes		noted		18.: Projec	RP-150440	5G Standardization Work Plan	NTT DOCOMO, Fujitsu, Hitachi, Kyocera, Mitsubishi, NEC, NTC, NTT,	Disc					-	-	revision of RP-150217	RP-150217			5G			2/27/2015 3:44	
Yes		approved		11.3.5: Op	RP-150441	Revised WID: Enhanced LTE Device to Device Proximity Services	Qualcomm Incorporated	WID	rev	RAN2			REL-13	LTE_eD2D_Prox	last approved WID: RP-142311	RP-142311							
Yes		agreed		07.2.2: ITU	RP-150442	Draft letter to ITU in reply to ITU-R WP5D/TEMP/521(Rev.1) = RP-150031 and ITU-R WP5D/TEMP/577 = RP-150041 on the detailed work plan, timeline, process and deliverables for the future development of International Mobile Telecommunications (IMT) (to: SA, cc: -; contact: Telecom Italia)	RAN	LTIout		LS06			-	-	will be provided to SA for review and from there to PCG for approval	RP-150031, RP-150041, RP-150043			5G				
Yes		noted		06.2: LSs f	RP-150443	CT-input to LETTER TO ITU ON 3GPP COMMENTS ON DRAFT REVISION 2 OF RECOMMENDATION ITU-R M.2012 (CP-150207; to: RAN; cc: -; contact: CT chair (Ericsson))	CT	LSin		LS07			-	-	received on Tue of RAN #67; related to ITU-R LS in RP-150029 and triggered by RP-150044; LS will be treated under AI 7.2.2; no RAN action required; no LS answer	RP-150029, RP-150044							
Yes		revised		12.4.03: O	RP-150444	Draft Response LS to IEEE_802_LMSC_150202 = RP-150024 regarding Coexistence of Licensed Assisted Access (LAA) and IEEE 802 (to: IEEE 802 LMSC; cc: -; contact: Ericsson)	Ericsson, Huawei	LSout		LS01			REL-13	FS_LTE_LAA	revised in RP-150454	RP-150024, RP-15454			LAA	Mr. Daniel Larsson	Ericsson LM		
Yes		revised		12.4.03: O	RP-150445	[DRAFT] LS on Licensed-Assisted Access (to: ETSI BRAN; cc: -; contact: Ericsson)	Ericsson, Huawei	LSout		LS08			REL-13	FS_LTE_LAA	revision of RP-150278; revised in RP-150455	RP-150278, RP-150455			LAA	Mr. Daniel Larsson	Ericsson LM		
Yes		revised		13.1.2: Ne	RP-150446	New WI Proposal: Multicarrier Load Distribution of UEs in LTE	Verizon, China Telecom, NTT DOCOMO, Inc, ZTE, Alcatel-Lucent	WID	(new)	RAN2			REL-13	-	revision of RP-150200; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_MC_load; WI was rejected at RAN #66 in RP-142279; revised in RP-150491	RP-142279, RP-150201, RP-150200, RP-150491		LTE		Dr. Yee Sin Chan	Verizon UK Ltd	2/27/2015 0:51	new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_MC_load; this WI proposal was postponed at RAN #66 in RP-142279
Yes		approved		11.4.2.03.	RP-150447	Revised Work Item Proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 8 and Band 28	SoftBank Mobile	WID	rev	RAN4	s (3DL/1UL)		REL-13	LTE_CA_B1_B8_B28	revision of RP-150067; last approved WID: RP-141826; to change TRs from new specs to affected specs	RP-141826, RP-150067				Mr. Kenichi Kihara	SOFTBANK MOE	2/18/2015 0:29	This revision is to change TRs from new specs. to affected specs.
Yes		approved		11.4.3.1: C	RP-150448	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 5 and Band 30	AT&T	WID	rev	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B2_B5_B30	last approved WID: RP-142199; revision of RP-150086	RP-142199, RP-150086				Mr. Marc Grant	AT&T GNS Belgi	2/23/2015 7:59	Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 5 and Band 30
Yes		approved		11.4.3.2: C	RP-150449	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 12 and Band 30	AT&T	WID	rev	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B2_B12_B30	last approved WID: RP-142198; revision of RP-150087	RP-142198, RP-150087				Mr. Marc Grant	AT&T GNS Belgi	2/23/2015 8:01	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 12 and Band 30

Samsung Exhibit 1025, Page 1297 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics		contact	contact company	reserved	info
Yes		approved		11.4.3.3: C	RP-150450	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 29 and Band 30	AT&T	WID	rev	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B2_B29_B30	last approved WID: RP-142200; revision of RP-150088	RP-142200, RP-150088					Mr. Marc Grant	AT&T GNS Belgi	2/23/2015 8:02	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 2, Band 29 and Band 30
Yes		approved		11.4.3.4: C	RP-150451	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 5 and Band 30	AT&T	WID	rev	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B4_B5_B30	last approved WID: RP-142202; revision of RP-150089	RP-142202, RP-150089					Mr. Marc Grant	AT&T GNS Belgi	2/23/2015 8:04	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 5 and Band 30
Yes		approved		11.4.3.5: C	RP-150452	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 12 and Band 30	AT&T	WID	rev	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B4_B12_B30	last approved WID: RP-142201; revision of RP-150090	RP-142201, RP-150090					Mr. Marc Grant	AT&T GNS Belgi	2/23/2015 8:05	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 12 and Band 30
Yes		approved		11.4.3.6: C	RP-150453	LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30	AT&T	WID	rev	RAN4	s (4DL/1UL)		REL-13	LTE_CA_B2_B4_B29_B30	revision of RP-150419; last approved WID: RP-142203;	RP-142203, RP-150091, RP-150419								
Yes		approved		12.4.03: O	RP-150454	Response LS to IEEE_802_LMSC_150202 = RP-150024 regarding Coexistence of Licensed Assisted Access (LAA) and IEEE 802 (to: IEEE 802 LMSC; cc: <, contact: Ericsson)	RAN	LSout		LS01			REL-13	FS_LTE_LAA	revision of RP-150444; sent out on Wed of RAN #67	RP-150024, RP-150444								
Yes		revised		12.4.03: O	RP-150455	[DRAFT] LS on Licensed-Assisted Access (to: ETSI BRAN; cc: <, contact: Ericsson)	Ericsson, Huawei	LSout		LS08			REL-13	FS_LTE_LAA	revision of RP-150445; revised in RP-150505	RP-150278, RP-150445, RP-150505			LAA		Mr. Daniel Larsson	Ericsson LM		
Yes		revised		12.4.05: O	RP-150456	New SI proposal: Study on Downlink Multiuser Superposition Transmission for LTE	Mediatek	SID	(new)	RAN1			REL-13	-	new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_MUST; note: The scope and title of SI FS_LTE_MUTX_NAIC has changed significantly, therefore it was decided to stop SI FS_LTE_MUTX_NAIC and to open instead this new SI with corresponding new scope and title; revised in RP-150496	RP-150186, RP-150214, RP-150496			LTE					
Yes		approved		12.4.09: O	RP-150457	Revised SID: Study on LTE DL 4 Rx antenna ports	Ericsson	SID	rev	RAN4			REL-13	FS_LTE_4Rx_AP_DL	revision of RP-150139; last approved SID: RP-142299;	RP-142299, RP-150139	y				Ms. Maomao Chen	Ericsson GmbH,	2/25/2015 11:29	Revised SID with TR name and complete date added
Yes		not treated		14.: UE ca	RP-150458	CR to 36.306 on new DL UE categories	Huawei, HiSilicon	CR	36.306	0268	1	C	REL-12	LTE_CA-Core, LTE_SC_enh_L1, TEI12	company contribution not related to RAN2 Tdocs; revision of RP-150298	RP-150242, RP-150298	cc			RAN2	Dr. David Mazzarese	Huawei Technolc	2/27/2015 14:06	company contribution not related to RAN2 Tdocs
Yes		not treated		14.: UE ca	RP-150459	CR to 36.331 on new DL UE categories	Huawei, HiSilicon	CR	36.331	1799	1	C	REL-12	LTE_CA-Core, LTE_SC_enh_L1, TEI12	company contribution not related to RAN2 Tdocs; revised in RP-150299	RP-150242, RP-150299	cc			RAN2	Dr. David Mazzarese	Huawei Technolc	2/27/2015 14:08	company contribution not related to RAN2 Tdocs
Yes	AH	revised		12.4.04: O	RP-150460	Text proposal TR 36.825: Frequency bands	Orange	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	for section 4.2; wrong TR number on TP; revision of RP-150401; revised in RP-150463	RP-150401, RP-150463								
Yes	AH	revised		12.4.04: O	RP-150461	Text proposal for Section 5 and 6 of TR 36.825	NEC	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	revision of RP-150402; revised in RP-150485	RP-150402, RP-150485								
Yes	AH	approved		12.4.04: O	RP-150462	TP for TR 36.825 on Deployment scenarios – synchronization aspects	NTT DOCOMO, INC.	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	revision of RP-150404	RP-150400, RP-150404								
Yes	AH	rejected		12.4.04: O	RP-150463	Text proposal TR 36.825: Frequency bands	Orange	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	revision of RP-150460	RP-150401, RP-150460								
No		withdrawn		13.1.4: Ne	RP-150464	New WID: RF requirements for LTE BS or MSR BS in case of common antenna with multi-band operation	ZTE	WID	new	RAN4			REL-13	-	new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_BS_Common_Ant; revision of RP-150270	RP-150270	y		LTE		Mr. Zhongda Du	ZTE Corporation	2/27/2015 9:28	
Yes		approved		13.1.2: Ne	RP-150465	New SI proposal: Study on Latency reduction techniques for LTE	Ericsson	SID	new	RAN2			REL-13	-	revision of RP-150309; new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_LATRED; SI was postponed at RAN #66 in RP-142025; note: REL-10 WI LTE_LATRED-Core was terminated in RP-091449 at RAN #50;	RP-142025, RP-150310, RP-150238, RP-150309			LTE	LATRED	Dr. Riikka Susitaival	Ericsson LM	2/27/2015 15:31	new SI for LTE; leading WG: RAN2; this SI proposal was postponed at RAN #66 in RP-142025
Yes		revised		13.1.2: Ne	RP-150466	New WI Proposal: RAN aspects of Application specific Congestion control for Data Communication	LG Electronics	WID	(new)	RAN2			REL-13	-	revision of RP-150422; new WI for; leading WG: RAN2; WI code to be used: ACDC-RAN; note: ACDC is a REL-13 WI in SA; at first approved but then revised in RP-150512 as time budget for UMTS in RAN2 was not indicated	RP-150166, RP-150167, RP-150422, RP-150512			UTRA, LTE	ACDC	Mr. Youngdae Lee	LG Electronics F	2/26/2015 8:38	
Yes		revised		18.: Projec	RP-150467	Getting ready for "5G"	RAN chairman (Qualcomm)	Disc					-	-	revision of RP-150056; revised in RP-150483	RP-150056, RP-150483				5G				
Yes		revised		13.1.1: Ne	RP-150468	New SID Proposal: study on interference coordination for semi-static spectrum refarming between UMTS and LTE	China Unicom	SID	(new)	RAN1			REL-13	-	revision of RP-150263; new SI for UTRA & LTE; leading WG: RAN1; WI code to be used: FS_UTRA_LTE_ICSSR; revised in RP-150503	RP-150266, RP-150263, RP-150503			UTRA, LTE				2/27/2015 9:21	
Yes		noted		13.1.4: Ne	RP-150469	Way forward on RAN4-led WI proposals for RAN#67	NTT DOCOMO, INC.	Disc					REL-13	-										
Yes		approved		13.1.: New	RP-150470	New SID: Study on regulatory aspects for flexible duplex for E-UTRAN	LG Electronics	SID	new	RAN			REL-13	-	revision of RP-150248; new SI for LTE only; leading WG: RAN; WI code to be used: FS_LTE_flex_duplex_reg; SI was postponed at RAN #66 in RP-142278;	RP-142278, RP-150249, RP-150250, RP-150199, RP-150248			LTE	flex_duplex			2/27/2015 8:01	
Yes		postponed		13.1.3: Ne	RP-150471	New SID Proposal: Study on HSPA and LTE Joint Operation	China Unicom	SID	new	RAN3			REL-13	-	revision of RP-150268; new SI for UTRA & LTE; leading WG: RAN3; WI code to be used: FS_UTRA_LTE_JOP; SI was rejected at RAN #66 in RP-141889;	RP-141889, RP-150273, RP-150268			UTRA, LTE				2/27/2015 9:27	
Yes		approved		13.1.2: Ne	RP-150472	New SID Proposal: Study on further Enhancements of Minimization of Drive Tests for E-UTRAN	CMCC	SID	new	RAN2			REL-13	-	revision of RP-150193; new SI for LTE only; leading WG: RAN2; WI code to be used: FS_LTE_eMDT2; SI was rejected at RAN #66 in RP-142242;	RP-142242, RP-150192, RP-150193			LTE	MDT			2/26/2015 15:54	New SI for LTE; Leading WG: RAN2
Yes		not treated		13.1.4: Ne	RP-150473	Way forward on RAN4-led SI/WI	Intel Corporation	Disc					REL-13	-										

Samsung Exhibit 1025, Page 1298 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc
Yes		revised		13.1.4: Ne	RP-150474	New WI: Interference mitigation for downlink control channels of LTE	Intel Corporation, ZTE	WID	(new)	RAN4			REL-13	-	revision of RP-150267;new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_IM_DLCCH; SI was rejected at RAN #66 in RP-142314 where it was proposed to be a RAN1-led SI, now proposed to be a RAN4-led WI; no Core part; revised in RP-150494	RP-150265, RP-142314, RP-150267, RP-150494
Yes		revised		13.1.4: Ne	RP-150475	New SI proposal: Study on Measurement gap enhancement for LTE	Intel Corporation	SID	(new)	RAN4			REL-13	-	revision of RP-150276; new SI for LTE only; leading WG: RAN4; WI code to be used: FS_LTE_meas_gap; SI was postponed at RAN#66 in RP-142261; revised in RP-150515 (as multiple versions of RP-150475 exist)	RP-150274, RP-1412261, RP-150276, RP-150515
Yes		noted		08.4.2: RA	RP-150476	Way forward on "Mandating Pcell support in UE for all bands of LTE-CA band combinations"	Vodafone	Disc					REL-12	LTE_CA_TEI12	way forward was approved	RP-150145
Yes		approved		07.2.2: ITU	RP-150477	Reply LS to ITU-R WP5D/TEMP/567 = RP-150028 ON CURRENT IMPLEMENTATION OF 700 MHz BAND PLAN WITHIN 3GPP SPECIFICATION (to: ITU-R WP5D; cc: -; contact: Ericsson)	RAN	LSout		LS05			REL-11	LTE_DL_FDD700, LTE_APAC700	will be sent out via 3GPP LS coordinator	RP-150028, RP-150039
Yes		agreed		07.2.2: ITU	RP-150478	Draft letter to ITU in reply to ITU-R WP5D/TEMP/530 = RP-150029 on 3GPP comments on draft revision 2 of Recommendation ITU-R M.2012 (to: SA; cc: -; contact: Telecom Italia)	RAN	LTIout		LS07			-	-	will be provided to SA for review and from there to PCG for approval	RP-150029, RP-150044, RP-150443
Yes		approved		13.2: New	RP-150479	New WI proposal: LTE Advanced 3DL/2UL Inter-band Carrier Aggregation	Nokia Corporation, LG Electronics	WID	new	RAN4	s (3DL/2UL)		REL-13	-	revision of RP-150439; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_3DL_2UL	RP-150105, RP-150439
Yes		noted		13.1.2: Ne	RP-150480	Way forward on new RAN2-led Rel-13 Work and Study Items	Ericsson, Huawei, HiSilicon, Qualcomm, Softbank Mobile, Sony, TeliaSonera, US Cellular, Inter Digital, Sierra Wireless, Telefonica, Light Squared, KDDI, Panasonic, Sprint, Verizon, Mediatek, T Mobile US, ZTE, Asustek, Motorola, US Dept of Commerce, China Telecom, Dish Network, SouthernLink, Telus, Elektrobit, Deutsche Telekom, Orange, Nokia Networks, III, ITRI, CoolPad, Telecom Italia	Disc					REL-13	-	way forward was endorsed	
Yes		revised		13.1.2: Ne	RP-150481	New WI proposal: LTE-WLAN Radio Level Integration and Interworking Enhancement	Intel Corporation, China Telecom, Qualcomm Incorporated	WID	(new)	RAN2			REL-13	-	revision of RP-150262 (but now a WI instead of a SI); new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_WLAN_radio; revised in RP-150504	RP-142280, RP-150180, RP-150307, RP-150262, RP-150504
Yes		revised		13.1.: New	RP-150482	DRAFT LS on 3GPP RAN Study on regulatory aspects for flexible duplex for E-UTRAN (to: ECC PT1, RRA; cc: -; contact: Telecom Italia)	Telecom Italia	LSout		LS11			REL-13	FS_LTE_flex_duplex_reg	revised in RP-150507	RP-150470, RP-150507
Yes		noted		18.: Projec	RP-150483	Getting ready for "5G"	RAN chairman (Qualcomm)	Disc					-	-	revision of RP-150467	RP-150056, RP-150467
Yes	AH	revised		12.4.04: O	RP-150484	Email discussion topics for the evaluation of additional TDD configuration(s)	NEC	Disc					REL-13	FS_LTE_TDD_add_config	topics for email discussion on RAN reflector after RAN #67; revised in RP-150486	RP-150486
Yes	AH	approved		12.4.04: O	RP-150485	Text proposal for Section 5 and 6 of TR 36.825	NEC	TP	36.825	RAN			REL-13	FS_LTE_TDD_add_config	revision of RP-150461	RP-150402, RP-150461
Yes	AH	approved		12.4.04: O	RP-150486	Email discussion topics for the evaluation of additional TDD configuration(s)	NEC	Disc					REL-13	FS_LTE_TDD_add_config	topics for email discussion on RAN reflector after RAN #67; revision of RP-150484	RP-150484
Yes	AH	revised		12.4.04: O	RP-150487	TR 36.825 v0.1.0 for Feasibility study on possible additional configuration for LTE TDD	CATT	TR	36.825	RAN			REL-13	FS_LTE_TDD_add_config	revision of RP-150152; summarizing the results of RAN #67 with revision marks compared to v0.0.1 in RP-150152; RP-150487 was agreed during RAN #67 but revised after RAN #67 in RP-150519 for an editorial clean-up	RP-150152, RP-150519
Yes		revised		10.6.5: Op	RP-150488	Draft LS regarding D2D off network operation (to: CT1; cc: SA2; contact: Sprint)	Sprint	LSout		LS09			REL-12	LTE_D2D_Prox-Core	related to LS in RP-150037	RP-150037, RP-150516
Yes		noted		14.: UE ca	RP-150489	Way forward on new UE categories in Rel-12	KDDI, Sprint, CMCC, Huawei, HiSilicon, Qualcomm, Ericsson, Nokia Corporation, Nokia Networks, Samsung	Disc					REL-12	TEI12	will go for 750/800Mbps and 1 Gbps UE category for REL-12; RAN1 will decide if 750Mbps or 800Mbps and the feature combination to get to the category	RP-150161
Yes		approved		13.1.2: Ne	RP-150490	New WI proposal: Dual Connectivity enhancements for LTE	NTT DOCOMO, INC.	WID	new	RAN2			REL-13	-	revision of RP-150415; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_dualC_enh; follow-up WI of REL-12 WI LTE_SC_enh_dualC	RP-150157, RP-141781, RP-150211, RP-150156, RP-150415
Yes		approved		13.1.2: Ne	RP-150491	New WI Proposal: Multicarrier Load Distribution of UEs in LTE	Verizon, China Telecom, NTT DOCOMO, Inc, ZTE, Alcatel-Lucent	WID	new	RAN2			REL-13	-	revision of RP-150446; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_MC_load; WI was rejected at RAN #66 in RP-142279;	RP-142279, RP-150201, RP-150200, RP-150446
Yes		approved		11.3.2: Op	RP-150492	Revised WID: Further LTE Physical Layer Enhancements for MTC	Ericsson	WID	rev	RAN1			REL-13	LTE_MTCe2_L1	last approved WID: RP-141865; revision of RP-150101	RP-141865, RP-150101
Yes		approved		13.1.2: Ne	RP-150493	New WI proposal: RAN enhancements for extended DRX in LTE	Qualcomm Incorporated	WID	new	RAN2			REL-13	-	revision of RP-150182; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_extDRX; WI was rejected at RAN #66 in RP-142277; no Perf. part	RP-150181, RP-142277, RP-150182
Yes		postponed		13.1.4: Ne	RP-150494	New WI: Interference mitigation for downlink control channels of LTE	Intel Corporation, ZTE	WID	new	RAN4			REL-13	-	revision of RP-150474;new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_IM_DLCCH; SI was rejected at RAN #66 in RP-142314 where it was proposed to be a RAN1-led SI, now proposed to be a RAN4-led WI; no Core part;	RP-150265, RP-142314, RP-150267, RP-150474
Yes		noted		11.3.2: Op	RP-150495	Status report for WI Further LTE Physical Layer Enhancements for MTC: rapporteur: Ericsson	RAN1	Report					REL-13	LTE_MTCe2_L1	revision of RP-150100	RP-150100

status	system	topics	contact	contact company	reserved	info
	LTE		Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:26	new WI for LTE only; leading WG: RAN4; this was a SI proposal targeted for RAN1 at RAN#66 in RP-142314. It is now proposed to be a RAN4-led WI.
	LTE		Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:35	new SI for LTE only; leading WG: RAN4; this SI proposal was postponed at RAN#66 in RP-142261
	LTE		Mr. Petri Vasenkari	Nokia Corporatio	2/24/2015 12:56	New WI for LTE only. This WID is only for WG RAN4.
	LTE	WLAN	Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:14	new SI for LTE only; leading WG: RAN2; this SI proposal was postponed at RAN#66 in RP-142280
		flex_duplex				
		5G				
	LTE	DualC	DualC			
	LTE		Dr. Yee Sin Chan	Verizon UK Ltd	2/27/2015 0:51	new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_MC_load; this WI proposal was postponed at RAN #66 in RP-142279
			Mr. Johan Bergman	Ericsson AB	2/24/2015 7:05	last approved WID: RP-141865
	LTE	DRX			2/26/2015 13:37	new WI for LTE only; leading WG: RAN2
	LTE		Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:26	new WI for LTE only; leading WG: RAN4; this was a SI proposal targeted for RAN1 at RAN#66 in RP-142314. It is now proposed to be a RAN4-led WI.
			Mr. Johan Bergman	Ericsson AB	2/24/2015 7:05	

Samsung Exhibit 1025, Page 1299 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc	status	system	topics	contact	contact company	reserved	info
Yes		approved		12.4.05: O	RP-150496	New SI proposal: Study on Downlink Multiuser Superposition Transmission for LTE	Mediatek	SID	new	RAN1			REL-13	-	revision of RP-150456; new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_MUST; note: The scope and title of SI FS_LTE_MUTX_NAIC has changed significantly, therefore it was decided to stop SI FS_LTE_MUTX_NAIC and to open instead this new SI with corresponding new scope and title;	RP-150186, RP-150214, RP-150456		LTE					
Yes		revised		13.1.3: Ne	RP-150497	Draft LS on Reporting to SA and SA2 on consequences for UPCON of RAN WI prioritisation	NEC	LSout		LS10			REL-13	-	related to new SI proposal for UPCON in RP-150291; revised in RP-150501	RP-150291, RP-150501			UPCON				
Yes		approved		10.3: Closi	RP-150498	Approval of TR 36.852-12 v2.0.1: E-UTRA inter-band Carrier Aggregation	Ericsson	TR	36.852-12	RAN4			REL-12	LTE_CA_B1_B8-Core	RAN4 TR 36.852-12 is provided for approval; note: TR 36.851 was provided to RAN #66 for information (RP-142015), then TR number was changed to TR 36.852-12; all TPs from Rel-12 WIs are implemented in this TR; revision of RP-150072 covering a number of late editorial review comments coming from a check by ETSI Edithelp;	RP-142015, RP-150072				Dr. Muhammad Kazmi	Ericsson LM	2/19/2015 15:02	In RAN#66 in RP-142015, the TR 36.852-12 v1.0.0 was submitted for information. All TPs from Rel-12 WIs are now implemented in the TR. The TR 36.852-12 is therefore proposed to be approved as V12.0.0.
Yes		not treated		13.1.1: Ne	RP-150499	New SI proposal: Feasibility Study on LTE-based V2X Services	LG Electronics	SID	new	RAN1			REL-13	-	revision of RP-150165; new SI for LTE only; leading WG: RAN1; WI code to be used: FS_LTE_V2X	RP-150164, RP-141958, RP-150165		LTE	V2X	Mr. Youngdae Lee	LG Electronics F	2/26/2015 8:34	
Yes		approved		13.1.3: Ne	RP-150500	New WI: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network	Ericsson	WID	new	RAN3			REL-13	-	revision of RP-150304; new WI for UTRA only; leading WG: RAN3; WI code to be used: CSPS_Coord-UTRA; note: CSPS_Coord is an SA2 REL-13 WI	RP-150305, RP-150304		UTRA		Mr. Martin Israelsson	Ericsson LM	2/27/2015 14:56	new WI for UTRAN only; leading WG: RAN3
Yes		revised		13.1.3: Ne	RP-150501	LS on Consequence of RAN WI prioritisation for UPCON work in SA2 (to: SA2; cc: SA; contact: NEC)	NEC	LSout		LS10			REL-13	-	related to new SI proposal for UPCON in RP-150291; revision of RP-150497; revised in RP-150514	RP-150291, RP-150497, RP-150514			UPCON				
Yes		noted		13.1.1: Ne	RP-150502	Way forward on new RAN1-led WI proposal on LTE bandwidth flexibility enhancements	Huawei, China Unicom, AT&T, Telefonica	Disc					REL-13	-	way forward was not agreed								
Yes		postponed		13.1.1: Ne	RP-150503	New SID Proposal: study on interference coordination for semi-static spectrum refarming between UMTS and LTE	China Unicom	SID	new	RAN1			REL-13	-	revision of RP-150468; new SI for UTRA & LTE; leading WG: RAN1; WI code to be used: FS_UTRA_LTE_ICSSR;	RP-150266, RP-150263, RP-150468		UTRA, LTE				2/27/2015 9:21	
Yes		revised		13.1.2: Ne	RP-150504	New WI proposal: LTE-WLAN Radio Level Integration and Interworking Enhancement	Intel Corporation, China Telecom, Qualcomm Incorporated	WID	(new)	RAN2			REL-13	-	revision of RP-150481; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_WLAN_radio; revised in RP-150510	RP-142280, RP-150180, RP-150307, RP-150262, RP-150481, RP-150510		LTE	WLAN	Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:14	new SI for LTE only; leading WG: RAN2; this SI proposal was postponed at RAN#66 in RP-142280
Yes		approved		12.4.03: O	RP-150505	LS on Licensed-Assisted Access (to: ETSI BRAN; cc: ; contact: Ericsson)	RAN	LSout		LS08			REL-13	FS_LTE_LAA	revision of RP-150455	RP-150278, RP-150445, RP-150455			LAA	Mr. Daniel Larsson	Ericsson LM		
Yes		approved		13.1.: New	RP-150506	3GPP TSG RAN views regarding Mission Critical Air Ground Air Communications	RAN	Disc					REL-13	-	based on RP-150315; revision of RP-150423	RP-150315, RP-150423			A2G				
Yes		revised		13.1.: New	RP-150507	Draft LS out to regulatory bodies on flexible duplex	Telecom Italia	LSout		LS11			REL-13	FS_LTE_flex_duplex_reg	revision of RP-150482, revised in RP-150509	RP-150470, RP-150482, RP-150509			flex_duplex				
Yes		noted		13.1.4: Ne	RP-150508	Way forward on RAN4 led WI/SI of RAN #67	NTT DOCOMO, INC., Ericsson, Qualcomm, TeliaSonera, China Unicom, US Cellular, AT&T, Bell Mobility, Softbank Mobile, Intel, Samsung, Alucatel lucent, Huawei, HiSilicon, NEC, KT, DISH, LGE, CATT, Microsoft, Deutsche Telekom, Telefonica, T-Mobile USA	Disc					REL-13	-	way forward was approved	RP-150469						2/27/2015 5:15	How to handle RAN4 related WI/SI is discussed.
Yes		approved		13.1.: New	RP-150509	LS on 3GPP RAN Study on regulatory aspects for flexible duplex for E-UTRAN (to: ECC PT1, FCC, RRA, National Communications Commission (TW), ARIB, CCSA, Wireless Adviser to the Government of India; cc: ; contact: Telecom Italia)	RAN	LSout		LS11			REL-13	FS_LTE_flex_duplex_reg	revision of RP-150507; for 2 weeks email discussion	RP-150470, RP-150482, RP-150507			flex_duplex				
Yes		approved		13.1.2: Ne	RP-150510	New WI proposal: LTE-WLAN Radio Level Integration and Interworking Enhancement	Intel Corporation, China Telecom, Qualcomm Incorporated	WID	new	RAN2			REL-13	-	revision of RP-150481; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_WLAN_radio;	RP-142280, RP-150180, RP-150307, RP-150262, RP-150481, RP-150504		LTE	WLAN	Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:14	new SI for LTE only; leading WG: RAN2; this SI proposal was postponed at RAN#66 in RP-142280
Yes		noted		14.: UE ca	RP-150511	Way forward in handling of RAN4 features	NTT DOCOMO, INC., Orange, TeliaSonera, AT&T, Telecom Italia, Softbank Mobile, Deutsche Telekom	Disc					REL-12	-	way forward was not approved								
Yes		approved		13.1.2: Ne	RP-150512	New WI Proposal: RAN aspects of Application specific Congestion control for Data Communication	LG Electronics	WID	new	RAN2			REL-13	-	revision of RP-150466; new WI for; leading WG: RAN2; WI code to be used: ACDC-RAN; note: ACDC is a REL-13 WI in SA	RP-150166, RP-150167, RP-150422, RP-150466		UTRA, LTE	ACDC	Mr. Youngdae Lee	LG Electronics F	2/26/2015 8:38	
Yes		postponed		13.1.1: Ne	RP-150513	New Work Item proposal: LTE bandwidth flexibility enhancements	Huawei, China Unicom, HiSilicon	WID	new	RAN1			REL-13	-	revision of RP-150236; new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_flex_BW; WI was postponed at RAN #66 in RP-141911	RP-150237, RP-141911, RP-150236		LTE		Dr. David Mazzarese	Huawei Technolc	2/27/2015 5:59	new WI for LTE only; leading WG: RAN1; Revision of RP-141911.
Yes		approved		13.1.3: Ne	RP-150514	LS on Consequence of RAN WI prioritisation for UPCON work in SA2 (to: SA2; cc: SA, RAN2, RAN3; contact: NEC)	RAN	LSout		LS10			REL-13	UPCON	related to new SI proposal for UPCON in RP-150291; revision of RP-150501	RP-150291, RP-150497, RP-150501			UPCON				
Yes		approved		13.1.4: Ne	RP-150515	New SI proposal: Study on Measurement gap enhancement for LTE	Intel Corporation	SID	new	RAN4			REL-13	-	revision of RP-150276; new SI for LTE only; leading WG: RAN4; WI code to be used: FS_LTE_meas_gap; SI was postponed at RAN#66 in RP-142261	RP-150274, RP-1412261, RP-150276, RP-150475		LTE		Dr. Mo-han Fong	Intel Corporation	2/27/2015 9:35	new SI for LTE only; leading WG: RAN4; this SI proposal was postponed at RAN#66 in RP-142261
Yes		approved		10.6.5: Op	RP-150516	LS regarding D2D off network operation (to: CT1; cc: SA2, RAN1, RAN2, RAN4, RAN5; contact: Sprint)	RAN	LSout		LS09			REL-12	LTE_D2D_Prox-Core	related to LSin RP-150037; revision of RP-150488	RP-150037, RP-150488							
Yes		noted		12.4.10: O	RP-150517	Status Report for SI: Study on performance enhancements for high speed scenario in LTE	RAN4	Report					REL-13	FS_LTE_high_speed	revision of RP-150158	RP-150158				Mr. Teshima Kunihiko	NTT DOCOMO II	2/26/2015 4:20	Core part: 5%, Sep. 2015
Yes		endorsed		13.: New W	RP-150518	Status of time budgets for RAN1/2/3/4 REL-12 & REL-13 WIs/SIs after RAN #67	RAN1/RAN2/RAN3/RAN4 chairmen	Report					REL-12	-	note: The status after RAN #66 was endorsed in RP-142318; revision of RP-150048	RP-142318, RP-150048							

Samsung Exhibit 1025, Page 1300 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Available	Late	status	Flag	Agenda it	Tdoc	Title	Source	Type	Spec	CR # or LS link	rev	cat	REL	SI/WI	further information	related Tdoc
Yes	AH	agreed		12.4.04: C	RP-150519	TR 36.825 v0.1.1 for Feasibility study on possible additional configuration for LTE TDD	CATT, ETSI MCC	TR	36.825	RAN			REL-13	FS_LTE_TDD_add_config	editorial clean-up of TR 36.825 v0.1.0 of RP-150487 to align with 3GPP drafting rules	RP-150152, RP-150487
Yes		agreed		07.2.2: ITU	RP-150520	DRAFT Letter to ITU in reply to ITU-R WP5D/TEMP/473 = RP-141756 on the schedule for updating Recommendation ITU-R M.1457 to Revision 13 (to: CT; cc: -; contact: Telecom Italia)	RAN	LTIout					REL-12	-	agreed by email after RAN #67; email discussion started on 14.04.15 by ITU-R ad hoc convener via RAN reflector; LTI will be provided to CT for review and from there afterwards to SA for review, finally it has to be approved by PCG on 28.04.15; note: This is a 2nd reply to RP-141756 (first reply was in RP-142247) and a final reply will be sent from RAN #70 in Dec.15	RP-141756, RP-142247

status	system	topics	contact	contact company	reserved	info

Samsung Exhibit 1025, Page 1301 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 38



3GPP_TSG_RAN Archives

June 2015, Week 1

3GPP_TSG_RAN@LIST.ETSI.ORG

Options: Use Monospaced Font
Show Text Part by Default
Show All Mail Headers

Message: [<< First] [< Prev] [Next >] [Last >>]
Topic: [<< First] [< Prev] [Next >] [Last >>]
Author: [<< First] [< Prev] [Next >] [Last >>]

Subject: draft report of RAN #67 as input for RAN #68
From: Joern Krause <[log in to unmask]>
Reply To: Joern Krause <[log in to unmask]>
Date: Mon, 1 Jun 2015 15:04:10 +0000
Content-Type: multipart/mixed
Parts/Attachments: text/plain (391 bytes) , text/html (2901 bytes) , RP-150526.zip (2 MB)

Dear all,
Please find attached the latest draft report of RAN #67 as input to RAN #68
(including now also executive summary, statistics, participants list, email agreed Tdocs etc.).

In case you have still any comments,
please send me an email before the submission deadline (Tue 09.06.2015 17:00 CEST).
Thanks.
BR
Joern

Joern Krause, ETSI MCC
[log in to unmask]

ATOM RSS1 RSS2

Samsung Exhibit 1025, Page 1303 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 39

www.3gpp.org / ftp / Specs / archive / 36_series / 36.213

	sort by name/desc	sort by date/desc	sort by size/desc
36213-010.zip	2006/10/13 8:05	40 KB
36213-020.zip	2007/01/03 7:50	89,2 KB
36213-021.zip	2007/02/07 15:28	45,3 KB
36213-100.zip	2007/03/19 15:45	45,6 KB
36213-120.zip	2007/06/13 17:52	44,2 KB
36213-200.zip	2007/09/24 9:01	58,6 KB
36213-210.zip	2007/09/24 9:01	58,4 KB
36213-800.zip	2007/09/27 11:44	57,7 KB
36213-810.zip	2007/12/18 16:12	81,4 KB
36213-820.zip	2008/03/18 15:39	153,4 KB
36213-830.zip	2008/06/18 10:42	290,6 KB
36213-840.zip	2008/09/19 6:46	409,9 KB
36213-850.zip	2008/12/22 8:47	604,7 KB
36213-860.zip	2009/03/13 20:38	655,9 KB
36213-870.zip	2009/06/08 11:43	660,9 KB
36213-880.zip	2009/09/19 21:53	660 KB
36213-900.zip	2009/12/13 17:59	714,7 KB
36213-901.zip	2009/12/17 9:23	717,9 KB
36213-910.zip	2010/03/21 10:41	721,5 KB
36213-920.zip	2010/06/10 9:35	722,6 KB
36213-930.zip	2010/09/17 20:18	602,8 KB
36213-a00.zip	2010/12/22 11:20	824,9 KB
36213-a01.zip	2010/12/28 10:37	812,9 KB
36213-a10.zip	2011/03/30 13:04	938,2 KB
36213-a20.zip	2011/06/22 6:53	1014,9 KB
36213-a30.zip	2011/09/25 21:03	1033,9 KB
36213-a40.zip	2011/12/15 13:29	1134,7 KB
36213-a50.zip	2012/03/07 16:47	1139 KB
36213-a60.zip	2012/06/26 12:35	1144,7 KB
36213-a70.zip	2012/09/18 17:24	1145 KB

Samsung Exhibit 1025, Page 1305 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
36213-a80.zip	2012/12/15 20:44	1144,1 KB
36213-a90.zip	2013/03/12 17:05	1150,1 KB
36213-aa0.zip	2013/06/18 9:14	1155,6 KB
36213-ab0.zip	2013/12/14 15:28	1166,7 KB
36213-ac0.zip	2014/03/18 17:05	1026,5 KB
36213-ad0.zip	2015/06/25 16:52	1032 KB
36213-b00.zip	2012/09/18 17:19	1221,5 KB
36213-b10.zip	2012/12/20 9:38	1321,8 KB
36213-b20.zip	2013/03/15 14:36	1467,2 KB
36213-b30.zip	2013/06/25 13:58	1508,9 KB
36213-b40.zip	2013/09/20 15:29	1524,2 KB
36213-b50.zip	2013/12/15 8:18	1491,4 KB
36213-b60.zip	2014/03/19 10:37	1357,4 KB
36213-b70.zip	2014/06/19 14:34	1357,9 KB
36213-b80.zip	2014/09/22 14:49	1358,2 KB
36213-b90.zip	2015/01/03 21:50	1360 KB
36213-ba0.zip	2015/03/16 15:20	1359,9 KB
36213-bb0.zip	2015/06/25 19:53	1370,4 KB
36213-bc0.zip	2016/09/29 10:17	1368,8 KB
36213-bd0.zip	2017/09/26 19:59	1371,9 KB
36213-c00.zip	2013/12/15 9:48	1599,9 KB
36213-c10.zip	2014/03/19 12:16	1421,5 KB
36213-c20.zip	2014/06/30 20:36	1650,3 KB
36213-c30.zip	2014/09/26 7:58	1691,2 KB
36213-c40.zip	2015/01/07 7:14	1820,9 KB
36213-c50.zip	2015/03/25 21:24	1671 KB
36213-c60.zip	2015/07/03 4:34	1801,1 KB
36213-c70.zip	2015/09/24 16:06	1843,9 KB
36213-c80.zip	2015/12/09 10:51	1849,2 KB
36213-c90.zip	2016/03/28 16:30	1848,8 KB
36213-c91.zip	2016/03/31 14:21	1849,1 KB
36213-ca0.zip	2016/06/30 12:55	1849,8 KB
36213-cb0.zip	2016/09/29 11:02	1849,4 KB
36213-cc0.zip	2017/09/26 20:01	1850 KB

Samsung Exhibit 1025, Page 1306 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

	sort by name/desc	sort by date/desc	sort by size/desc
	36213-cd0.zip	2018/10/01 18:09	1854,1 KB
	36213-d00.zip	2016/01/05 16:38	2956,6 KB
	36213-d01.zip	2016/01/26 17:05	2956,8 KB
	36213-d10.zip	2016/03/29 21:25	3197,1 KB
	36213-d11.zip	2016/03/31 14:18	3197,4 KB
	36213-d20.zip	2016/06/30 12:57	3361,8 KB
	36213-d30.zip	2016/09/29 11:04	3386,6 KB
	36213-d40.zip	2017/01/02 16:37	3399,9 KB
	36213-d50.zip	2017/03/23 11:57	3403,7 KB
	36213-d60.zip	2017/06/23 20:15	3420,7 KB
	36213-d70.zip	2017/09/26 19:58	3419,3 KB
	36213-d80.zip	2018/01/09 16:52	3439,6 KB
	36213-d90.zip	2018/04/03 13:23	3272,9 KB
	36213-da0.zip	2018/07/08 20:30	3303,3 KB
	36213-db0.zip	2018/10/01 18:08	3300,1 KB
	36213-dc0.zip	2019/01/11 14:15	3307,5 KB
	36213-dd0.zip	2019/03/28 10:49	3306,6 KB
	36213-de0.zip	2019/06/24 9:59	3298,4 KB
	36213-df0.zip	2020/01/06 15:28	3252,7 KB
	36213-dg0.zip	2020/04/03 11:15	3249,1 KB
	36213-e00.zip	2016/09/29 11:07	3557,3 KB
	36213-e10.zip	2017/01/02 16:39	3615 KB
	36213-e20.zip	2017/03/23 13:03	3902,4 KB
	36213-e30.zip	2017/06/23 20:16	3940,7 KB
	36213-e40.zip	2017/09/26 19:56	4002,8 KB
	36213-e50.zip	2018/01/10 6:57	3994,7 KB
	36213-e60.zip	2018/04/03 13:24	3731,4 KB
	36213-e70.zip	2018/07/08 20:50	3779,4 KB
	36213-e80.zip	2018/10/01 18:06	3693,4 KB
	36213-e90.zip	2019/01/11 14:16	3704,3 KB
	36213-ea0.zip	2019/03/28 10:53	3711,5 KB
	36213-eb0.zip	2019/06/24 9:57	3707 KB
	36213-ec0.zip	2019/09/28 19:54	3650 KB
	36213-ed0.zip	2020/01/06 15:30	3655,1 KB

Samsung Exhibit 1025, Page 1307 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

	sort by name/desc	sort by date/desc	sort by size/desc
	36213-ee0.zip	2020/04/03 11:16	3652,8 KB
	36213-ef0.zip	2020/07/14 9:48	3653,8 KB
	36213-eg0.zip	2020/10/01 15:17	3657 KB
	36213-eh0.zip	2021/06/30 20:40	4126,1 KB
	36213-f00.zip	2018/01/16 16:05	4103,9 KB
	36213-f10.zip	2018/04/03 13:25	3856 KB
	36213-f20.zip	2018/07/19 9:47	3899,6 KB
	36213-f30.zip	2018/10/01 18:05	3943,8 KB
	36213-f40.zip	2019/01/11 14:17	3977,3 KB
	36213-f50.zip	2019/03/28 12:22	3991,1 KB
	36213-f60.zip	2019/06/24 9:56	3992,7 KB
	36213-f70.zip	2019/09/28 19:56	3953,3 KB
	36213-f80.zip	2020/01/06 15:31	3925,8 KB
	36213-f90.zip	2020/04/03 11:18	3926,4 KB
	36213-fa0.zip	2020/07/14 9:49	3924,9 KB
	36213-fb0.zip	2020/10/01 15:18	3919,7 KB
	36213-fc0.zip	2021/01/08 8:10	3922,5 KB
	36213-fd0.zip	2021/03/31 7:58	4203,9 KB
	36213-fe0.zip	2021/06/30 20:41	4225,4 KB
	36213-ff0.zip	2021/09/28 7:38	4254,6 KB
	36213-fg0.zip	2022/09/21 10:01	4212,1 KB
	36213-g00.zip	2020/01/14 15:39	4081,8 KB
	36213-g10.zip	2020/04/03 11:20	4107,3 KB
	36213-g20.zip	2020/07/14 9:51	4114,1 KB
	36213-g30.zip	2020/10/01 15:19	4120,1 KB
	36213-g40.zip	2021/01/08 8:12	4126,5 KB
	36213-g50.zip	2021/03/31 7:59	4436 KB
	36213-g60.zip	2021/06/30 20:42	4463,9 KB
	36213-g70.zip	2021/09/28 7:40	4484 KB
	36213-g71.zip	2021/10/25 18:55	4482,1 KB
	36213-g80.zip	2022/01/05 19:35	4483,2 KB
	36213-g90.zip	2022/09/21 10:03	4437,3 KB
	36213-ga0.zip	2024/01/09 9:09	4423,4 KB
	36213-h00.zip	2022/01/05 19:37	4526,4 KB

Samsung Exhibit 1025, Page 1308 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

	sort by name/desc	sort by date/desc	sort by size/desc
	36213-h10.zip	2022/04/01 20:43	4509,3 KB
	36213-h20.zip	2022/06/23 7:04	4423,8 KB
	36213-h30.zip	2022/09/21 10:04	4434,8 KB
	36213-h40.zip	2023/01/04 15:12	4422 KB
	36213-h50.zip	2023/03/30 8:07	4440,7 KB
	36213-h60.zip	2024/01/09 9:12	4436,4 KB
	36213-i00.zip	2023/09/28 9:35	4492,3 KB
	36213-i10.zip	2024/01/09 9:14	4483,5 KB

140 items.

Samsung Exhibit 1025, Page 1309 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 40

www.3gpp.org / ftp / tsg_ran / TSG_RAN / TSGR_67 / Docs

sort by name/desc	sort by date/desc	sort by size/desc
RP-150001.zip	2015/02/06 9:37	35,4 KB
RP-150002.zip	2015/02/09 21:19	3203,5 KB
RP-150003.zip	2015/03/08 14:02	5308,1 KB
RP-150004.zip	2015/03/05 10:47	23,4 KB
RP-150005.zip	2015/03/06 15:00	549 KB
RP-150006.zip	2015/03/05 17:22	13,5 KB
RP-150007.zip	2015/03/05 10:46	735,2 KB
RP-150008.zip	2015/03/05 15:58	25,2 KB
RP-150009.zip	2015/03/08 3:22	1447,2 KB
RP-150010.zip	2015/03/05 22:59	19,9 KB
RP-150011.zip	2015/03/03 13:05	492,3 KB
RP-150012.zip	2015/03/07 19:37	36,6 KB
RP-150013.zip	2015/03/02 14:04	28,4 KB
RP-150014.zip	2015/03/08 3:22	687,5 KB
RP-150015.zip	2015/03/08 19:09	79 KB
RP-150016.zip	2015/03/02 14:13	1998,8 KB
RP-150017.zip	2015/03/08 11:03	4015,3 KB
RP-150018.zip	2015/03/09 12:13	3266,8 KB
RP-150019.zip	2015/02/03 9:09	479,9 KB
RP-150020.zip	2015/02/03 9:09	573,8 KB
RP-150021.zip	2015/02/03 9:09	14,9 KB
RP-150022.zip	2015/02/03 9:09	7,9 KB
RP-150023.zip	2015/02/03 9:09	24,5 KB
RP-150024.zip	2015/02/03 9:09	1152,5 KB
RP-150025.zip	2015/02/03 9:09	97,6 KB
RP-150026.zip	2015/02/05 13:55	15,3 KB
RP-150027.zip	2015/02/05 13:55	17,3 KB
RP-150028.zip	2015/02/05 13:55	44 KB
RP-150029.zip	2015/02/13 22:31	1269 KB
RP-150030.zip	2015/02/13 22:31	95,6 KB

Samsung Exhibit 1025, Page 1311 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150031.zip	2015/02/18 22:18	44,7 KB
RP-150032.zip	2015/02/18 22:18	38,8 KB
RP-150033.zip	2015/02/18 22:18	17,8 KB
RP-150034.zip	2015/02/18 22:18	46,6 KB
RP-150035.zip	2015/02/18 22:18	10,7 KB
RP-150036.zip	2015/02/18 22:18	45,1 KB
RP-150037.zip	2015/02/18 22:18	11 KB
RP-150038.zip	2015/02/18 22:18	13,5 KB
RP-150039.zip	2015/02/18 22:18	12,6 KB
RP-150040.zip	2015/02/19 13:49	7910,8 KB
RP-150041.zip	2015/02/20 10:04	1511,7 KB
RP-150042.zip	2015/03/03 18:31	96,7 KB
RP-150043.zip	2015/03/02 22:11	13,5 KB
RP-150044.zip	2015/03/02 22:11	13,7 KB
RP-150048.zip	2015/03/12 16:12	289,3 KB
RP-150049.zip	2015/03/05 22:59	71,4 KB
RP-150050.zip	2015/03/09 12:13	27,6 KB
RP-150051.zip	2015/03/09 12:13	13,3 KB
RP-150052.zip	2015/03/09 12:13	10,3 KB
RP-150053.zip	2015/03/07 1:35	18,8 KB
RP-150054.zip	2015/03/01 19:05	178,6 KB
RP-150055.zip	2015/02/11 19:05	499,2 KB
RP-150056.zip	2015/02/24 13:59	506,3 KB
RP-150057.zip	2015/03/11 8:54	6947,2 KB
RP-150058.zip	2015/03/06 2:57	286,5 KB
RP-150059.zip	2015/03/08 16:34	1111,4 KB
RP-150060.zip	2015/03/13 3:22	3206,7 KB
RP-150061.zip	2015/03/02 8:51	20,3 KB
RP-150062.zip	2015/03/02 16:07	18,8 KB
RP-150063.zip	2015/03/02 16:06	19,4 KB
RP-150064.zip	2015/03/03 14:18	44,2 KB
RP-150065.zip	2015/03/03 12:22	34,9 KB
RP-150066.zip	2015/03/03 12:23	35,1 KB
RP-150067.zip	2015/02/24 3:34	24,3 KB

Samsung Exhibit 1025, Page 1312 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150068.zip	2015/02/24 0:54	44,9 KB
RP-150069.zip	2015/02/24 0:55	52,2 KB
RP-150070.zip	2015/02/24 0:56	21,8 KB
RP-150071.zip	2015/02/24 0:57	22,3 KB
RP-150072.zip	2015/03/03 15:38	634,9 KB
RP-150073.zip	2015/03/03 13:34	26,2 KB
RP-150074.zip	2015/03/03 13:35	26,4 KB
RP-150075.zip	2015/03/03 13:36	25,7 KB
RP-150076.zip	2015/02/27 11:20	151,8 KB
RP-150077.zip	2015/02/27 11:27	27,9 KB
RP-150078.zip	2015/02/27 11:59	92,8 KB
RP-150079.zip	2015/02/27 11:31	26 KB
RP-150080.zip	2015/03/01 3:34	25,7 KB
RP-150081.zip	2015/03/03 14:31	23 KB
RP-150082.zip	2015/03/03 15:56	27,6 KB
RP-150083.zip	2015/02/27 7:38	25,5 KB
RP-150084.zip	2015/02/27 7:49	25,4 KB
RP-150085.zip	2015/02/27 7:42	26,8 KB
RP-150086.zip	2015/03/02 15:12	27 KB
RP-150087.zip	2015/03/02 15:13	27 KB
RP-150088.zip	2015/03/02 15:14	26,7 KB
RP-150089.zip	2015/03/02 15:15	25,2 KB
RP-150090.zip	2015/03/02 15:17	25,7 KB
RP-150091.zip	2015/03/02 15:18	26,1 KB
RP-150093.zip	2015/03/03 2:28	639,2 KB
RP-150094.zip	2015/03/03 2:14	43,2 KB
RP-150095.zip	2015/03/03 2:47	23,4 KB
RP-150096.zip	2015/03/03 3:11	20,9 KB
RP-150098.zip	2015/02/25 22:33	18 KB
RP-150100.zip	2015/03/03 15:43	48,4 KB
RP-150101.zip	2015/03/03 15:48	31,9 KB
RP-150102.zip	2015/03/03 15:50	42,6 KB
RP-150103.zip	2015/03/02 14:14	24,9 KB
RP-150104.zip	2015/03/02 14:15	20 KB

Samsung Exhibit 1025, Page 1313 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150105.zip	2015/03/03 13:36	37,3 KB
RP-150106.zip	2015/03/02 20:48	21,2 KB
RP-150107.zip	2015/03/02 20:49	26,5 KB
RP-150108.zip	2015/03/02 9:15	312,6 KB
RP-150109.zip	2015/03/02 9:20	29,4 KB
RP-150110.zip	2015/03/02 9:12	20,4 KB
RP-150111.zip	2015/03/02 19:42	26,5 KB
RP-150112.zip	2015/03/02 19:41	26,7 KB
RP-150113.zip	2015/03/02 19:39	27,1 KB
RP-150114.zip	2015/03/02 19:37	26,6 KB
RP-150115.zip	2015/03/03 13:35	53,3 KB
RP-150116.zip	2015/03/03 17:31	336,1 KB
RP-150117.zip	2015/03/03 17:31	314 KB
RP-150118.zip	2015/03/02 9:58	142,6 KB
RP-150119.zip	2015/03/02 0:47	56,2 KB
RP-150120.zip	2015/03/02 0:53	16,3 KB
RP-150121.zip	2015/03/03 9:09	26,7 KB
RP-150122.zip	2015/03/03 9:11	26,6 KB
RP-150123.zip	2015/03/03 9:12	26,5 KB
RP-150124.zip	2015/03/03 9:14	26,5 KB
RP-150125.zip	2015/03/03 9:17	26,5 KB
RP-150126.zip	2015/03/03 5:05	59 KB
RP-150127.zip	2015/03/03 5:08	22 KB
RP-150128.zip	2015/03/03 5:10	21 KB
RP-150129.zip	2015/03/03 5:11	26,3 KB
RP-150130.zip	2015/03/03 5:14	22,3 KB
RP-150131.zip	2015/03/03 5:19	25,8 KB
RP-150132.zip	2015/02/25 9:47	89,4 KB
RP-150133.zip	2015/02/25 9:48	43,9 KB
RP-150134.zip	2015/02/25 11:56	21,2 KB
RP-150135.zip	2015/02/25 11:56	34,1 KB
RP-150136.zip	2015/02/25 11:57	33,7 KB
RP-150137.zip	2015/02/25 11:57	34,2 KB
RP-150138.zip	2015/03/03 11:20	23,1 KB

Samsung Exhibit 1025, Page 1314 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150139.zip	2015/03/03 11:21	25,4 KB
RP-150140.zip	2015/02/27 10:48	577,2 KB
RP-150141.zip	2015/03/12 16:12	275,9 KB
RP-150142.zip	2015/03/03 11:24	28 KB
RP-150143.zip	2015/03/03 11:22	437,3 KB
RP-150144.zip	2015/03/03 15:19	26,8 KB
RP-150145.zip	2015/03/03 15:21	24,4 KB
RP-150146.zip	2015/02/27 14:46	25,8 KB
RP-150147.zip	2015/02/27 14:47	22,5 KB
RP-150148.zip	2015/03/03 14:35	26,6 KB
RP-150149.zip	2015/03/02 14:49	21,4 KB
RP-150150.zip	2015/03/03 14:36	111,6 KB
RP-150151.zip	2015/02/27 12:57	45,8 KB
RP-150152.zip	2015/02/27 8:52	163,7 KB
RP-150153.zip	2015/02/27 8:54	24,2 KB
RP-150154.zip	2015/03/03 0:05	20,7 KB
RP-150155.zip	2015/03/02 6:25	99,6 KB
RP-150156.zip	2015/03/03 13:47	70,8 KB
RP-150157.zip	2015/03/03 11:56	60,7 KB
RP-150158.zip	2015/03/03 13:48	49,8 KB
RP-150159.zip	2015/03/03 13:49	117,1 KB
RP-150160.zip	2015/03/03 9:36	50,8 KB
RP-150161.zip	2015/03/03 9:54	22,4 KB
RP-150162.zip	2015/03/03 8:25	26,9 KB
RP-150163.zip	2015/03/03 8:27	25,2 KB
RP-150164.zip	2015/03/03 7:43	239,9 KB
RP-150165.zip	2015/03/03 7:44	31,9 KB
RP-150166.zip	2015/03/03 7:44	138,9 KB
RP-150167.zip	2015/03/03 7:44	30,5 KB
RP-150168.zip	2015/02/27 9:24	147,8 KB
RP-150169.zip	2015/03/02 2:10	259,8 KB
RP-150170.zip	2015/03/03 8:28	30,5 KB
RP-150171.zip	2015/03/03 11:48	22,7 KB
RP-150172.zip	2015/03/03 11:44	28,7 KB

Samsung Exhibit 1025, Page 1315 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150173.zip	2015/03/03 4:24	59,3 KB
RP-150174.zip	2015/03/03 4:25	55,3 KB
RP-150175.zip	2015/03/03 4:26	22,3 KB
RP-150176.zip	2015/03/03 14:16	25,3 KB
RP-150177.zip	2015/03/03 14:16	32 KB
RP-150178.zip	2015/03/03 13:55	57,6 KB
RP-150179.zip	2015/03/03 10:53	24,3 KB
RP-150180.zip	2015/03/03 12:03	729,4 KB
RP-150181.zip	2015/03/03 12:05	701,6 KB
RP-150182.zip	2015/03/03 12:06	27,7 KB
RP-150183.zip	2015/03/03 12:07	683,7 KB
RP-150184.zip	2015/03/03 12:08	25 KB
RP-150185.zip	2015/02/27 14:49	1653,7 KB
RP-150186.zip	2015/03/03 15:50	70 KB
RP-150187.zip	2015/03/03 2:49	26,6 KB
RP-150188.zip	2015/03/02 14:20	22,6 KB
RP-150189.zip	2015/03/03 9:44	26,8 KB
RP-150190.zip	2015/03/03 1:47	44 KB
RP-150191.zip	2015/03/03 2:04	25,4 KB
RP-150192.zip	2015/03/03 2:05	355,1 KB
RP-150193.zip	2015/03/03 2:33	53,6 KB
RP-150194.zip	2015/03/03 2:36	26,2 KB
RP-150195.zip	2015/03/02 19:34	169,2 KB
RP-150196.zip	2015/03/03 13:48	23,1 KB
RP-150197.zip	2015/03/04 7:25	776,8 KB
RP-150198.zip	2015/03/02 10:00	26,6 KB
RP-150199.zip	2015/02/27 0:44	36,3 KB
RP-150200.zip	2015/03/03 15:30	26,6 KB
RP-150201.zip	2015/03/02 20:05	810,8 KB
RP-150202.zip	2015/03/02 2:04	24,1 KB
RP-150203.zip	2015/03/03 8:30	35,7 KB
RP-150204.zip	2015/03/03 1:35	31,9 KB
RP-150205.zip	2015/03/03 1:37	25 KB
RP-150206.zip	2015/03/03 1:38	30 KB

Samsung Exhibit 1025, Page 1316 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150207.zip	2015/03/03 5:04	47,8 KB
RP-150208.zip	2015/02/27 12:31	287,9 KB
RP-150209.zip	2015/03/03 3:52	72,3 KB
RP-150210.zip	2015/02/27 14:22	23,7 KB
RP-150211.zip	2015/03/03 13:48	458,6 KB
RP-150212.zip	2015/03/03 8:55	42,9 KB
RP-150213.zip	2015/03/03 7:38	21,4 KB
RP-150214.zip	2015/03/03 7:33	50,7 KB
RP-150215.zip	2015/03/03 7:31	20,2 KB
RP-150216.zip	2015/03/03 8:28	982,3 KB
RP-150217.zip	2015/03/03 9:51	577,2 KB
RP-150218.zip	2015/02/27 10:58	91,7 KB
RP-150219.zip	2015/03/03 13:22	23,6 KB
RP-150220.zip	2015/03/03 13:24	27 KB
RP-150221.zip	2015/03/03 13:26	779,1 KB
RP-150222.zip	2015/03/03 13:28	403,1 KB
RP-150223.zip	2015/03/03 4:35	26,7 KB
RP-150224.zip	2015/03/03 4:35	52,6 KB
RP-150225.zip	2015/03/03 4:36	161,6 KB
RP-150226.zip	2015/03/03 4:43	21 KB
RP-150227.zip	2015/03/03 4:43	21,3 KB
RP-150228.zip	2015/03/03 13:52	40,1 KB
RP-150229.zip	2015/03/03 4:44	23,4 KB
RP-150230.zip	2015/02/27 12:42	167,6 KB
RP-150231.zip	2015/03/03 4:45	28,4 KB
RP-150232.zip	2015/03/03 4:45	32,6 KB
RP-150233.zip	2015/03/03 4:45	28 KB
RP-150234.zip	2015/03/03 4:46	28,1 KB
RP-150235.zip	2015/03/03 4:46	27 KB
RP-150236.zip	2015/03/03 13:58	33,3 KB
RP-150237.zip	2015/03/03 13:58	316,5 KB
RP-150238.zip	2015/03/03 13:59	433,9 KB
RP-150239.zip	2015/03/03 13:59	29,3 KB
RP-150240.zip	2015/03/03 13:59	40,7 KB

Samsung Exhibit 1025, Page 1317 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150241.zip	2015/03/03 4:46	27,3 KB
RP-150242.zip	2015/03/03 14:16	35,8 KB
RP-150243.zip	2015/03/03 14:17	41,1 KB
RP-150244.zip	2015/03/03 15:46	34,4 KB
RP-150245.zip	2015/03/03 4:47	25,9 KB
RP-150246.zip	2015/03/03 4:47	25,8 KB
RP-150247.zip	2015/02/27 12:52	184,7 KB
RP-150248.zip	2015/03/03 11:34	25,7 KB
RP-150249.zip	2015/03/03 11:35	110,7 KB
RP-150250.zip	2015/03/03 11:37	85 KB
RP-150251.zip	2015/02/27 14:56	26,9 KB
RP-150252.zip	2015/02/27 13:12	40 KB
RP-150253.zip	2015/02/27 13:13	37,5 KB
RP-150254.zip	2015/02/27 13:15	37,8 KB
RP-150255.zip	2015/02/27 13:16	164,5 KB
RP-150256.zip	2015/03/03 0:07	24,3 KB
RP-150257.zip	2015/03/03 0:09	1258,2 KB
RP-150258.zip	2015/03/03 0:10	23,9 KB
RP-150259.zip	2015/03/03 0:11	37,1 KB
RP-150260.zip	2015/03/03 2:54	22,1 KB
RP-150261.zip	2015/03/03 4:44	57,8 KB
RP-150262.zip	2015/03/03 14:38	26,5 KB
RP-150263.zip	2015/03/03 11:05	29,5 KB
RP-150264.zip	2015/03/03 11:51	789,6 KB
RP-150265.zip	2015/03/03 5:00	43,6 KB
RP-150266.zip	2015/03/03 11:08	86,3 KB
RP-150267.zip	2015/03/03 5:03	27,1 KB
RP-150268.zip	2015/03/03 8:04	24 KB
RP-150270.zip	2015/03/02 19:14	25,8 KB
RP-150271.zip	2015/03/03 8:27	40,3 KB
RP-150272.zip	2015/03/03 13:32	39,4 KB
RP-150273.zip	2015/03/03 8:11	137,3 KB
RP-150274.zip	2015/03/03 5:50	33 KB
RP-150275.zip	2015/03/03 10:11	227,7 KB

Samsung Exhibit 1025, Page 1318 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150276.zip	2015/03/03 5:55	25,5 KB
RP-150277.zip	2015/03/03 10:13	37,8 KB
RP-150278.zip	2015/03/03 8:28	10,2 KB
RP-150279.zip	2015/03/03 8:33	2030,5 KB
RP-150280.zip	2015/03/03 8:34	23,7 KB
RP-150281.zip	2015/03/03 10:46	995,1 KB
RP-150282.zip	2015/03/03 15:33	33,9 KB
RP-150283.zip	2015/03/03 10:47	23,2 KB
RP-150284.zip	2015/03/03 10:48	164,9 KB
RP-150285.zip	2015/03/03 13:50	26,4 KB
RP-150286.zip	2015/03/03 13:50	74,2 KB
RP-150287.zip	2015/02/27 13:16	11,6 KB
RP-150288.zip	2015/03/03 13:56	15,8 KB
RP-150289.zip	2015/03/03 15:01	20,7 KB
RP-150290.zip	2015/03/03 15:02	42,3 KB
RP-150291.zip	2015/03/03 15:03	24,2 KB
RP-150292.zip	2015/02/27 12:28	16,7 KB
RP-150293.zip	2015/03/03 14:02	1098,2 KB
RP-150294.zip	2015/03/03 13:38	24,4 KB
RP-150295.zip	2015/03/03 13:38	125,5 KB
RP-150296.zip	2015/03/03 13:39	24,6 KB
RP-150297.zip	2015/03/03 13:39	156,3 KB
RP-150298.zip	2015/03/03 14:17	28,2 KB
RP-150299.zip	2015/03/03 14:17	47,5 KB
RP-150300.zip	2015/02/27 14:52	30,1 KB
RP-150301.zip	2015/02/27 15:25	32,4 KB
RP-150302.zip	2015/03/03 14:45	30,3 KB
RP-150304.zip	2015/03/03 15:56	23,7 KB
RP-150305.zip	2015/03/03 14:50	251,5 KB
RP-150306.zip	2015/03/03 15:57	111,9 KB
RP-150307.zip	2015/03/03 15:17	119,4 KB
RP-150308.zip	2015/03/03 15:19	37,5 KB
RP-150309.zip	2015/03/03 15:56	27,9 KB
RP-150310.zip	2015/03/03 14:51	635 KB

Samsung Exhibit 1025, Page 1319 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150311.zip	2015/03/03 15:50	25,7 KB
RP-150312.zip	2015/03/03 13:46	119,4 KB
RP-150313.zip	2015/03/03 13:59	25 KB
RP-150314.zip	2015/03/03 13:56	403,7 KB
RP-150315.zip	2015/03/05 10:46	30 KB
RP-150316.zip	2015/03/03 13:06	454,7 KB
RP-150317.zip	2015/03/03 15:31	15,3 KB
RP-150318.zip	2015/03/03 14:24	27,3 KB
RP-150319.zip	2015/03/02 14:04	25,9 KB
RP-150320.zip	2015/03/05 17:22	245,3 KB
RP-150321.zip	2015/03/05 17:22	530,7 KB
RP-150322.zip	2015/03/05 17:22	1596,9 KB
RP-150323.zip	2015/03/05 17:23	2721,1 KB
RP-150324.zip	2015/03/05 17:23	2503,2 KB
RP-150325.zip	2015/03/05 17:23	810,3 KB
RP-150326.zip	2015/03/05 17:23	1292,1 KB
RP-150327.zip	2015/03/05 17:23	1733,3 KB
RP-150328.zip	2015/03/05 17:24	1112,6 KB
RP-150329.zip	2015/03/05 17:24	1351,7 KB
RP-150330.zip	2015/03/06 15:18	73,9 KB
RP-150331.zip	2015/03/05 18:18	5445,7 KB
RP-150332.zip	2015/03/06 15:18	19 KB
RP-150333.zip	2015/03/05 18:18	754 KB
RP-150334.zip	2015/03/06 15:18	290 KB
RP-150335.zip	2015/03/06 11:24	2764,5 KB
RP-150336.zip	2015/03/06 15:18	20,3 KB
RP-150337.zip	2015/03/05 18:18	49 KB
RP-150338.zip	2015/03/05 17:24	287 KB
RP-150339.zip	2015/03/05 17:24	700,7 KB
RP-150340.zip	2015/03/05 17:24	1322,4 KB
RP-150341.zip	2015/03/05 17:24	2695,6 KB
RP-150342.zip	2015/03/05 17:25	1333,7 KB
RP-150343.zip	2015/03/05 17:25	3265,8 KB
RP-150344.zip	2015/03/05 17:25	437 KB

Samsung Exhibit 1025, Page 1320 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150345.zip	2015/03/05 17:25	1715,4 KB
RP-150346.zip	2015/03/03 16:51	34,6 KB
RP-150347.zip	2015/03/05 23:00	233 KB
RP-150348.zip	2015/03/05 23:00	609,5 KB
RP-150349.zip	2015/03/05 23:00	72,6 KB
RP-150350.zip	2015/03/05 23:00	35 KB
RP-150351.zip	2015/03/05 23:00	382,6 KB
RP-150352.zip	2015/03/05 23:00	40,4 KB
RP-150353.zip	2015/03/05 23:00	130,8 KB
RP-150354.zip	2015/03/05 23:00	72,2 KB
RP-150355.zip	2015/03/05 23:00	73,2 KB
RP-150356.zip	2015/03/05 23:00	1324,9 KB
RP-150357.zip	2015/03/09 12:13	19,7 KB
RP-150358.zip	2015/03/05 17:25	72,1 KB
RP-150359.zip	2015/03/05 17:25	46,9 KB
RP-150360.zip	2015/03/05 17:25	40 KB
RP-150361.zip	2015/03/05 17:25	58,4 KB
RP-150362.zip	2015/03/05 17:25	33,7 KB
RP-150363.zip	2015/03/05 17:25	51,3 KB
RP-150364.zip	2015/03/05 17:26	1404,2 KB
RP-150365.zip	2015/03/05 17:26	1229,5 KB
RP-150366.zip	2015/03/05 17:42	7958,9 KB
RP-150367.zip	2015/03/11 8:54	60,2 KB
RP-150368.ZIP	2015/03/05 15:58	181,6 KB
RP-150369.ZIP	2015/03/05 15:58	41 KB
RP-150370.ZIP	2015/03/05 15:58	240,1 KB
RP-150371.ZIP	2015/03/05 15:58	178,3 KB
RP-150372.ZIP	2015/03/05 15:58	128,4 KB
RP-150373.ZIP	2015/03/05 15:58	1485,2 KB
RP-150374.ZIP	2015/03/05 15:59	1613,5 KB
RP-150375.ZIP	2015/03/05 15:59	97,9 KB
RP-150376.ZIP	2015/03/05 15:59	295,7 KB
RP-150377.ZIP	2015/03/05 15:59	1406,9 KB
RP-150378.ZIP	2015/03/05 15:59	59,6 KB

Samsung Exhibit 1025, Page 1321 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150379.ZIP	2015/03/05 15:59	45,3 KB
RP-150380.zip	2015/03/05 10:46	282,1 KB
RP-150381.zip	2015/03/07 1:14	264,7 KB
RP-150382.zip	2015/03/07 1:15	1226,4 KB
RP-150383.zip	2015/03/07 1:14	84,1 KB
RP-150384.zip	2015/03/07 1:15	698,9 KB
RP-150385.zip	2015/03/07 1:15	195,7 KB
RP-150386.zip	2015/03/07 1:15	198,2 KB
RP-150387.zip	2015/03/07 1:16	1269,5 KB
RP-150388.zip	2015/03/07 1:36	621,3 KB
RP-150389.zip	2015/03/07 1:16	40,4 KB
RP-150390.zip	2015/03/07 1:16	245,8 KB
RP-150391.zip	2015/03/07 1:16	220,9 KB
RP-150392.zip	2015/03/07 1:16	647,5 KB
RP-150393.zip	2015/03/07 1:16	89,2 KB
RP-150394.zip	2015/03/07 1:16	184,2 KB
RP-150395.zip	2015/03/07 1:16	96,8 KB
RP-150396.zip	2015/03/07 1:16	96,1 KB
RP-150397.zip	2015/03/06 15:00	850,5 KB
RP-150398.zip	2015/03/06 11:24	80,5 KB
RP-150399.zip	2015/03/10 22:30	48 KB
RP-150400.zip	2015/03/11 8:54	139,7 KB
RP-150401.zip	2015/03/11 8:55	26,5 KB
RP-150402.zip	2015/03/11 8:55	24,8 KB
RP-150403.zip	2015/03/12 16:12	49,7 KB
RP-150404.zip	2015/03/12 16:12	24,1 KB
RP-150405.zip	2015/03/12 16:12	93,6 KB
RP-150407.zip	2015/03/06 15:00	26,5 KB
RP-150408.zip	2015/03/11 8:55	25,5 KB
RP-150409.zip	2015/03/06 16:14	50,1 KB
RP-150410.zip	2015/03/10 22:14	24,9 KB
RP-150411.zip	2015/03/06 16:06	27 KB
RP-150412.zip	2015/03/06 18:27	22,4 KB
RP-150413.zip	2015/03/07 1:16	56,8 KB

Samsung Exhibit 1025, Page 1322 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150414.zip	2015/03/08 3:22	41,6 KB
RP-150415.zip	2015/03/08 20:38	30,8 KB
RP-150416.zip	2015/03/08 3:22	26,2 KB
RP-150417.zip	2015/03/08 3:22	27,4 KB
RP-150418.zip	2015/03/08 3:22	58,1 KB
RP-150419.zip	2015/03/10 22:14	26,7 KB
RP-150420.zip	2015/03/07 19:37	411,3 KB
RP-150421.zip	2015/03/09 12:13	13,3 KB
RP-150422.zip	2015/03/09 12:13	30,5 KB
RP-150423.zip	2015/03/12 16:12	25,5 KB
RP-150424.zip	2015/03/10 22:14	26,8 KB
RP-150425.zip	2015/03/09 12:13	34 KB
RP-150426.zip	2015/03/12 16:12	25,8 KB
RP-150427.zip	2015/03/11 8:55	57,9 KB
RP-150428.zip	2015/03/11 8:55	55,8 KB
RP-150429.zip	2015/03/11 15:06	27,3 KB
RP-150430.zip	2015/03/11 15:06	27,5 KB
RP-150431.zip	2015/03/11 15:06	27,5 KB
RP-150432.zip	2015/03/11 15:06	27,1 KB
RP-150433.zip	2015/03/12 16:13	27,9 KB
RP-150434.zip	2015/03/09 12:13	58,1 KB
RP-150435.zip	2015/03/09 12:13	29,1 KB
RP-150436.zip	2015/03/10 22:14	27,6 KB
RP-150437.zip	2015/03/11 8:55	26,3 KB
RP-150438.zip	2015/03/12 16:13	26,2 KB
RP-150439.zip	2015/03/10 22:15	37,6 KB
RP-150440.zip	2015/03/10 22:15	636,2 KB
RP-150441.zip	2015/03/11 8:55	38,7 KB
RP-150442.zip	2015/03/10 22:15	13,6 KB
RP-150443.zip	2015/03/10 22:15	11,8 KB
RP-150444.zip	2015/03/10 22:15	11,6 KB
RP-150445.zip	2015/03/10 22:15	11 KB
RP-150446.zip	2015/03/11 8:55	28,2 KB
RP-150447.zip	2015/03/10 22:15	24,4 KB

Samsung Exhibit 1025, Page 1323 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150448.zip	2015/03/11 15:06	27,3 KB
RP-150449.zip	2015/03/11 15:06	27,4 KB
RP-150450.zip	2015/03/11 15:06	26,9 KB
RP-150451.zip	2015/03/11 15:06	25,3 KB
RP-150452.zip	2015/03/11 15:06	25,9 KB
RP-150453.zip	2015/03/11 15:06	26,9 KB
RP-150454.zip	2015/03/10 22:15	11,4 KB
RP-150455.zip	2015/03/12 16:13	11 KB
RP-150456.zip	2015/03/10 22:15	51,4 KB
RP-150457.zip	2015/03/12 16:13	51,1 KB
RP-150458.zip	2015/03/11 8:55	28,5 KB
RP-150459.zip	2015/03/11 8:55	48,4 KB
RP-150460.zip	2015/03/11 15:06	27,1 KB
RP-150461.zip	2015/03/12 16:13	24,4 KB
RP-150462.zip	2015/03/12 16:13	24,3 KB
RP-150463.zip	2015/03/12 16:13	27,3 KB
RP-150465.zip	2015/03/12 16:13	30,1 KB
RP-150466.zip	2015/03/12 16:13	31,5 KB
RP-150467.zip	2015/03/11 8:55	515,6 KB
RP-150468.zip	2015/03/11 8:55	48,1 KB
RP-150469.zip	2015/03/11 8:55	62,6 KB
RP-150470.zip	2015/03/11 8:56	52,4 KB
RP-150471.zip	2015/03/11 8:56	23,8 KB
RP-150472.zip	2015/03/11 8:56	52,4 KB
RP-150473.zip	2015/03/11 8:56	45,5 KB
RP-150474.zip	2015/03/11 8:56	28,1 KB
RP-150475.zip	2015/03/12 16:13	26,6 KB
RP-150476.zip	2015/03/12 16:13	23,1 KB
RP-150477.zip	2015/03/11 8:56	9,3 KB
RP-150478.zip	2015/03/11 8:56	13,5 KB
RP-150479.zip	2015/03/11 8:56	38,1 KB
RP-150480.zip	2015/03/11 8:56	51,1 KB
RP-150481.zip	2015/03/12 16:13	78,6 KB
RP-150482.zip	2015/03/12 16:13	10 KB

Samsung Exhibit 1025, Page 1324 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150483.zip	2015/03/12 16:13	516,1 KB
RP-150484.zip	2015/03/12 16:13	14,8 KB
RP-150485.zip	2015/03/12 16:14	25,2 KB
RP-150486.zip	2015/03/12 16:14	14,7 KB
RP-150487.zip	2015/03/12 16:14	170,4 KB
RP-150488.zip	2015/03/12 16:14	10,4 KB
RP-150489.zip	2015/03/12 16:14	57,1 KB
RP-150490.zip	2015/03/12 16:14	31,3 KB
RP-150491.zip	2015/03/12 16:14	28,8 KB
RP-150492.zip	2015/03/12 16:14	31,5 KB
RP-150493.zip	2015/03/12 16:14	28,3 KB
RP-150494.zip	2015/03/12 16:14	28,1 KB
RP-150495.zip	2015/03/12 16:14	48,4 KB
RP-150496.zip	2015/03/12 16:14	52,8 KB
RP-150497.zip	2015/03/12 16:14	45,5 KB
RP-150498.zip	2015/03/12 16:15	1289,1 KB
RP-150499.zip	2015/03/12 16:15	63,7 KB
RP-150500.zip	2015/03/12 16:15	24 KB
RP-150501.zip	2015/03/12 16:15	9 KB
RP-150502.zip	2015/03/12 16:15	94,1 KB
RP-150503.zip	2015/03/12 16:15	24,4 KB
RP-150504.zip	2015/03/12 16:15	27,2 KB
RP-150505.zip	2015/03/12 16:15	10,8 KB
RP-150506.zip	2015/03/12 16:15	25,6 KB
RP-150507.zip	2015/03/12 16:15	62,4 KB
RP-150508.zip	2015/03/12 16:15	80,4 KB
RP-150509.zip	2015/03/27 13:29	64,4 KB
RP-150510.zip	2015/03/12 16:15	27,3 KB
RP-150511.zip	2015/03/12 16:15	54,7 KB
RP-150512.zip	2015/03/12 16:15	31,1 KB
RP-150513.zip	2015/03/12 16:15	34,4 KB
RP-150514.zip	2015/03/12 16:16	8,8 KB
RP-150515.zip	2015/03/12 16:16	26,6 KB
RP-150516.zip	2015/03/12 16:16	10,3 KB

Samsung Exhibit 1025, Page 1325 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
RP-150517.zip	2015/03/12 16:16	21,7 KB
RP-150518.zip	2015/03/12 16:16	284,1 KB
RP-150519.zip	2015/03/16 10:43	307,9 KB
RP-150520.zip	2015/04/16 19:52	1161 KB
TDoc_List_Meeting_RAN#67.xlsm	2016/06/03 7:38	19,1 KB
TDoc_List_Meeting_RAN#67.xlsx	2017/10/22 5:04	16 KB

512 items.

Samsung Exhibit 1025, Page 1326 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 41

www.3gpp.org / ftp / Specs / archive / 36_series / 36.321

	sort by name/desc	sort by date/desc	sort by size/desc
36321-100.zip	2007/09/10 14:45	133,9 KB
36321-110.zip	2014/12/10 17:37	139,1 KB
36321-200.zip	2007/12/11 7:58	219,8 KB
36321-800.zip	2007/12/20 9:15	218,3 KB
36321-810.zip	2008/03/17 9:47	311,9 KB
36321-820.zip	2008/06/17 7:18	306,6 KB
36321-830.zip	2008/09/18 13:08	315 KB
36321-840.zip	2009/01/05 8:52	474 KB
36321-850.zip	2009/03/23 8:46	582,4 KB
36321-860.zip	2009/06/18 6:13	584,1 KB
36321-870.zip	2009/09/22 16:22	584,7 KB
36321-880.zip	2009/12/28 12:12	584,2 KB
36321-890.zip	2010/06/18 7:34	578,6 KB
36321-8a0.zip	2011/09/28 11:33	582,2 KB
36321-8b0.zip	2011/12/20 12:16	581,5 KB
36321-8c0.zip	2012/03/15 15:55	582,2 KB
36321-900.zip	2009/09/22 16:23	577,6 KB
36321-910.zip	2009/12/28 12:13	620,3 KB
36321-920.zip	2010/04/21 8:20	605,5 KB
36321-930.zip	2010/06/17 13:32	600,8 KB
36321-940.zip	2011/09/30 20:21	610,1 KB
36321-950.zip	2011/12/20 12:18	609,8 KB
36321-960.zip	2012/03/15 15:56	610,5 KB
36321-a00.zip	2010/12/17 23:49	668,5 KB
36321-a10.zip	2011/04/05 11:25	652,4 KB
36321-a20.zip	2011/06/21 22:40	654,3 KB
36321-a30.zip	2011/09/28 18:41	648,9 KB
36321-a40.zip	2011/12/20 12:19	657,6 KB
36321-a50.zip	2012/03/15 15:59	658,3 KB
36321-a60.zip	2012/09/21 0:34	657,9 KB

Samsung Exhibit 1025, Page 1328 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
36321-a70.zip	2013/01/02 0:26	649,6 KB
36321-a80.zip	2013/03/13 18:19	658,5 KB
36321-a90.zip	2013/06/29 15:50	659,1 KB
36321-aa0.zip	2014/01/06 10:26	659,1 KB
36321-b00.zip	2012/09/21 22:59	651,9 KB
36321-b10.zip	2013/01/02 0:28	746 KB
36321-b20.zip	2013/03/13 18:20	755,8 KB
36321-b30.zip	2013/06/29 15:51	756,9 KB
36321-b40.zip	2014/01/06 10:27	757,1 KB
36321-b50.zip	2014/03/20 13:17	747,7 KB
36321-b60.zip	2015/03/26 10:19	716,7 KB
36321-c00.zip	2014/01/06 10:55	759,5 KB
36321-c10.zip	2014/03/20 13:17	751,4 KB
36321-c20.zip	2014/07/01 8:28	722,5 KB
36321-c21.zip	2014/07/10 14:02	753,1 KB
36321-c30.zip	2014/09/20 7:56	753,4 KB
36321-c40.zip	2014/12/31 18:08	886,3 KB
36321-c50.zip	2015/03/25 15:58	1125,2 KB
36321-c60.zip	2015/06/30 22:42	1150,7 KB
36321-c70.zip	2015/09/24 8:09	1139,6 KB
36321-c80.zip	2015/12/21 10:09	1140,6 KB
36321-c90.zip	2016/03/30 16:35	1140,8 KB
36321-ca0.zip	2017/09/25 23:51	1132,7 KB
36321-d00.zip	2016/01/14 15:26	1260,3 KB
36321-d10.zip	2016/04/01 16:18	1288,6 KB
36321-d20.zip	2016/07/07 9:43	1323,6 KB
36321-d30.zip	2016/10/03 12:19	1352,5 KB
36321-d40.zip	2016/12/30 1:20	1382,5 KB
36321-d50.zip	2017/03/21 17:27	1371,6 KB
36321-d60.zip	2017/06/23 21:52	1366,3 KB
36321-d70.zip	2017/09/25 23:52	1355 KB
36321-d80.zip	2018/04/02 0:03	1362 KB
36321-d90.zip	2018/07/06 12:20	1361,4 KB
36321-e00.zip	2016/10/03 12:26	1374,1 KB

Samsung Exhibit 1025, Page 1329 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

	sort by name/desc	sort by date/desc	sort by size/desc
	36321-e10.zip	2016/12/30 1:25	1422,4 KB
	36321-e20.zip	2017/03/22 9:22	1503,3 KB
	36321-e21.zip	2017/04/27 16:44	1504 KB
	36321-e30.zip	2017/06/23 21:53	1490,6 KB
	36321-e40.zip	2017/09/25 23:52	1494,9 KB
	36321-e50.zip	2018/01/07 13:40	1497,4 KB
	36321-e60.zip	2018/04/02 0:04	1490,3 KB
	36321-e70.zip	2018/07/06 13:08	1491 KB
	36321-e80.zip	2018/09/28 14:04	1498,3 KB
	36321-e90.zip	2019/01/11 0:51	1501,8 KB
	36321-ea0.zip	2019/04/11 15:58	1489 KB
	36321-eb0.zip	2019/06/27 12:15	1487,6 KB
	36321-ec0.zip	2020/01/07 14:43	1486,5 KB
	36321-ed0.zip	2020/10/02 11:06	1490,5 KB
	36321-f00.zip	2018/01/07 13:41	1497 KB
	36321-f10.zip	2018/04/02 0:05	1498,6 KB
	36321-f20.zip	2018/07/06 20:36	1607,9 KB
	36321-f30.zip	2018/10/01 12:29	1611 KB
	36321-f40.zip	2019/01/13 0:20	1758,4 KB
	36321-f50.zip	2019/04/11 15:58	1727,8 KB
	36321-f60.zip	2019/06/27 21:08	1776,3 KB
	36321-f70.zip	2019/09/26 16:12	1776,6 KB
	36321-f80.zip	2020/01/07 14:44	1777,1 KB
	36321-f90.zip	2020/07/24 20:53	1780,1 KB
	36321-fa0.zip	2020/10/02 11:07	1781,6 KB
	36321-fb0.zip	2021/01/06 1:23	1782,9 KB
	36321-g00.zip	2020/04/08 14:40	1797,5 KB
	36321-g10.zip	2020/07/24 15:06	1800,7 KB
	36321-g20.zip	2020/10/02 11:07	1803,6 KB
	36321-g30.zip	2021/01/06 1:23	1807,1 KB
	36321-g40.zip	2021/03/29 16:35	1899,5 KB
	36321-g50.zip	2021/07/07 22:16	1900,3 KB
	36321-g60.zip	2021/09/27 17:09	1900,5 KB
	36321-g70.zip	2022/04/15 16:34	1901,9 KB

Samsung Exhibit 1025, Page 1330 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

	sort by name/desc	sort by date/desc	sort by size/desc
	36321-g80.zip	2022/07/17 21:25	1902,7 KB
	36321-g90.zip	2024/01/12 20:49	1903,3 KB
	36321-h00.zip	2022/04/19 10:09	1934,1 KB
	36321-h10.zip	2022/07/17 21:25	1927,5 KB
	36321-h20.zip	2022/10/03 15:20	1926,2 KB
	36321-h30.zip	2023/01/13 19:48	1928,4 KB
	36321-h40.zip	2023/03/29 22:18	1932,7 KB
	36321-h50.zip	2023/06/30 17:57	1932,7 KB
	36321-h60.zip	2023/09/26 21:45	1933,3 KB
	36321-h70.zip	2024/01/12 20:50	1934,4 KB
	36321-i00.zip	2024/01/12 20:50	1957,8 KB

109 items.

Samsung Exhibit 1025, Page 1331 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 42

www.3gpp.org / ftp / Specs / archive / 36_series / 36.331

	sort by name/desc	sort by date/desc	sort by size/desc
36331-100.zip	2007/12/11 8:00	180,3 KB
36331-800.zip	2007/12/18 8:30	183,7 KB
36331-810.zip	2008/03/17 9:45	322,6 KB
36331-820.zip	2008/05/29 9:21	352,8 KB
36331-830.zip	2008/09/18 9:13	415,1 KB
36331-840.zip	2008/12/10 9:43	584,1 KB
36331-850.zip	2009/03/20 7:56	641,8 KB
36331-860.zip	2009/06/18 6:13	674,8 KB
36331-870.zip	2009/09/29 9:01	643,8 KB
36331-880.zip	2010/01/02 21:17	646,7 KB
36331-890.zip	2010/04/21 8:21	668,7 KB
36331-8a0.zip	2010/06/15 17:04	654,6 KB
36331-8b0.zip	2010/09/28 10:05	690 KB
36331-8c0.zip	2010/12/18 0:09	730,7 KB
36331-8d0.zip	2011/03/22 20:25	717 KB
36331-8e0.zip	2011/06/24 9:47	688,5 KB
36331-8f0.zip	2011/09/28 11:54	693,9 KB
36331-8g0.zip	2011/12/20 15:05	674,2 KB
36331-8h0.zip	2012/06/28 15:11	658,2 KB
36331-8i0.zip	2013/01/02 23:30	687,6 KB
36331-8j0.zip	2013/03/15 17:01	677,5 KB
36331-8k0.zip	2013/07/03 10:13	659 KB
36331-8l0.zip	2014/07/01 8:28	645,5 KB
36331-900.zip	2009/09/29 9:02	684,4 KB
36331-910.zip	2010/01/06 23:38	710 KB
36331-920.zip	2010/04/21 8:22	706,3 KB
36331-930.zip	2010/06/17 17:16	711,2 KB
36331-940.zip	2010/09/28 10:10	737,7 KB
36331-950.zip	2010/12/18 0:12	763,9 KB
36331-960.zip	2011/03/22 20:24	750,3 KB

Samsung Exhibit 1025, Page 1333 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
36331-970.zip	2011/06/24 10:01	744,9 KB
36331-980.zip	2011/09/30 20:15	761 KB
36331-990.zip	2011/12/20 15:06	765 KB
36331-9a0.zip	2012/03/13 20:32	702,8 KB
36331-9b0.zip	2012/06/28 15:11	734,1 KB
36331-9c0.zip	2012/09/24 14:26	743,8 KB
36331-9d0.zip	2013/01/03 17:57	724 KB
36331-9e0.zip	2013/03/15 17:03	783,9 KB
36331-9e1.zip	2013/03/21 16:46	743,2 KB
36331-9f0.zip	2013/06/29 15:57	773,2 KB
36331-9g0.zip	2013/09/16 19:21	766,5 KB
36331-9h0.zip	2014/01/01 20:35	731,8 KB
36331-9i0.zip	2014/07/01 8:28	742,6 KB
36331-a00.zip	2010/12/19 22:24	806,6 KB
36331-a10.zip	2011/03/30 13:46	881,2 KB
36331-a20.zip	2011/06/24 16:58	872,3 KB
36331-a30.zip	2011/09/30 20:17	815,1 KB
36331-a40.zip	2011/12/20 15:06	898,5 KB
36331-a50.zip	2012/03/13 20:34	868,5 KB
36331-a60.zip	2012/07/02 8:05	889,6 KB
36331-a70.zip	2012/09/24 14:26	887 KB
36331-a80.zip	2013/01/03 17:58	858,3 KB
36331-a90.zip	2013/03/21 14:16	902,1 KB
36331-aa0.zip	2013/07/04 8:34	873,4 KB
36331-ab0.zip	2013/09/16 19:27	902,4 KB
36331-ac0.zip	2014/01/01 20:42	1121,5 KB
36331-ad0.zip	2014/07/02 10:43	1072,1 KB
36331-ae0.zip	2014/09/23 13:38	1072,2 KB
36331-af0.zip	2014/12/21 22:15	1067,8 KB
36331-ag0.zip	2015/03/18 15:43	1068,6 KB
36331-ah0.zip	2015/07/07 12:59	1073,6 KB
36331-ai0.zip	2015/09/24 8:09	1076,9 KB
36331-aj0.zip	2015/12/21 10:09	1079,9 KB
36331-ak0.zip	2016/12/30 1:34	1073,4 KB

Samsung Exhibit 1025, Page 1334 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
36331-al0.zip	2017/09/25 23:56	1081,7 KB
36331-am0.zip	2018/07/08 20:20	1085,3 KB
36331-b00.zip	2012/07/02 8:06	894,5 KB
36331-b10.zip	2012/09/24 16:19	975,3 KB
36331-b20.zip	2012/12/19 11:55	954,5 KB
36331-b30.zip	2013/03/15 17:04	925,9 KB
36331-b40.zip	2013/07/04 8:35	935,9 KB
36331-b50.zip	2013/09/16 19:28	943,4 KB
36331-b60.zip	2014/01/06 11:00	1199,8 KB
36331-b70.zip	2014/03/19 14:00	1155,5 KB
36331-b80.zip	2014/07/03 13:00	1127,6 KB
36331-b90.zip	2014/09/23 13:38	1128,7 KB
36331-ba0.zip	2014/12/21 22:15	1127,3 KB
36331-bb0.zip	2015/03/25 16:40	1127,2 KB
36331-bc0.zip	2015/06/30 22:43	1139,2 KB
36331-bd0.zip	2015/09/24 8:09	1150,3 KB
36331-be0.zip	2015/12/21 10:09	1149,7 KB
36331-bf0.zip	2016/03/30 16:40	1150,4 KB
36331-bg0.zip	2016/07/01 9:26	1174,1 KB
36331-bh0.zip	2016/12/30 1:35	1173,6 KB
36331-bi0.zip	2017/09/25 23:57	1163,8 KB
36331-bj0.zip	2018/07/08 20:20	1166,8 KB
36331-c00.zip	2014/01/07 18:09	1151,1 KB
36331-c10.zip	2014/03/19 14:00	1163,1 KB
36331-c20.zip	2014/07/04 13:08	1147,5 KB
36331-c30.zip	2014/09/23 13:38	1170,3 KB
36331-c40.zip	2015/01/05 16:30	1233,9 KB
36331-c41.zip	2015/01/07 8:40	1248,2 KB
36331-c50.zip	2015/03/27 9:37	1317,6 KB
36331-c60.zip	2015/06/30 22:43	1350 KB
36331-c70.zip	2015/09/24 8:34	1359,2 KB
36331-c80.zip	2015/12/28 14:24	1369,2 KB
36331-c90.zip	2016/03/30 16:48	1371,5 KB
36331-ca0.zip	2016/07/01 10:17	1368,7 KB

Samsung Exhibit 1025, Page 1335 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
36331-cb0.zip	2016/09/29 8:06	1385,7 KB
36331-cc0.zip	2017/01/12 22:35	1392,2 KB
36331-cd0.zip	2017/03/21 17:30	1378,2 KB
36331-ce0.zip	2017/06/24 10:44	1342,4 KB
36331-cf0.zip	2017/09/25 23:58	1346,2 KB
36331-cf1.zip	2017/09/29 10:09	1349,3 KB
36331-cg0.zip	2018/01/07 13:44	1355 KB
36331-ch0.zip	2018/07/08 20:21	1348,8 KB
36331-ci0.zip	2019/04/11 2:06	1403,6 KB
36331-cj0.zip	2020/10/02 13:18	1595 KB
36331-ck0.zip	2021/01/06 22:29	1603,9 KB
36331-d00.zip	2016/01/06 10:43	1369,3 KB
36331-d10.zip	2016/04/01 16:22	1442,5 KB
36331-d20.zip	2016/07/11 8:39	1586,4 KB
36331-d30.zip	2016/10/03 11:58	1617,2 KB
36331-d40.zip	2017/01/12 22:37	1617 KB
36331-d50.zip	2017/03/21 17:30	1602,5 KB
36331-d60.zip	2017/06/24 11:57	1514,9 KB
36331-d61.zip	2017/07/03 14:28	1514,9 KB
36331-d70.zip	2017/09/25 23:59	1519,3 KB
36331-d71.zip	2017/09/29 9:58	1519,5 KB
36331-d80.zip	2018/01/08 1:16	1524,7 KB
36331-d81.zip	2018/01/09 13:32	1526,6 KB
36331-d90.zip	2018/04/03 1:11	1566,9 KB
36331-d91.zip	2018/04/03 22:39	1530,5 KB
36331-da0.zip	2018/07/10 13:41	1531,3 KB
36331-db0.zip	2018/09/27 21:44	1547,7 KB
36331-dc0.zip	2019/01/16 21:06	1533,6 KB
36331-dd0.zip	2019/04/11 2:07	1752,9 KB
36331-de0.zip	2019/06/29 22:24	1740,3 KB
36331-df0.zip	2020/01/08 1:28	1747,5 KB
36331-dg0.zip	2020/10/02 17:55	1953,2 KB
36331-dh0.zip	2021/01/06 22:29	1964,3 KB
36331-e00.zip	2016/10/04 15:40	1639,2 KB

Samsung Exhibit 1025, Page 1336 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
36331-e10.zip	2017/01/12 22:39	1675,6 KB
36331-e20.zip	2017/03/23 5:56	1667,8 KB
36331-e21.zip	2017/03/23 15:20	1667,9 KB
36331-e22.zip	2017/04/20 21:46	1664,8 KB
36331-e30.zip	2017/07/13 0:14	1625,1 KB
36331-e40.zip	2017/09/26 0:00	1628,4 KB
36331-e50.zip	2018/01/08 1:17	1671,5 KB
36331-e51.zip	2018/01/09 13:33	1662,7 KB
36331-e60.zip	2018/04/03 1:12	1707,8 KB
36331-e61.zip	2018/04/03 22:39	1662,9 KB
36331-e62.zip	2018/04/04 9:36	1663,1 KB
36331-e70.zip	2018/07/10 13:43	1673,7 KB
36331-e80.zip	2018/09/27 21:50	1681,8 KB
36331-e90.zip	2019/01/16 21:07	1674,1 KB
36331-ea0.zip	2019/04/11 2:08	1930,2 KB
36331-eb0.zip	2019/06/29 22:25	1914,8 KB
36331-ec0.zip	2019/09/27 14:02	1915 KB
36331-ed0.zip	2020/01/08 1:28	1928,8 KB
36331-ee0.zip	2020/03/31 11:49	1946,6 KB
36331-ef0.zip	2020/10/02 18:04	2148,6 KB
36331-eg0.zip	2021/01/06 22:30	2152,9 KB
36331-f00.zip	2018/01/08 1:18	1674 KB
36331-f01.zip	2018/01/09 13:35	1674,1 KB
36331-f10.zip	2018/04/03 22:35	1693,3 KB
36331-f20.zip	2018/06/20 2:14	1706,2 KB
36331-f21.zip	2018/06/21 0:22	1706,2 KB
36331-f22.zip	2018/07/10 13:45	1715,6 KB
36331-f30.zip	2018/09/27 22:07	1961,6 KB
36331-f40.zip	2019/02/19 16:12	1992,7 KB
36331-f50.zip	2019/04/04 13:15	2334,5 KB
36331-f51.zip	2019/04/22 19:27	2327,1 KB
36331-f60.zip	2019/06/29 22:25	2359,6 KB
36331-f70.zip	2019/09/27 14:03	2363,9 KB
36331-f80.zip	2020/01/08 1:41	2403,5 KB

Samsung Exhibit 1025, Page 1337 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
36331-f90.zip	2020/03/31 10:42	2430,8 KB
36331-fa0.zip	2020/07/24 15:31	2461,5 KB
36331-fb0.zip	2020/10/05 17:42	2480,5 KB
36331-fc0.zip	2021/01/06 22:30	2490,5 KB
36331-fd0.zip	2021/03/30 9:00	3060,5 KB
36331-fe0.zip	2021/07/06 23:04	3062 KB
36331-ff0.zip	2021/09/29 20:17	3066 KB
36331-fg0.zip	2021/12/23 15:34	3066,8 KB
36331-fh0.zip	2022/04/13 21:40	3067,6 KB
36331-fi0.zip	2022/07/17 21:26	3068,3 KB
36331-fj0.zip	2022/09/30 17:52	3068,8 KB
36331-fk0.zip	2023/01/13 9:29	3065 KB
36331-fl0.zip	2023/09/27 21:13	3062,3 KB
36331-g00.zip	2020/04/06 14:19	2655,1 KB
36331-g10.zip	2020/07/24 15:32	2758,8 KB
36331-g11.zip	2020/07/26 22:34	2760,2 KB
36331-g20.zip	2020/10/06 17:47	4309,7 KB
36331-g21.zip	2020/10/07 22:04	2766,3 KB
36331-g30.zip	2021/01/06 22:31	2791 KB
36331-g40.zip	2021/03/30 10:27	3436,1 KB
36331-g50.zip	2021/07/06 23:04	3438,1 KB
36331-g60.zip	2021/09/29 20:17	3530,2 KB
36331-g70.zip	2021/12/23 15:34	3451,8 KB
36331-g80.zip	2022/04/14 9:28	3655,3 KB
36331-g90.zip	2022/07/17 21:27	3661,3 KB
36331-ga0.zip	2022/09/30 21:17	3663,3 KB
36331-gb0.zip	2023/01/13 9:29	3664,3 KB
36331-gc0.zip	2023/03/30 12:41	3665,5 KB
36331-gd0.zip	2023/09/28 12:30	3666,7 KB
36331-ge0.zip	2024/01/12 8:36	3670,1 KB
36331-h00.zip	2022/04/13 23:20	3522,2 KB
36331-h10.zip	2022/07/20 9:02	3543,9 KB
36331-h20.zip	2022/10/04 6:46	3555,4 KB
36331-h30.zip	2023/01/13 19:01	3559,6 KB

Samsung Exhibit 1025, Page 1338 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
36331-h40.zip	2023/03/30 23:05	3563,2 KB
36331-h50.zip	2023/07/04 15:29	3564,3 KB
36331-h60.zip	2023/09/28 18:43	3569,4 KB
36331-h70.zip	2024/01/15 8:57	3563,2 KB
36331-i00.zip	2024/01/14 23:18	3599 KB

205 items.

Samsung Exhibit 1025, Page 1339 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 43

www.3gpp.org / ftp / tsg_ran / WG2_RL2 / TSGR2_93 / Docs

sort by name/desc	sort by date/desc	sort by size/desc
R2-161001.zip	2016/01/28 16:39	178 KB
R2-161002.zip	2016/02/08 17:33	1428,3 KB
R2-161003.zip	2016/02/08 17:33	407,6 KB
R2-161004.zip	2016/02/08 17:33	1125,6 KB
R2-161005.zip	2016/02/12 17:20	440 KB
R2-161006.zip	2016/01/28 16:40	29,6 KB
R2-161007.zip	2016/01/28 16:40	19,5 KB
R2-161008.zip	2016/01/28 16:40	53,1 KB
R2-161009.zip	2016/01/28 16:40	31,3 KB
R2-161010.zip	2016/01/28 16:40	11,6 KB
R2-161011.zip	2016/01/28 16:40	9,9 KB
R2-161012.zip	2016/01/28 16:40	18,9 KB
R2-161013.zip	2016/01/28 16:40	9,5 KB
R2-161014.zip	2016/01/28 16:40	12 KB
R2-161015.zip	2016/01/28 16:40	12,7 KB
R2-161016.zip	2016/01/28 16:40	12,8 KB
R2-161017.zip	2016/01/28 16:40	11 KB
R2-161018.zip	2016/01/28 16:40	10,7 KB
R2-161019.zip	2016/01/28 16:40	9,8 KB
R2-161020.zip	2016/01/28 16:40	17,8 KB
R2-161021.zip	2016/01/28 16:41	15,6 KB
R2-161022.zip	2016/01/28 16:41	13,7 KB
R2-161023.zip	2016/01/28 16:41	16,1 KB
R2-161024.zip	2016/01/28 16:41	10,3 KB
R2-161025.zip	2016/01/28 16:41	10 KB
R2-161026.zip	2016/01/28 16:41	12,1 KB
R2-161027.zip	2016/01/28 16:41	23,2 KB
R2-161028.zip	2016/01/28 16:41	15,7 KB
R2-161029.zip	2016/01/28 16:41	37,5 KB
R2-161030.zip	2016/01/28 16:41	58,1 KB

Samsung Exhibit 1025, Page 1341 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161031.zip	2016/01/28 16:42	820,1 KB
R2-161032.zip	2016/01/28 16:43	69,4 KB
R2-161033.zip	2016/01/28 16:43	27,3 KB
R2-161034.zip	2016/01/28 16:43	73,4 KB
R2-161035.zip	2016/01/28 16:43	126,6 KB
R2-161036.zip	2016/01/28 16:43	37,2 KB
R2-161037.zip	2016/01/28 16:43	31,4 KB
R2-161038.zip	2016/01/28 16:47	7397,2 KB
R2-161039.zip	2016/01/28 16:43	80,4 KB
R2-161040.zip	2016/02/02 10:54	14,7 KB
R2-161041.zip	2016/02/02 10:54	25 KB
R2-161042.zip	2016/02/02 10:54	12,2 KB
R2-161043.zip	2016/02/02 10:54	36,3 KB
R2-161044.zip	2016/02/02 10:54	462,4 KB
R2-161045.zip	2016/02/10 10:07	24,2 KB
R2-161046.zip	2016/02/10 10:07	106,4 KB
R2-161047.zip	2016/02/10 10:07	94,7 KB
R2-161048.zip	2016/02/10 10:07	9,9 KB
R2-161049.zip	2016/02/10 17:19	11,1 KB
R2-161050.zip	2016/02/11 10:25	456,2 KB
R2-161051.zip	2016/02/19 13:20	10,4 KB
R2-161052.zip	2016/02/19 13:20	15,3 KB
R2-161053.zip	2016/02/19 13:20	14,1 KB
R2-161054.zip	2016/02/19 13:20	21,5 KB
R2-161055.zip	2016/02/19 13:20	12,1 KB
R2-161056.zip	2016/02/19 13:20	12 KB
R2-161057.zip	2016/02/19 13:20	19,2 KB
R2-161058.zip	2016/02/19 13:20	12,1 KB
R2-161059.zip	2016/02/19 13:20	30,7 KB
R2-161060.zip	2016/02/19 13:20	12,4 KB
R2-161061.zip	2016/02/19 13:20	11,6 KB
R2-161062.zip	2016/02/19 13:20	13,9 KB
R2-161063.zip	2016/02/19 13:21	4618,9 KB
R2-161064.zip	2016/02/19 17:27	77,1 KB

Samsung Exhibit 1025, Page 1342 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161065.zip	2016/02/19 13:21	14 KB
R2-161066.zip	2016/02/19 13:21	15,1 KB
R2-161067.zip	2016/02/19 13:21	1447,2 KB
R2-161068.zip	2016/02/19 13:21	1033,2 KB
R2-161069.zip	2016/02/19 13:21	221,8 KB
R2-161070.zip	2016/02/19 17:28	807,2 KB
R2-161071.zip	2016/02/06 6:11	43,2 KB
R2-161072.zip	2016/02/06 6:11	138,5 KB
R2-161073.zip	2016/02/06 6:11	18,3 KB
R2-161074.zip	2016/02/06 6:11	64,3 KB
R2-161076.zip	2016/02/06 6:11	121,2 KB
R2-161077.zip	2016/02/06 6:11	40,8 KB
R2-161078.zip	2016/02/06 6:11	51,1 KB
R2-161079.zip	2016/02/06 6:11	52,4 KB
R2-161080.zip	2016/02/06 6:11	58,7 KB
R2-161081.zip	2016/02/02 7:22	179,9 KB
R2-161082.zip	2016/01/29 16:20	1354,6 KB
R2-161083.zip	2016/01/29 16:17	849,5 KB
R2-161084.zip	2016/01/29 22:29	38,7 KB
R2-161085.zip	2016/01/29 22:29	36,1 KB
R2-161086.zip	2016/02/01 17:31	705,9 KB
R2-161087.zip	2016/02/02 0:10	199,8 KB
R2-161088.zip	2016/02/05 9:31	47,9 KB
R2-161089.zip	2016/02/05 9:31	46 KB
R2-161090.zip	2016/02/05 9:31	42,5 KB
R2-161091.zip	2016/02/05 9:31	39 KB
R2-161092.zip	2016/02/05 9:31	88,9 KB
R2-161093.zip	2016/02/05 9:31	30,4 KB
R2-161094.zip	2016/02/05 9:31	145 KB
R2-161095.zip	2016/02/05 9:31	43,3 KB
R2-161096.zip	2016/02/03 10:00	310,1 KB
R2-161097.zip	2016/02/03 10:00	68,9 KB
R2-161098.zip	2016/02/03 10:01	36,5 KB
R2-161099.zip	2016/02/06 6:38	114,2 KB

Samsung Exhibit 1025, Page 1343 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161100.zip	2016/02/06 6:38	180,4 KB
R2-161101.zip	2016/02/06 6:38	71,9 KB
R2-161102.zip	2016/02/06 6:38	13,1 KB
R2-161103.zip	2016/02/06 6:37	159,6 KB
R2-161104.zip	2016/02/06 6:37	498,6 KB
R2-161105.zip	2016/02/06 6:38	680,1 KB
R2-161106.zip	2016/02/06 6:38	879,6 KB
R2-161107.zip	2016/02/04 7:59	295,5 KB
R2-161108.zip	2016/02/05 23:44	42,1 KB
R2-161109.zip	2016/02/04 7:59	23,7 KB
R2-161110.zip	2016/02/03 12:24	28,9 KB
R2-161111.zip	2016/02/03 12:24	154,3 KB
R2-161112.zip	2016/02/03 12:24	27 KB
R2-161113.zip	2016/02/03 12:24	43,8 KB
R2-161114.zip	2016/02/03 12:24	54,4 KB
R2-161115.zip	2016/02/03 12:24	34,5 KB
R2-161116.zip	2016/02/06 3:40	1085,7 KB
R2-161117.zip	2016/02/05 7:23	58 KB
R2-161118.zip	2016/02/05 7:23	26,2 KB
R2-161119.zip	2016/02/05 7:23	23,6 KB
R2-161120.zip	2016/02/05 7:23	112,1 KB
R2-161121.zip	2016/02/05 7:23	35 KB
R2-161122.zip	2016/02/05 7:23	23,1 KB
R2-161123.zip	2016/02/05 7:23	9,9 KB
R2-161124.zip	2016/02/05 13:32	703,8 KB
R2-161125.zip	2016/02/05 13:32	253,5 KB
R2-161126.zip	2016/02/05 13:32	26,2 KB
R2-161128.zip	2016/02/05 13:50	30,8 KB
R2-161129.zip	2016/02/05 13:50	18,3 KB
R2-161130.zip	2016/02/05 14:07	32,9 KB
R2-161131.zip	2016/02/05 14:07	27,9 KB
R2-161132.zip	2016/02/05 14:12	7,7 KB
R2-161133.zip	2016/02/05 18:28	14,1 KB
R2-161134.zip	2016/02/05 14:02	154,4 KB

Samsung Exhibit 1025, Page 1344 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161135.zip	2016/02/05 14:02	42,1 KB
R2-161136.zip	2016/02/06 3:39	78 KB
R2-161137.zip	2016/02/05 14:02	310,5 KB
R2-161138.zip	2016/02/06 0:12	54,8 KB
R2-161139.zip	2016/02/06 0:12	23,4 KB
R2-161140.zip	2016/02/06 0:12	24,6 KB
R2-161141.zip	2016/02/06 0:12	86,1 KB
R2-161142.zip	2016/02/06 0:12	52,4 KB
R2-161143.zip	2016/02/06 2:24	39,2 KB
R2-161144.zip	2016/02/05 6:15	49 KB
R2-161145.zip	2016/02/05 6:16	12,7 KB
R2-161146.zip	2016/02/05 6:16	39,9 KB
R2-161147.zip	2016/02/05 6:16	15,9 KB
R2-161148.zip	2016/02/05 6:25	14,2 KB
R2-161149.zip	2016/02/05 6:25	61,5 KB
R2-161150.zip	2016/02/05 6:25	14,6 KB
R2-161151.zip	2016/02/05 6:25	13,4 KB
R2-161152.zip	2016/02/05 6:25	13,4 KB
R2-161153.zip	2016/02/05 6:25	14,5 KB
R2-161154.zip	2016/02/05 14:14	62 KB
R2-161155.zip	2016/02/05 6:25	13,2 KB
R2-161156.zip	2016/02/05 9:31	15,9 KB
R2-161157.zip	2016/02/05 14:14	15 KB
R2-161158.zip	2016/02/05 14:14	22,2 KB
R2-161159.zip	2016/02/05 12:36	269,2 KB
R2-161160.zip	2016/02/06 7:52	22 KB
R2-161161.zip	2016/02/05 19:40	179,2 KB
R2-161162.zip	2016/02/05 19:40	173,9 KB
R2-161163.zip	2016/02/05 12:36	346,9 KB
R2-161164.zip	2016/02/05 19:40	175 KB
R2-161165.zip	2016/02/05 8:52	32 KB
R2-161166.zip	2016/02/19 13:21	86,1 KB
R2-161167.zip	2016/02/05 4:04	34,4 KB
R2-161168.zip	2016/02/05 4:04	65,4 KB

Samsung Exhibit 1025, Page 1345 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161169.zip	2016/02/05 23:02	22,2 KB
R2-161170.zip	2016/02/05 23:02	23,9 KB
R2-161171.zip	2016/02/05 23:02	33,6 KB
R2-161172.zip	2016/02/06 1:10	42,6 KB
R2-161173.zip	2016/02/06 1:10	22,9 KB
R2-161174.zip	2016/02/06 1:10	26,6 KB
R2-161175.zip	2016/02/05 17:14	58,2 KB
R2-161176.zip	2016/02/06 1:10	52 KB
R2-161177.zip	2016/02/05 9:00	190,8 KB
R2-161178.zip	2016/02/05 19:40	184,8 KB
R2-161179.zip	2016/02/05 20:48	26,5 KB
R2-161180.zip	2016/02/05 14:31	13,1 KB
R2-161181.zip	2016/02/05 23:02	68,9 KB
R2-161182.zip	2016/02/04 10:46	47,3 KB
R2-161183.zip	2016/02/04 10:46	19,2 KB
R2-161184.zip	2016/02/04 10:46	56,6 KB
R2-161185.zip	2016/02/06 2:26	11,3 KB
R2-161186.zip	2016/02/06 2:26	51,2 KB
R2-161187.zip	2016/02/06 2:26	40,2 KB
R2-161188.zip	2016/02/06 2:26	40,1 KB
R2-161189.zip	2016/02/06 2:26	301,1 KB
R2-161190.zip	2016/02/06 2:26	102,8 KB
R2-161191.zip	2016/02/04 11:13	33,7 KB
R2-161192.zip	2016/02/04 11:32	60 KB
R2-161193.zip	2016/02/04 11:34	17,5 KB
R2-161194.zip	2016/02/05 17:56	416,8 KB
R2-161195.zip	2016/02/05 18:00	32,2 KB
R2-161196.zip	2016/02/05 18:01	23,2 KB
R2-161197.zip	2016/02/08 21:38	108,2 KB
R2-161198.zip	2016/02/05 23:03	1480,7 KB
R2-161199.zip	2016/02/05 23:04	1565,6 KB
R2-161200.zip	2016/02/04 12:19	33 KB
R2-161201.zip	2016/02/05 20:49	1368,2 KB
R2-161202.zip	2016/02/05 20:49	860,8 KB

Samsung Exhibit 1025, Page 1346 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161203.zip	2016/02/05 11:50	32,3 KB
R2-161204.zip	2016/02/05 8:57	17,1 KB
R2-161205.zip	2016/02/05 11:51	257,6 KB
R2-161206.zip	2016/02/05 11:51	30,6 KB
R2-161207.zip	2016/02/05 9:06	480,7 KB
R2-161208.zip	2016/02/05 9:06	480,8 KB
R2-161209.zip	2016/02/05 8:36	16,8 KB
R2-161210.zip	2016/02/10 8:54	42,2 KB
R2-161211.zip	2016/02/10 8:54	19,3 KB
R2-161212.zip	2016/02/10 8:54	19,8 KB
R2-161213.zip	2016/02/05 11:51	125,7 KB
R2-161214.zip	2016/02/05 11:51	31,7 KB
R2-161215.zip	2016/02/05 11:51	20,4 KB
R2-161216.zip	2016/02/05 11:51	20,4 KB
R2-161217.zip	2016/02/05 11:51	20,4 KB
R2-161218.zip	2016/02/05 11:51	20,4 KB
R2-161219.zip	2016/02/05 23:18	41,6 KB
R2-161220.zip	2016/02/05 23:18	60,1 KB
R2-161221.zip	2016/02/09 8:56	25,1 KB
R2-161222.zip	2016/02/05 23:21	29,7 KB
R2-161223.zip	2016/02/05 23:21	44,4 KB
R2-161224.zip	2016/02/05 23:18	49,9 KB
R2-161225.zip	2016/02/05 23:18	24,7 KB
R2-161226.zip	2016/02/05 16:40	18,6 KB
R2-161227.zip	2016/02/05 16:40	26 KB
R2-161228.zip	2016/02/05 16:40	18 KB
R2-161229.zip	2016/02/05 16:40	33,6 KB
R2-161230.zip	2016/02/05 16:42	30 KB
R2-161231.zip	2016/02/05 16:42	29,8 KB
R2-161232.zip	2016/02/05 16:44	21,1 KB
R2-161233.zip	2016/02/05 16:54	20,8 KB
R2-161235.zip	2016/02/06 5:05	48,5 KB
R2-161236.zip	2016/02/06 5:05	21,1 KB
R2-161237.zip	2016/02/06 5:05	21,9 KB

Samsung Exhibit 1025, Page 1347 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161238.zip	2016/02/10 10:16	30,2 KB
R2-161239.zip	2016/02/06 5:05	27 KB
R2-161240.zip	2016/02/06 5:10	17,2 KB
R2-161241.zip	2016/02/06 7:07	41,6 KB
R2-161242.zip	2016/02/06 7:07	41,1 KB
R2-161243.zip	2016/02/05 21:32	471,5 KB
R2-161244.zip	2016/02/05 3:36	37,1 KB
R2-161245.zip	2016/02/05 3:36	52,8 KB
R2-161246.zip	2016/02/05 3:36	42,9 KB
R2-161247.zip	2016/02/05 3:36	25,6 KB
R2-161248.zip	2016/02/05 3:36	27,7 KB
R2-161249.zip	2016/02/06 5:05	33 KB
R2-161250.zip	2016/02/11 8:34	39,5 KB
R2-161251.zip	2016/02/06 5:05	26 KB
R2-161252.zip	2016/02/06 5:05	27,4 KB
R2-161253.zip	2016/02/06 5:05	25,2 KB
R2-161254.zip	2016/02/14 9:47	80,1 KB
R2-161255.zip	2016/02/06 5:05	39,1 KB
R2-161256.zip	2016/02/06 5:05	62,3 KB
R2-161257.zip	2016/02/06 5:05	50,7 KB
R2-161258.zip	2016/02/06 5:05	21,1 KB
R2-161259.zip	2016/02/06 5:05	20,8 KB
R2-161260.zip	2016/02/06 5:05	24,4 KB
R2-161261.zip	2016/02/06 5:05	50,1 KB
R2-161262.zip	2016/02/06 5:05	14,1 KB
R2-161263.zip	2016/02/06 5:05	64,5 KB
R2-161264.zip	2016/02/06 5:05	20 KB
R2-161265.zip	2016/02/06 5:05	13,2 KB
R2-161266.zip	2016/02/06 5:05	154,7 KB
R2-161267.zip	2016/02/06 5:05	19,3 KB
R2-161268.zip	2016/02/06 5:05	26,7 KB
R2-161269.zip	2016/02/06 5:05	26,7 KB
R2-161270.zip	2016/02/05 3:36	39,3 KB
R2-161271.zip	2016/02/05 3:36	68,8 KB

Samsung Exhibit 1025, Page 1348 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161272.zip	2016/02/05 3:36	26,8 KB
R2-161273.zip	2016/02/05 3:36	20,5 KB
R2-161274.zip	2016/02/05 9:25	27,5 KB
R2-161275.zip	2016/02/05 9:25	27,7 KB
R2-161277.zip	2016/02/05 9:25	113,7 KB
R2-161278.zip	2016/02/06 1:32	22,6 KB
R2-161279.zip	2016/02/06 1:32	23,8 KB
R2-161280.zip	2016/02/06 1:32	33,6 KB
R2-161281.zip	2016/02/06 1:32	38,1 KB
R2-161282.zip	2016/02/06 1:32	21,4 KB
R2-161283.zip	2016/02/06 1:32	21,5 KB
R2-161284.zip	2016/02/06 1:31	23 KB
R2-161285.zip	2016/02/06 1:31	36,3 KB
R2-161286.zip	2016/02/06 1:31	43,5 KB
R2-161287.zip	2016/02/06 1:31	38,5 KB
R2-161288.zip	2016/02/06 1:31	47,9 KB
R2-161289.zip	2016/02/06 1:31	38,2 KB
R2-161290.zip	2016/02/06 3:40	17,5 KB
R2-161291.zip	2016/02/06 3:44	16,3 KB
R2-161292.zip	2016/02/06 3:44	31,4 KB
R2-161293.zip	2016/02/05 5:39	649,3 KB
R2-161294.zip	2016/02/05 6:07	23,4 KB
R2-161295.zip	2016/02/05 4:01	24,7 KB
R2-161296.zip	2016/02/05 6:07	22,4 KB
R2-161297.zip	2016/02/05 4:01	18,7 KB
R2-161298.zip	2016/02/05 4:18	57,4 KB
R2-161299.zip	2016/02/05 4:18	35,7 KB
R2-161300.zip	2016/02/05 4:18	23,3 KB
R2-161301.zip	2016/02/06 2:52	35,9 KB
R2-161302.zip	2016/02/05 4:48	104 KB
R2-161303.zip	2016/02/05 7:57	18,9 KB
R2-161304.zip	2016/02/05 8:06	43,2 KB
R2-161305.zip	2016/02/05 8:05	43 KB
R2-161306.zip	2016/02/06 8:08	23,1 KB

Samsung Exhibit 1025, Page 1349 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161307.zip	2016/02/06 8:08	65,8 KB
R2-161308.zip	2016/02/06 8:08	214,5 KB
R2-161309.zip	2016/02/06 8:08	18,4 KB
R2-161311.zip	2016/02/06 8:08	156,7 KB
R2-161312.zip	2016/02/06 8:08	208,2 KB
R2-161313.zip	2016/02/06 8:08	21,1 KB
R2-161314.zip	2016/02/06 8:08	31 KB
R2-161315.zip	2016/02/10 17:22	21,9 KB
R2-161317.zip	2016/02/05 8:05	15,3 KB
R2-161318.zip	2016/02/05 8:06	15,4 KB
R2-161319.zip	2016/02/05 8:06	49,3 KB
R2-161320.zip	2016/02/05 8:06	48,2 KB
R2-161321.zip	2016/02/05 13:18	29,2 KB
R2-161322.zip	2016/02/05 8:06	18,1 KB
R2-161323.zip	2016/02/10 17:22	35,7 KB
R2-161324.zip	2016/02/10 17:22	61,1 KB
R2-161325.zip	2016/02/05 13:18	9,1 KB
R2-161326.zip	2016/02/05 8:06	18,1 KB
R2-161327.zip	2016/02/05 8:06	20,6 KB
R2-161328.zip	2016/02/05 8:06	17,6 KB
R2-161329.zip	2016/02/08 1:08	40,4 KB
R2-161330.zip	2016/02/05 8:06	53,1 KB
R2-161331.zip	2016/02/05 8:06	19,4 KB
R2-161332.zip	2016/02/05 13:34	112,9 KB
R2-161333.zip	2016/02/05 13:23	42,9 KB
R2-161335.zip	2016/02/05 6:09	20,2 KB
R2-161337.zip	2016/02/05 7:23	26,2 KB
R2-161338.zip	2016/02/05 8:32	18 KB
R2-161339.zip	2016/02/05 8:32	18,1 KB
R2-161340.zip	2016/02/06 1:20	58,4 KB
R2-161341.zip	2016/02/05 7:26	61,1 KB
R2-161342.zip	2016/02/06 1:20	21 KB
R2-161343.zip	2016/02/06 5:10	18,1 KB
R2-161344.zip	2016/02/05 7:40	28,2 KB

Samsung Exhibit 1025, Page 1350 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161345.zip	2016/02/05 8:48	44,6 KB
R2-161346.zip	2016/02/05 8:48	42,1 KB
R2-161347.zip	2016/02/05 8:48	53 KB
R2-161348.zip	2016/02/05 8:48	35,4 KB
R2-161350.zip	2016/02/05 8:48	31,6 KB
R2-161351.zip	2016/02/05 8:48	28,2 KB
R2-161352.zip	2016/02/05 8:19	499,4 KB
R2-161353.zip	2016/02/05 8:17	43,6 KB
R2-161354.zip	2016/02/05 9:22	56,6 KB
R2-161355.zip	2016/02/05 9:22	17,9 KB
R2-161356.zip	2016/02/05 8:36	62,1 KB
R2-161357.zip	2016/02/05 10:26	22 KB
R2-161358.zip	2016/02/05 9:55	264,5 KB
R2-161359.zip	2016/02/05 17:38	233 KB
R2-161360.zip	2016/02/05 17:38	59,4 KB
R2-161361.zip	2016/02/05 17:38	74,6 KB
R2-161362.zip	2016/02/05 17:38	32,9 KB
R2-161363.zip	2016/02/05 17:38	88,6 KB
R2-161364.zip	2016/02/05 17:38	54,3 KB
R2-161365.zip	2016/02/05 20:04	20,9 KB
R2-161366.zip	2016/02/05 20:04	22,5 KB
R2-161368.zip	2016/02/05 20:04	15,1 KB
R2-161369.zip	2016/02/05 20:04	17,2 KB
R2-161370.zip	2016/02/05 20:04	28,1 KB
R2-161371.zip	2016/02/05 20:04	101,8 KB
R2-161372.zip	2016/02/05 20:04	21,2 KB
R2-161374.zip	2016/02/05 20:04	12,8 KB
R2-161375.zip	2016/02/06 6:58	2440,8 KB
R2-161376.zip	2016/02/06 6:58	59,4 KB
R2-161377.zip	2016/02/06 6:58	79,3 KB
R2-161378.zip	2016/02/06 6:58	25,9 KB
R2-161379.zip	2016/02/06 6:58	25,2 KB
R2-161380.zip	2016/02/06 6:58	27,8 KB
R2-161381.zip	2016/02/06 6:58	55 KB

Samsung Exhibit 1025, Page 1351 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161382.zip	2016/02/06 6:58	18,2 KB
R2-161383.zip	2016/02/06 6:58	26,7 KB
R2-161384.zip	2016/02/06 6:58	30,7 KB
R2-161385.zip	2016/02/06 6:58	19,1 KB
R2-161386.zip	2016/02/06 6:58	39,5 KB
R2-161387.zip	2016/02/06 6:58	28,7 KB
R2-161388.zip	2016/02/06 6:58	21,4 KB
R2-161389.zip	2016/02/05 14:02	59,1 KB
R2-161390.zip	2016/02/05 14:02	84,1 KB
R2-161391.zip	2016/02/06 3:39	154,6 KB
R2-161392.zip	2016/02/06 4:47	81,6 KB
R2-161393.zip	2016/02/06 3:39	99 KB
R2-161394.zip	2016/02/05 14:02	97,2 KB
R2-161395.zip	2016/02/06 1:29	28,4 KB
R2-161396.zip	2016/02/05 14:15	17,4 KB
R2-161397.zip	2016/02/05 14:15	20,4 KB
R2-161398.zip	2016/02/06 5:52	21,6 KB
R2-161399.zip	2016/02/06 5:52	14,1 KB
R2-161400.zip	2016/02/05 21:01	30,5 KB
R2-161401.zip	2016/02/05 12:36	97,4 KB
R2-161403.zip	2016/02/05 12:36	83,3 KB
R2-161404.zip	2016/02/06 5:52	23,8 KB
R2-161405.zip	2016/02/06 5:52	28 KB
R2-161406.zip	2016/02/05 11:26	35,4 KB
R2-161407.zip	2016/02/05 11:38	15 KB
R2-161408.zip	2016/02/05 11:38	16,7 KB
R2-161409.zip	2016/02/05 11:38	48,9 KB
R2-161410.zip	2016/02/05 11:42	37,8 KB
R2-161411.zip	2016/02/05 11:39	613,3 KB
R2-161412.zip	2016/02/05 10:51	42,4 KB
R2-161413.zip	2016/02/05 11:26	57,4 KB
R2-161414.zip	2016/02/06 5:51	134,7 KB
R2-161415.zip	2016/02/05 11:27	40,7 KB
R2-161416.zip	2016/02/06 5:50	54,2 KB

Samsung Exhibit 1025, Page 1352 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161418.zip	2016/02/05 12:36	42,1 KB
R2-161419.zip	2016/02/05 12:36	44,7 KB
R2-161420.zip	2016/02/05 12:36	125,7 KB
R2-161421.zip	2016/02/05 12:36	93,6 KB
R2-161422.zip	2016/02/05 20:04	17,6 KB
R2-161423.zip	2016/02/06 4:44	31,9 KB
R2-161424.zip	2016/02/06 4:44	34,1 KB
R2-161425.zip	2016/02/06 4:44	38,1 KB
R2-161426.zip	2016/02/06 4:44	38,8 KB
R2-161427.zip	2016/02/06 4:44	27,6 KB
R2-161428.zip	2016/02/06 4:44	47,9 KB
R2-161429.zip	2016/02/06 4:44	30,3 KB
R2-161430.zip	2016/02/05 12:37	539,5 KB
R2-161431.zip	2016/02/05 12:37	71,5 KB
R2-161433.zip	2016/02/06 0:29	12,4 KB
R2-161434.zip	2016/02/05 14:35	411,3 KB
R2-161435.zip	2016/02/06 0:29	42,8 KB
R2-161436.zip	2016/02/06 6:38	346,9 KB
R2-161437.zip	2016/02/05 21:01	23,5 KB
R2-161438.zip	2016/02/05 21:01	23,2 KB
R2-161439.zip	2016/02/05 14:01	141,8 KB
R2-161440.zip	2016/02/05 14:01	208,2 KB
R2-161441.zip	2016/02/05 14:01	45 KB
R2-161442.zip	2016/02/05 14:01	141,3 KB
R2-161443.zip	2016/02/05 14:01	45,7 KB
R2-161444.zip	2016/02/05 14:01	33,8 KB
R2-161445.zip	2016/02/05 14:01	35,2 KB
R2-161446.zip	2016/02/05 14:25	56,6 KB
R2-161447.zip	2016/02/05 14:01	27,8 KB
R2-161448.zip	2016/02/05 14:25	17,9 KB
R2-161449.zip	2016/02/06 0:42	44,7 KB
R2-161450.zip	2016/02/06 1:06	35,3 KB
R2-161451.zip	2016/02/06 1:06	27,9 KB
R2-161452.zip	2016/02/06 1:06	33,6 KB

Samsung Exhibit 1025, Page 1353 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161453.zip	2016/02/06 1:06	88,4 KB
R2-161454.zip	2016/02/06 1:06	24,1 KB
R2-161455.zip	2016/02/19 13:21	70 KB
R2-161456.zip	2016/02/06 1:06	86,8 KB
R2-161457.zip	2016/02/06 1:06	32,6 KB
R2-161458.zip	2016/02/06 0:42	83,6 KB
R2-161459.zip	2016/02/06 0:42	45,1 KB
R2-161460.zip	2016/02/05 14:53	32,4 KB
R2-161461.zip	2016/02/05 14:53	611,6 KB
R2-161462.zip	2016/02/05 14:53	42,2 KB
R2-161463.zip	2016/02/05 22:37	30,8 KB
R2-161464.zip	2016/02/05 18:30	16,9 KB
R2-161465.zip	2016/02/05 20:04	19,4 KB
R2-161466.zip	2016/02/05 22:38	116,6 KB
R2-161468.zip	2016/02/09 18:09	55,5 KB
R2-161469.zip	2016/02/06 7:16	17,1 KB
R2-161470.zip	2016/02/06 7:16	29 KB
R2-161471.zip	2016/02/06 7:16	26,1 KB
R2-161472.zip	2016/02/06 7:16	25,4 KB
R2-161473.zip	2016/02/06 7:16	37,4 KB
R2-161474.zip	2016/02/06 7:17	45,5 KB
R2-161475.zip	2016/02/06 7:17	23 KB
R2-161476.zip	2016/02/06 7:17	21,3 KB
R2-161477.zip	2016/02/06 7:17	28,8 KB
R2-161478.zip	2016/02/06 6:16	50,6 KB
R2-161479.zip	2016/02/05 16:48	36,1 KB
R2-161480.zip	2016/02/05 16:46	37,2 KB
R2-161481.zip	2016/02/05 15:56	18,4 KB
R2-161482.zip	2016/02/05 17:47	50,5 KB
R2-161483.zip	2016/02/05 17:47	146 KB
R2-161484.zip	2016/02/06 0:29	64 KB
R2-161485.zip	2016/02/06 0:29	43,2 KB
R2-161486.zip	2016/02/05 17:47	53,3 KB
R2-161487.zip	2016/02/06 0:29	68,4 KB

Samsung Exhibit 1025, Page 1354 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161488.zip	2016/02/05 22:38	65,4 KB
R2-161489.zip	2016/02/05 18:07	404,3 KB
R2-161490.zip	2016/02/05 22:38	57,8 KB
R2-161491.zip	2016/02/05 18:07	18,5 KB
R2-161492.zip	2016/02/06 0:29	34,9 KB
R2-161493.zip	2016/02/06 0:29	24,3 KB
R2-161494.zip	2016/02/06 0:29	15 KB
R2-161495.zip	2016/02/06 0:29	57,3 KB
R2-161496.zip	2016/02/06 0:29	14,5 KB
R2-161497.zip	2016/02/06 7:42	31,5 KB
R2-161498.zip	2016/02/06 7:42	26 KB
R2-161499.zip	2016/02/05 22:38	24,4 KB
R2-161500.zip	2016/02/05 22:38	28,7 KB
R2-161501.zip	2016/02/06 0:43	69,2 KB
R2-161502.zip	2016/02/06 7:07	21,9 KB
R2-161503.zip	2016/02/06 7:07	52,3 KB
R2-161504.zip	2016/02/06 8:07	27 KB
R2-161505.zip	2016/02/06 7:55	177,6 KB
R2-161506.zip	2016/02/06 7:55	196,4 KB
R2-161507.zip	2016/02/06 7:20	42,8 KB
R2-161508.zip	2016/02/06 7:20	34,3 KB
R2-161509.zip	2016/02/06 7:07	116,9 KB
R2-161510.zip	2016/02/06 7:07	94,9 KB
R2-161511.zip	2016/02/06 0:43	75,4 KB
R2-161512.zip	2016/02/06 0:01	48 KB
R2-161513.zip	2016/02/06 2:22	69,6 KB
R2-161514.zip	2016/02/06 0:02	42,1 KB
R2-161515.zip	2016/02/06 0:02	334,2 KB
R2-161516.zip	2016/02/06 0:03	24,4 KB
R2-161517.zip	2016/02/06 0:03	17,9 KB
R2-161518.zip	2016/02/06 0:03	20,9 KB
R2-161519.zip	2016/02/06 2:24	32 KB
R2-161520.zip	2016/02/05 22:52	40,5 KB
R2-161521.zip	2016/02/05 20:10	214,5 KB

Samsung Exhibit 1025, Page 1355 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161522.zip	2016/02/05 20:10	19,1 KB
R2-161523.zip	2016/02/05 20:10	23,1 KB
R2-161524.zip	2016/02/06 2:24	33,2 KB
R2-161525.zip	2016/02/05 23:04	45,7 KB
R2-161526.zip	2016/02/05 20:10	23,9 KB
R2-161527.zip	2016/02/05 20:10	22,6 KB
R2-161528.zip	2016/02/05 20:10	94,8 KB
R2-161529.zip	2016/02/05 20:10	52,2 KB
R2-161530.zip	2016/02/06 6:54	31,8 KB
R2-161531.zip	2016/02/10 10:16	32,1 KB
R2-161532.zip	2016/02/05 23:02	16,2 KB
R2-161533.zip	2016/02/06 7:23	47,4 KB
R2-161534.zip	2016/02/06 0:03	25,7 KB
R2-161535.zip	2016/02/06 0:03	26,7 KB
R2-161536.zip	2016/02/05 20:58	15,8 KB
R2-161537.zip	2016/02/05 20:58	23,4 KB
R2-161538.zip	2016/02/05 20:58	47,4 KB
R2-161539.zip	2016/02/05 20:58	19 KB
R2-161540.zip	2016/02/05 20:58	19,9 KB
R2-161541.zip	2016/02/05 20:59	62,7 KB
R2-161542.zip	2016/02/05 20:59	23,5 KB
R2-161543.zip	2016/02/05 20:59	59,9 KB
R2-161544.zip	2016/02/05 20:59	82,5 KB
R2-161545.zip	2016/02/05 20:59	34,9 KB
R2-161546.zip	2016/02/05 20:59	22,3 KB
R2-161547.zip	2016/02/05 20:59	27,5 KB
R2-161548.zip	2016/02/05 20:21	25,7 KB
R2-161549.zip	2016/02/05 20:20	15,1 KB
R2-161550.zip	2016/02/05 20:21	21,9 KB
R2-161551.zip	2016/02/05 20:21	14,1 KB
R2-161552.zip	2016/02/05 20:21	17,3 KB
R2-161553.zip	2016/02/05 20:21	17,5 KB
R2-161554.zip	2016/02/05 20:21	59,1 KB
R2-161555.zip	2016/02/05 20:21	15 KB

Samsung Exhibit 1025, Page 1356 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161556.zip	2016/02/05 20:21	72,9 KB
R2-161557.zip	2016/02/05 20:21	16,9 KB
R2-161558.zip	2016/02/05 20:22	27,6 KB
R2-161559.zip	2016/02/05 20:22	27,1 KB
R2-161560.zip	2016/02/05 20:22	27,6 KB
R2-161561.zip	2016/02/05 20:22	27,4 KB
R2-161562.zip	2016/02/05 20:22	16,8 KB
R2-161563.zip	2016/02/05 20:22	16,4 KB
R2-161564.zip	2016/02/06 6:48	48,8 KB
R2-161565.zip	2016/02/06 0:53	150,9 KB
R2-161566.zip	2016/02/06 0:54	31,4 KB
R2-161567.zip	2016/02/06 0:54	27 KB
R2-161568.zip	2016/02/06 0:55	384,1 KB
R2-161569.zip	2016/02/06 0:55	17,2 KB
R2-161570.zip	2016/02/06 0:56	62,1 KB
R2-161571.zip	2016/02/06 0:56	20,4 KB
R2-161572.zip	2016/02/06 0:57	67,3 KB
R2-161573.zip	2016/02/06 6:48	45,7 KB
R2-161574.zip	2016/02/10 10:16	6 KB
R2-161575.zip	2016/02/10 10:16	6,2 KB
R2-161576.zip	2016/02/06 6:49	22 KB
R2-161577.zip	2016/02/06 6:48	10,8 KB
R2-161578.zip	2016/02/06 6:48	19,7 KB
R2-161579.zip	2016/02/06 6:48	725,6 KB
R2-161580.zip	2016/02/05 22:38	60,7 KB
R2-161581.zip	2016/02/06 6:48	61,2 KB
R2-161582.zip	2016/02/06 6:48	303,5 KB
R2-161583.zip	2016/02/06 6:48	23,5 KB
R2-161584.zip	2016/02/06 6:48	39 KB
R2-161585.zip	2016/02/05 22:16	17,3 KB
R2-161586.zip	2016/02/05 22:16	117,7 KB
R2-161587.zip	2016/02/05 21:32	63,8 KB
R2-161588.zip	2016/02/05 21:32	28,4 KB
R2-161589.zip	2016/02/05 21:32	175,4 KB

Samsung Exhibit 1025, Page 1357 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161590.zip	2016/02/05 22:04	258,8 KB
R2-161591.zip	2016/02/05 22:04	25,5 KB
R2-161592.zip	2016/02/05 22:14	57,7 KB
R2-161593.zip	2016/02/06 7:28	366,3 KB
R2-161594.zip	2016/02/06 7:35	25,9 KB
R2-161595.zip	2016/02/06 7:28	73,8 KB
R2-161596.zip	2016/02/06 7:29	34,1 KB
R2-161597.zip	2016/02/05 21:32	41 KB
R2-161598.zip	2016/02/05 22:38	24,4 KB
R2-161599.zip	2016/02/05 22:38	47,3 KB
R2-161600.zip	2016/02/05 22:38	67,2 KB
R2-161601.zip	2016/02/05 22:38	1278,1 KB
R2-161602.zip	2016/02/05 22:50	124,5 KB
R2-161603.zip	2016/02/06 5:05	19,3 KB
R2-161604.zip	2016/02/19 13:22	6396,8 KB
R2-161605.zip	2016/02/05 22:59	62,7 KB
R2-161606.zip	2016/02/06 0:43	51 KB
R2-161607.zip	2016/02/05 23:45	115,5 KB
R2-161608.zip	2016/02/06 1:59	34,7 KB
R2-161609.zip	2016/02/06 1:59	64,8 KB
R2-161610.zip	2016/02/05 23:46	37,1 KB
R2-161611.zip	2016/02/06 1:59	171,4 KB
R2-161612.zip	2016/02/05 23:46	41,5 KB
R2-161613.zip	2016/02/06 1:59	29,1 KB
R2-161614.zip	2016/02/06 1:59	29 KB
R2-161615.zip	2016/02/06 0:43	60,2 KB
R2-161616.zip	2016/02/06 7:00	14,9 KB
R2-161617.zip	2016/02/06 7:00	22,9 KB
R2-161618.zip	2016/02/06 7:00	23,4 KB
R2-161619.zip	2016/02/06 0:52	111,2 KB
R2-161620.zip	2016/02/06 7:05	73,6 KB
R2-161621.zip	2016/02/06 6:49	64,9 KB
R2-161622.zip	2016/02/06 6:49	38,3 KB
R2-161623.zip	2016/02/06 6:49	36,4 KB

Samsung Exhibit 1025, Page 1358 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161624.zip	2016/02/06 6:49	36,2 KB
R2-161625.zip	2016/02/06 7:05	46,8 KB
R2-161626.zip	2016/02/06 7:05	16,3 KB
R2-161627.zip	2016/02/09 8:58	23,9 KB
R2-161628.zip	2016/02/09 8:58	51,6 KB
R2-161629.zip	2016/02/06 7:23	49,7 KB
R2-161630.zip	2016/02/06 7:12	55,7 KB
R2-161631.zip	2016/02/06 7:12	9,1 KB
R2-161632.zip	2016/02/06 7:12	55,7 KB
R2-161633.zip	2016/02/06 1:32	19,5 KB
R2-161634.zip	2016/02/06 1:40	24,9 KB
R2-161635.zip	2016/02/06 1:47	27,8 KB
R2-161636.zip	2016/02/06 1:47	173,8 KB
R2-161637.zip	2016/02/06 3:06	183,8 KB
R2-161638.zip	2016/02/06 3:06	46,7 KB
R2-161639.zip	2016/02/06 3:06	21 KB
R2-161640.zip	2016/02/06 3:06	19 KB
R2-161641.zip	2016/02/06 3:06	348,9 KB
R2-161642.zip	2016/02/06 3:06	371,7 KB
R2-161643.zip	2016/02/06 3:06	32,6 KB
R2-161644.zip	2016/02/11 8:35	50,1 KB
R2-161645.zip	2016/02/06 5:52	52,7 KB
R2-161646.zip	2016/02/06 5:52	27,1 KB
R2-161647.zip	2016/02/06 5:52	26,4 KB
R2-161648.zip	2016/02/06 2:08	27,9 KB
R2-161649.zip	2016/02/06 2:33	23,6 KB
R2-161650.zip	2016/02/06 7:20	93,5 KB
R2-161651.zip	2016/02/06 2:40	17,2 KB
R2-161652.zip	2016/02/06 2:33	26 KB
R2-161653.zip	2016/02/06 7:20	68,7 KB
R2-161654.zip	2016/02/06 7:12	39,3 KB
R2-161655.zip	2016/02/06 3:44	47,9 KB
R2-161656.zip	2016/02/06 5:10	113,4 KB
R2-161657.zip	2016/02/06 3:17	48,5 KB

Samsung Exhibit 1025, Page 1359 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161658.zip	2016/02/19 13:22	217,6 KB
R2-161659.zip	2016/02/06 4:12	83,2 KB
R2-161662.zip	2016/02/06 7:08	15 KB
R2-161663.zip	2016/02/06 7:08	22,5 KB
R2-161664.zip	2016/02/06 7:08	170 KB
R2-161665.zip	2016/02/06 7:08	32,8 KB
R2-161666.zip	2016/02/06 7:08	15,3 KB
R2-161667.zip	2016/02/06 4:01	25,6 KB
R2-161668.zip	2016/02/06 4:27	25 KB
R2-161669.zip	2016/02/06 4:01	23,6 KB
R2-161670.zip	2016/02/06 4:12	450 KB
R2-161671.zip	2016/02/06 4:18	29,7 KB
R2-161672.zip	2016/02/06 4:27	25,2 KB
R2-161673.zip	2016/02/06 4:01	22,7 KB
R2-161674.zip	2016/02/06 4:27	22,1 KB
R2-161675.zip	2016/02/06 4:18	68,1 KB
R2-161676.zip	2016/02/06 4:18	28,6 KB
R2-161677.zip	2016/03/02 10:53	175,3 KB
R2-161678.zip	2016/02/19 13:22	88,2 KB
R2-161679.zip	2016/02/06 4:18	17,1 KB
R2-161680.zip	2016/02/06 4:18	307,5 KB
R2-161681.zip	2016/02/06 4:39	72 KB
R2-161682.zip	2016/02/06 5:23	38,5 KB
R2-161683.zip	2016/02/06 5:15	23,4 KB
R2-161684.zip	2016/02/06 5:23	30,4 KB
R2-161685.zip	2016/02/06 5:09	83,1 KB
R2-161686.zip	2016/02/06 5:29	52,4 KB
R2-161687.zip	2016/02/06 5:35	22,9 KB
R2-161688.zip	2016/02/06 6:20	28,4 KB
R2-161689.zip	2016/02/06 6:20	35 KB
R2-161690.zip	2016/02/06 6:20	28,1 KB
R2-161691.zip	2016/02/06 6:20	26,4 KB
R2-161692.zip	2016/02/06 7:45	49,6 KB
R2-161693.zip	2016/02/06 6:20	91,4 KB

Samsung Exhibit 1025, Page 1360 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161694.zip	2016/02/06 7:45	119,1 KB
R2-161695.zip	2016/02/11 16:42	63,2 KB
R2-161696.zip	2016/02/06 6:20	29,4 KB
R2-161697.zip	2016/02/06 6:20	99,6 KB
R2-161698.zip	2016/02/09 8:58	24,6 KB
R2-161699.zip	2016/02/06 6:17	20,3 KB
R2-161700.zip	2016/02/06 6:17	17,1 KB
R2-161701.zip	2016/02/06 5:44	16,1 KB
R2-161702.zip	2016/02/06 6:58	31,9 KB
R2-161703.zip	2016/02/06 6:18	43,6 KB
R2-161704.zip	2016/02/06 6:58	22,9 KB
R2-161705.zip	2016/02/06 6:18	39,8 KB
R2-161706.zip	2016/02/06 6:18	62,9 KB
R2-161707.zip	2016/02/06 6:58	25,4 KB
R2-161708.zip	2016/02/06 6:19	17,4 KB
R2-161709.zip	2016/02/06 6:32	23,3 KB
R2-161710.zip	2016/02/13 2:01	24,2 KB
R2-161711.zip	2016/02/06 6:32	23 KB
R2-161712.zip	2016/02/06 6:32	23,2 KB
R2-161713.zip	2016/02/13 2:01	24,6 KB
R2-161714.zip	2016/02/06 6:32	23,1 KB
R2-161715.zip	2016/02/06 6:32	23 KB
R2-161716.zip	2016/02/06 6:32	23 KB
R2-161717.zip	2016/02/06 6:58	23 KB
R2-161718.zip	2016/02/06 6:58	23,1 KB
R2-161719.zip	2016/02/06 7:27	61,6 KB
R2-161720.zip	2016/02/06 6:58	22,6 KB
R2-161721.zip	2016/02/06 6:58	78,2 KB
R2-161723.zip	2016/02/06 7:27	18,7 KB
R2-161724.zip	2016/02/06 6:32	44,9 KB
R2-161725.zip	2016/02/06 6:32	27,9 KB
R2-161726.zip	2016/02/06 6:58	53,9 KB
R2-161727.zip	2016/02/06 10:16	28,4 KB
R2-161728.zip	2016/02/06 6:58	59,5 KB

Samsung Exhibit 1025, Page 1361 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161729.zip	2016/02/06 6:58	33,2 KB
R2-161730.zip	2016/02/06 6:58	26,8 KB
R2-161731.zip	2016/02/06 10:20	27,7 KB
R2-161732.zip	2016/02/06 7:20	61,6 KB
R2-161733.zip	2016/02/06 7:21	18,8 KB
R2-161734.zip	2016/02/12 17:42	101,6 KB
R2-161735.zip	2016/02/06 7:57	28,2 KB
R2-161736.zip	2016/02/06 6:55	168,6 KB
R2-161737.zip	2016/02/06 6:58	31,8 KB
R2-161738.zip	2016/02/06 6:58	27,2 KB
R2-161739.zip	2016/02/06 6:58	27,4 KB
R2-161740.zip	2016/02/06 6:58	9,5 KB
R2-161741.zip	2016/02/06 7:55	49,3 KB
R2-161742.zip	2016/02/06 7:55	23,1 KB
R2-161743.zip	2016/02/06 7:55	19,2 KB
R2-161744.zip	2016/02/14 9:47	74,8 KB
R2-161745.zip	2016/02/19 13:22	53,4 KB
R2-161747.zip	2016/02/06 6:53	118,2 KB
R2-161748.zip	2016/02/06 7:24	35,3 KB
R2-161749.zip	2016/02/06 7:24	76,3 KB
R2-161750.zip	2016/02/06 7:38	19,6 KB
R2-161751.zip	2016/02/06 7:59	32,1 KB
R2-161752.zip	2016/02/06 7:39	15 KB
R2-161753.zip	2016/02/11 8:34	26,1 KB
R2-161754.zip	2016/02/06 8:15	23,9 KB
R2-161755.zip	2016/02/06 8:15	51,6 KB
R2-161756.zip	2016/02/06 8:15	24,6 KB
R2-161757.zip	2016/02/06 9:32	41,8 KB
R2-161758.zip	2016/02/10 10:16	37 KB
R2-161759.zip	2016/02/10 10:16	16,7 KB
R2-161760.zip	2016/02/12 17:42	239,5 KB
R2-161761.zip	2016/02/12 17:39	14,5 KB
R2-161762.zip	2016/02/14 13:41	35,2 KB
R2-161763.zip	2016/02/19 13:22	20 KB

Samsung Exhibit 1025, Page 1362 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161764.zip	2016/02/19 17:28	55,7 KB
R2-161765.zip	2016/02/19 17:28	19,5 KB
R2-161766.zip	2016/02/19 17:28	33,8 KB
R2-161767.zip	2016/02/19 13:22	39,3 KB
R2-161768.zip	2016/02/19 13:22	36,5 KB
R2-161769.zip	2016/02/19 13:22	30 KB
R2-161770.zip	2016/02/19 13:22	19,7 KB
R2-161771.zip	2016/02/19 13:22	286,4 KB
R2-161772.zip	2016/02/19 13:22	200,6 KB
R2-161774.zip	2016/02/19 13:22	227,3 KB
R2-161775.zip	2016/02/19 13:22	26,5 KB
R2-161776.zip	2016/02/19 13:22	24,2 KB
R2-161777.zip	2016/02/19 13:22	143,9 KB
R2-161778.zip	2016/02/19 17:28	29,8 KB
R2-161779.zip	2016/02/19 13:22	19,6 KB
R2-161780.zip	2016/02/19 13:22	12,8 KB
R2-161781.zip	2016/02/19 17:28	8,7 KB
R2-161782.zip	2016/02/19 13:22	55,8 KB
R2-161783.zip	2016/02/19 13:22	101,4 KB
R2-161784.zip	2016/02/19 17:28	67 KB
R2-161785.zip	2016/02/19 17:28	16,2 KB
R2-161786.zip	2016/02/19 17:28	101,2 KB
R2-161787.zip	2016/02/19 13:22	209,5 KB
R2-161788.zip	2016/02/19 13:22	12,4 KB
R2-161789.zip	2016/02/27 21:49	1378,2 KB
R2-161790.zip	2016/02/27 21:49	841,1 KB
R2-161791.zip	2016/02/19 13:22	53,2 KB
R2-161792.zip	2016/02/19 13:22	23,1 KB
R2-161793.zip	2016/02/19 13:23	11,3 KB
R2-161794.zip	2016/02/19 13:23	44,1 KB
R2-161795.zip	2016/02/19 13:23	82,8 KB
R2-161796.zip	2016/02/19 13:23	761,8 KB
R2-161797.zip	2016/02/19 13:23	212,8 KB
R2-161798.zip	2016/02/27 21:49	179,3 KB

Samsung Exhibit 1025, Page 1363 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161799.zip	2016/02/19 13:23	36,7 KB
R2-161800.zip	2016/02/19 13:23	218,7 KB
R2-161801.zip	2016/02/19 13:23	11,3 KB
R2-161802.zip	2016/02/19 13:23	15,9 KB
R2-161803.zip	2016/02/19 13:23	54,3 KB
R2-161804.zip	2016/02/27 21:49	34,7 KB
R2-161805.zip	2016/02/27 21:49	213,4 KB
R2-161806.zip	2016/02/19 13:23	64,5 KB
R2-161808.zip	2016/02/19 13:23	17,5 KB
R2-161809.zip	2016/02/19 13:23	37,3 KB
R2-161810.zip	2016/02/19 13:23	199,1 KB
R2-161811.zip	2016/02/27 21:49	67,6 KB
R2-161812.zip	2016/02/27 21:49	17,3 KB
R2-161813.zip	2016/02/19 13:23	12,5 KB
R2-161814.zip	2016/02/19 13:23	9,9 KB
R2-161815.zip	2016/02/19 13:23	23,2 KB
R2-161816.zip	2016/02/19 13:23	29,8 KB
R2-161817.zip	2016/02/19 13:23	24 KB
R2-161818.zip	2016/02/22 16:52	9,9 KB
R2-161819.zip	2016/02/19 13:23	25,6 KB
R2-161820.zip	2016/02/19 13:23	52,8 KB
R2-161821.zip	2016/02/27 21:49	53,3 KB
R2-161822.zip	2016/02/27 21:49	57,2 KB
R2-161823.zip	2016/02/27 21:49	18,8 KB
R2-161824.zip	2016/02/27 21:49	61,3 KB
R2-161825.zip	2016/02/19 13:23	9,8 KB
R2-161826.zip	2016/02/19 13:23	23,6 KB
R2-161827.zip	2016/02/19 13:23	22,8 KB
R2-161828.zip	2016/02/19 13:23	24,1 KB
R2-161829.zip	2016/02/19 13:23	33,7 KB
R2-161830.zip	2016/02/19 13:23	22,6 KB
R2-161831.zip	2016/02/19 13:23	24,4 KB
R2-161832.zip	2016/02/19 13:23	33,9 KB
R2-161833.zip	2016/02/19 13:23	21,1 KB

Samsung Exhibit 1025, Page 1364 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161834.zip	2016/02/19 13:23	21,1 KB
R2-161835.zip	2016/02/19 13:23	12,5 KB
R2-161836.zip	2016/02/19 13:23	18,5 KB
R2-161837.zip	2016/02/19 13:23	30 KB
R2-161838.zip	2016/02/19 13:23	29,8 KB
R2-161839.zip	2016/02/19 13:24	3331,9 KB
R2-161840.zip	2016/02/19 13:24	31 KB
R2-161841.zip	2016/02/19 13:24	24,1 KB
R2-161842.zip	2016/02/19 13:24	23,2 KB
R2-161843.zip	2016/02/19 13:24	28,7 KB
R2-161844.zip	2016/02/19 13:24	52,7 KB
R2-161845.zip	2016/02/19 13:24	20 KB
R2-161846.zip	2016/02/19 13:24	19,7 KB
R2-161847.zip	2016/02/19 13:24	19,6 KB
R2-161848.zip	2016/02/19 13:24	25,7 KB
R2-161850.zip	2016/02/19 13:24	36,8 KB
R2-161851.zip	2016/02/19 13:24	129,7 KB
R2-161852.zip	2016/02/19 13:24	133,3 KB
R2-161853.zip	2016/02/26 14:34	3353,2 KB
R2-161854.zip	2016/02/19 13:24	18,5 KB
R2-161855.zip	2016/02/19 13:24	187,5 KB
R2-161856.zip	2016/02/19 13:24	45,8 KB
R2-161857.zip	2016/02/19 13:24	129,8 KB
R2-161858.zip	2016/02/19 13:24	30,2 KB
R2-161859.zip	2016/02/19 13:24	58,5 KB
R2-161860.zip	2016/02/19 13:24	15,3 KB
R2-161861.zip	2016/02/19 13:24	43,4 KB
R2-161862.zip	2016/02/19 17:28	17,8 KB
R2-161863.zip	2016/02/19 13:24	414,6 KB
R2-161864.zip	2016/02/19 13:24	32,3 KB
R2-161865.zip	2016/02/19 17:28	23,6 KB
R2-161866.zip	2016/02/19 13:24	258 KB
R2-161867.zip	2016/02/19 13:24	40,9 KB
R2-161868.zip	2016/02/19 13:24	76,7 KB

Samsung Exhibit 1025, Page 1365 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161869.zip	2016/02/19 13:25	4638 KB
R2-161871.zip	2016/02/19 13:25	16,6 KB
R2-161872.zip	2016/02/19 17:28	65,2 KB
R2-161873.zip	2016/02/19 17:28	24,1 KB
R2-161874.zip	2016/02/19 13:25	27,3 KB
R2-161875.zip	2016/02/19 13:25	62,7 KB
R2-161876.zip	2016/02/19 13:25	22,4 KB
R2-161877.zip	2016/02/19 13:25	625,2 KB
R2-161878.zip	2016/02/19 13:25	22,8 KB
R2-161880.zip	2016/02/19 13:25	14,2 KB
R2-161881.zip	2016/02/19 13:25	8,9 KB
R2-161882.zip	2016/02/19 13:25	9,4 KB
R2-161883.zip	2016/02/19 13:25	12,7 KB
R2-161884.zip	2016/02/19 13:25	10,1 KB
R2-161885.zip	2016/02/19 13:26	6344,3 KB
R2-161886.zip	2016/02/19 13:26	23,4 KB
R2-161887.zip	2016/02/19 13:26	77,9 KB
R2-161888.zip	2016/02/19 13:26	63,9 KB
R2-161889.zip	2016/02/19 13:26	40,1 KB
R2-161890.zip	2016/02/19 13:26	21,2 KB
R2-161891.zip	2016/02/19 13:26	19,2 KB
R2-161892.zip	2016/02/19 17:28	27,4 KB
R2-161893.zip	2016/02/19 17:28	27,5 KB
R2-161894.zip	2016/02/19 13:26	25,6 KB
R2-161895.zip	2016/02/19 13:26	25,5 KB
R2-161896.zip	2016/02/19 13:26	31 KB
R2-161897.zip	2016/02/19 13:26	22,5 KB
R2-161898.zip	2016/02/19 13:26	47,6 KB
R2-161899.zip	2016/02/19 13:26	23,1 KB
R2-161900.zip	2016/02/19 13:26	23,1 KB
R2-161901.zip	2016/02/19 13:26	110,5 KB
R2-161902.zip	2016/02/19 13:26	22 KB
R2-161903.zip	2016/02/19 13:26	17,5 KB
R2-161904.zip	2016/02/19 13:26	23,9 KB

Samsung Exhibit 1025, Page 1366 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161905.zip	2016/02/19 13:26	27,9 KB
R2-161906.zip	2016/02/19 13:26	16,5 KB
R2-161907.zip	2016/02/19 13:26	16,2 KB
R2-161908.zip	2016/02/19 13:26	16,1 KB
R2-161909.zip	2016/02/19 17:28	19,7 KB
R2-161910.zip	2016/02/19 17:28	19,6 KB
R2-161911.zip	2016/02/19 13:26	26,6 KB
R2-161912.zip	2016/02/19 13:26	26,7 KB
R2-161913.zip	2016/02/19 13:26	22,8 KB
R2-161914.zip	2016/02/19 13:26	78,8 KB
R2-161915.zip	2016/02/19 13:26	19,6 KB
R2-161916.zip	2016/02/19 13:26	26,3 KB
R2-161917.zip	2016/02/19 13:26	19,2 KB
R2-161918.zip	2016/02/27 21:49	95,3 KB
R2-161919.zip	2016/02/19 13:26	307,5 KB
R2-161920.zip	2016/02/19 13:26	14,3 KB
R2-161921.zip	2016/02/19 13:26	15,6 KB
R2-161922.zip	2016/02/19 13:26	15,6 KB
R2-161923.zip	2016/02/19 13:26	40,7 KB
R2-161924.zip	2016/02/19 13:27	532,7 KB
R2-161925.zip	2016/02/19 13:27	304,4 KB
R2-161926.zip	2016/02/19 13:27	390,7 KB
R2-161927.zip	2016/02/19 13:27	345,3 KB
R2-161928.zip	2016/02/19 13:27	35,4 KB
R2-161929.zip	2016/02/19 13:27	15 KB
R2-161930.zip	2016/02/19 13:27	56,9 KB
R2-161931.zip	2016/02/19 13:27	1337,7 KB
R2-161932.zip	2016/02/19 13:27	57,8 KB
R2-161933.zip	2016/02/19 13:27	25,7 KB
R2-161934.zip	2016/02/19 13:27	53,7 KB
R2-161935.zip	2016/02/19 13:27	61,6 KB
R2-161936.zip	2016/02/19 13:27	38,1 KB
R2-161937.zip	2016/02/19 13:27	27,3 KB
R2-161938.zip	2016/02/19 13:27	58,6 KB

Samsung Exhibit 1025, Page 1367 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161939.zip	2016/02/19 13:27	15,1 KB
R2-161941.zip	2016/02/19 13:27	52,3 KB
R2-161942.zip	2016/02/19 17:28	10,1 KB
R2-161943.zip	2016/02/19 13:27	9,3 KB
R2-161944.zip	2016/02/19 13:27	14,6 KB
R2-161945.zip	2016/02/19 13:27	10 KB
R2-161946.zip	2016/02/19 13:27	15,7 KB
R2-161947.zip	2016/02/29 9:59	59,9 KB
R2-161948.zip	2016/02/19 13:27	12,8 KB
R2-161949.zip	2016/02/29 9:51	32 KB
R2-161950.zip	2016/03/01 14:22	105,3 KB
R2-161951.zip	2016/02/19 13:27	15,6 KB
R2-161952.zip	2016/02/19 13:27	18 KB
R2-161953.zip	2016/02/19 13:27	56,8 KB
R2-161954.zip	2016/02/19 13:27	51,2 KB
R2-161955.zip	2016/02/19 13:27	185,4 KB
R2-161956.zip	2016/02/19 13:27	11,5 KB
R2-161957.zip	2016/02/19 13:27	79,7 KB
R2-161958.zip	2016/02/19 13:27	22,5 KB
R2-161959.zip	2016/02/19 13:27	187,5 KB
R2-161960.zip	2016/02/19 13:27	42,1 KB
R2-161961.zip	2016/02/19 13:27	25,3 KB
R2-161962.zip	2016/02/19 17:28	9,9 KB
R2-161963.zip	2016/02/19 13:28	4643,6 KB
R2-161964.zip	2016/02/19 13:29	4616,3 KB
R2-161965.zip	2016/02/23 9:29	31,1 KB
R2-161966.zip	2016/02/23 9:29	18,5 KB
R2-161967.zip	2016/02/19 13:29	39,9 KB
R2-161968.zip	2016/02/19 17:28	11,4 KB
R2-161969.zip	2016/02/19 13:29	26,2 KB
R2-161970.zip	2016/02/19 13:29	37,4 KB
R2-161971.zip	2016/02/19 13:29	20,3 KB
R2-161972.zip	2016/02/19 13:29	21,8 KB
R2-161973.zip	2016/02/19 13:29	735,1 KB

Samsung Exhibit 1025, Page 1368 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-161974.zip	2016/02/19 13:29	391,1 KB
R2-161975.zip	2016/02/19 17:28	141,2 KB
R2-161976.zip	2016/02/19 13:29	46,6 KB
R2-161977.zip	2016/02/19 17:28	1276,2 KB
R2-161978.zip	2016/02/19 17:28	43,6 KB
R2-161979.zip	2016/02/19 13:29	30,9 KB
R2-161980.zip	2016/02/19 17:28	23,1 KB
R2-161981.zip	2016/02/19 13:29	186,6 KB
R2-161982.zip	2016/02/19 13:29	36,3 KB
R2-161983.zip	2016/02/19 13:29	37,5 KB
R2-161984.zip	2016/02/19 17:28	187,3 KB
R2-161985.zip	2016/02/19 13:29	15,3 KB
R2-161986.zip	2016/02/19 17:28	209,7 KB
R2-161987.zip	2016/02/19 17:28	186,7 KB
R2-161988.zip	2016/02/19 13:29	43,3 KB
R2-161989.zip	2016/02/19 13:29	10,5 KB
R2-161990.zip	2016/02/19 17:28	58,9 KB
R2-161991.zip	2016/02/19 13:29	333,9 KB
R2-161992.zip	2016/02/27 21:49	46,2 KB
R2-161993.zip	2016/02/19 13:29	57,1 KB
R2-161994.zip	2016/02/19 17:28	33,2 KB
R2-161995.zip	2016/02/19 17:28	14,8 KB
R2-161997.zip	2016/02/19 17:28	23,5 KB
R2-161998.zip	2016/02/19 17:28	64,5 KB
R2-161999.zip	2016/02/19 17:28	48,8 KB
R2-162000.zip	2016/02/19 17:28	45,6 KB
R2-162001.zip	2016/02/19 17:28	47,6 KB
R2-162002.zip	2016/02/19 17:28	25,1 KB
R2-162003.zip	2016/02/19 17:28	26,5 KB
R2-162004.zip	2016/02/19 17:28	23,7 KB
R2-162005.zip	2016/02/19 17:28	65,3 KB
R2-162006.zip	2016/02/19 17:28	24,2 KB
R2-162007.zip	2016/02/19 17:28	57,1 KB
R2-162008.zip	2016/02/19 17:28	8,8 KB

Samsung Exhibit 1025, Page 1369 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-162009.zip	2016/02/19 17:28	77,1 KB
R2-162010.zip	2016/02/19 17:28	10,2 KB
R2-162011.zip	2016/02/19 17:28	179 KB
R2-162012.zip	2016/02/19 17:28	23,2 KB
R2-162013.zip	2016/02/19 17:28	401,8 KB
R2-162014.zip	2016/02/19 17:28	187,1 KB
R2-162015.zip	2016/02/19 17:28	48 KB
R2-162016.zip	2016/02/19 17:28	15 KB
R2-162017.zip	2016/02/19 17:28	28 KB
R2-162018.zip	2016/02/19 17:28	10 KB
R2-162019.zip	2016/02/19 17:29	14,7 KB
R2-162020.zip	2016/02/19 17:29	9,8 KB
R2-162021.zip	2016/04/06 21:05	22,8 KB
R2-162023.zip	2016/02/19 17:29	209,9 KB
R2-162024.zip	2016/02/22 13:43	211 KB
R2-162025.zip	2016/02/27 21:49	9,7 KB
R2-162026.zip	2016/02/27 21:49	57 KB
R2-162027.zip	2016/02/27 21:49	15,2 KB
R2-162028.zip	2016/02/24 15:22	96,3 KB
R2-162029.zip	2016/02/24 15:22	17,8 KB
R2-162030.zip	2016/02/24 15:22	17 KB
R2-162031.zip	2016/02/24 15:22	72 KB
R2-162032.zip	2016/02/24 15:22	17,2 KB
R2-162033.zip	2016/02/24 15:22	34,5 KB
R2-162034.zip	2016/02/24 15:22	29,2 KB
R2-162035.zip	2016/02/27 21:49	43,9 KB
R2-162036.zip	2016/02/27 21:49	58,9 KB
R2-162037.zip	2016/02/27 21:49	16,8 KB
R2-162038.zip	2016/02/27 21:49	28,7 KB
R2-162039.zip	2016/02/27 21:49	18,7 KB
R2-162040.zip	2016/02/29 20:40	740 KB
R2-162041.zip	2016/02/29 9:54	34,9 KB
R2-162042.zip	2016/02/29 9:48	188,6 KB
R2-162043.zip	2016/03/01 14:35	187,4 KB

Samsung Exhibit 1025, Page 1370 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-162044.zip	2016/03/01 14:33	59,4 KB
R2-162045.zip	2016/02/29 9:42	61,4 KB
R2-162046.zip	2016/02/29 9:42	22,7 KB
R2-162047.zip	2016/02/29 20:40	62,3 KB
R2-162048.zip	2016/02/27 21:49	23,2 KB
R2-162049.zip	2016/02/27 21:49	22,9 KB
R2-162050.zip	2016/02/27 21:49	24,1 KB
R2-162051.zip	2016/02/27 21:49	24,5 KB
R2-162052.zip	2016/02/27 21:49	34,1 KB
R2-162053.zip	2016/02/27 21:49	34 KB
R2-162054.zip	2016/02/29 9:45	3350,1 KB
R2-162055.zip	2016/02/29 14:04	17,6 KB
R2-162056.zip	2016/02/29 14:04	17,6 KB
R2-162057.zip	2016/02/29 14:04	19,2 KB
R2-162058.zip	2016/03/02 10:53	75 KB
R2-162059.zip	2016/02/28 10:46	53,4 KB
R2-162060.zip	2016/02/28 10:46	57,2 KB
R2-162061.zip	2016/02/29 10:01	22,4 KB
R2-162062.zip	2016/02/29 10:01	60,8 KB
R2-162063.zip	2016/02/29 13:44	23,8 KB
R2-162064.zip	2016/03/01 14:26	44 KB
R2-162065.zip	2016/03/01 14:30	60,3 KB
R2-162066.zip	2016/03/01 21:09	22,3 KB
R2-162067.zip	2016/03/01 21:09	59,8 KB
R2-162068.zip	2016/03/07 13:15	6549,5 KB
R2-162069.zip	2016/03/07 13:15	80 KB
R2-162070.zip	2016/03/07 13:15	221,4 KB
R2-162071.zip	2016/03/07 13:15	168,5 KB
R2-162072.zip	2016/03/07 13:15	73,1 KB
R2-162073.zip	2016/03/07 13:15	90,4 KB
R2-162074.zip	2016/03/07 13:15	95,6 KB
R2-162075.zip	2016/03/07 13:15	2460,4 KB
R2-162076.zip	2016/04/06 22:17	23,7 KB
R2-162077.zip	2016/03/04 11:20	158,8 KB

Samsung Exhibit 1025, Page 1371 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

sort by name/desc	sort by date/desc	sort by size/desc
R2-162078.zip	2016/03/04 11:20	158,5 KB
R2-162079.zip	2016/03/24 10:14	22,9 KB
TDoc_List_Meeting_RAN2#93.xlsm	2016/11/14 0:27	312,4 KB
TDoc_List_Meeting_RAN2#93.xlsx	2017/10/13 2:01	304,9 KB
TDoc_List_Meeting_RAN2#93.zip	2018/01/10 16:47	583,2 KB

1055 items.

Samsung Exhibit 1025, Page 1372 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 44

Agenda Item: 2.2

Source: ETSI MCC

Title: Draft Report of 3GPP TSG RAN WG2 meeting #93

St. Julian's, Malta, February 15 – 19, 2016

Document for: Approval

Draft Report of 3GPP TSG RAN WG2 meeting #93

held in St. Julian's, Malta
February 15 - 19, 2016



Samsung Exhibit 1025, Page 1374 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

3GPP

Postal address

3GPP support office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet

http://www.3gpp.org

© 2016, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
All rights reserved.

Samsung Exhibit 1025, Page 1375 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Contents

Organisation of the meeting 11

Statistics/Executive Summary 11

1 Opening of the meeting (9 AM) 12

1 Opening of the meeting (9 AM) 12
1.1 Call for IPR 12
1.2 Network usage conditions 12
1.3 Other 13

2 General 13
2.1 Approval of the agenda 13
2.2 Approval of the report of the previous meeting 15
2.3 Reporting from other meetings 15
2.4 Others 16

3 Incoming liaisons 16
3.1 Joint UMTS/LTE relevance 16
3.2 LTE relevance 16
3.3 UMTS relevance 18

4 Joint UMTS/LTE: Rel-12 and earlier releases 19
4.1 Joint UMTS/LTE: Rel-11 and earlier releases 19
4.2 Joint UMTS/LTE: Rel-12 WIs/SIs 19

5 Joint UMTS/LTE: Rel-13 20
5.1 WI: RAN aspects of Application specific Congestion control for Data Communication (ACDC) 20
5.2 Other Joint UMTS/LTE Rel-13 WIs 20
5.3 Joint UMTS/LTE TEI13 enhancements 20

6 LTE: Rel-12 and earlier releases 20
6.1 LTE: Rel-11 and earlier 20
6.1.1 Control Plane and Common 21
6.1.2 User Plane 24
6.2 LTE: Rel-12 24
6.2.1 WI: Dual Connectivity for LTE (SCE) 24
6.2.1.1 Dual Connectivity – Control Plane 24
6.2.1.2 Dual Connectivity – User Plane 27
6.2.2 WI: Small Cell Enhancements – Physical Layer 27
6.2.3 WI: LTE Device to Device Proximity Services - Radio Aspects 27
6.2.3.1 Control Plane and Common 27
6.2.3.2 User Plane 27
6.2.4 WI: Further MBMS Operations Support for E-UTRA 27
6.2.5 WI: Network-Assisted Interference Cancellation and Suppression 27
6.2.6 WI: Low Cost MTC for LTE 28
6.2.7 WI: Group Call eMBMS congestion management for LTE 28
6.2.8 WI: FDD/TDD Carrier Aggregation 28
6.2.9 LTE Other Closed Rel-12 WIs 28
6.2.9.1 LTE Other Closed Rel-12 WIs – CP and common CP/UP 29
6.2.9.2 LTE Other Closed Rel-12 WIs – UP 30

7 LTE Rel-13 30
7.1 WI: Licensed-Assisted Access using LTE 30
7.1.1 LBT related aspects 30
7.1.2 Other 32
7.2 WI: CA enhancements 34
7.2.1 Control Plane and Common 34
7.2.2 User Plane 39

Samsung Exhibit 1025, Page 1376 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

7.3 WI: Single-Cell point-to-multipoint transmission 39
7.4 WI: Further LTE Physical Layer Enhancements for MTC 42
7.4.1 Organizational and stage 2 42
7.4.2 SIB 44
7.4.3 Random Access 46
7.4.4 Paging 47
7.4.5 Mobility Support 49
7.4.6 User Plane aspects 49
7.4.7 Other 50
7.5 WI: ProSe enhancements 52
7.5.1 UE-to-Network Relays 52
7.5.2 ProSe discovery in partial- and outside network coverage 53
7.5.3 ProSe discovery for inter-carrier and inter-PLMN 53
7.5.4 Group priorities for ProSe communication 53
7.5.5 Other 54
7.6 WI: LTE-WLAN Radio Level Integration 54
7.6.1 Organizational 54
7.6.2 LTE+WLAN Aggregation 55
7.6.2.1 Stage 2 55
7.6.2.2 Stage 3 - Control Plane 59
7.6.2.3 Stage 3 - User Plane 62
7.6.3 Interworking Enhancements 64
7.6.3.1 Stage 2 64
7.6.3.2 Stage 3 66
7.6.4 Other 66
7.7 WI: Multicarrier Load Distribution in LTE 66
7.8 WI: Dual Connectivity Enhancements 67
7.9 WI: RAN enhancements for extended DRX in LTE 68
7.9.1 eDRX for idle mode 69
7.9.2 eDRX for connected mode 70
7.10 SI: Study on Latency reduction techniques for LTE 70
7.11 SI: Feasibility Study on LTE-based V2X Services 71
7.12 WI: Elevation Beamforming/Full-Dimension (FD) MIMO for LTE 72
7.13 WI: Further Enhancements of Minimization of Drive Tests for E-UTRAN 73
7.14 WI: Indoor Positioning Enhancements for UTRA and LTE 74
7.15 WI: LTE-WLAN RAN Level Integration supporting legacy WLAN 75
7.15.1 Stage 2 75
7.15.2 Stage 3 77
7.16 WI: Narrowband IOT 78
7.16.1 General 78
7.16.2 Control Plane 79
7.16.2.1 Radio Resource Control - RRC 79
7.16.2.2 System Information 81
7.16.2.3 Idle mode procedures 81
7.16.2.4 Paging 82
7.16.3 User Plane 82
7.16.3.1 MAC/RLC 82
7.16.3.2 PDCP 82
7.17 Other LTE Rel-13 WIs 83
7.18 LTE TEI13 enhancements 83
7.19 LTE ASN.1 review 86
7.19.1 Organisational 86
7.19.2 Other 87

8 UTRA Release 10 and earlier releases 88

9 UTRA Release 11 89

10 UTRA Release 12 90
10.1 WI: Further EUL Enhancements 90
10.2 WI: Enhancements to SIB 91
10.3 WI: UMTS Heterogeneous Networks enhancements 91
10.4 WI: DCH Enhancements for UMTS 91

Samsung Exhibit 1025, Page 1377 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.5 WI: WLAN/3GPP Radio Interworking – UTRA aspects 92
10.6 WI: Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA 92
10.7 Other UMTS Rel-12 WI/SIs 92

11 UTRA Release 13 93
11.1 WI: L2/L3 Downlink enhancements for UMTS 93
11.1.1 Retrievable configurations 93
11.1.2 Seamless URA_PCH to CELL_FACH transitions 94
11.1.3 Improved HARQ retransmission 94
11.1.4 Autonomous state transitions 94
11.1.5 Improved synchronized RRC procedures 94
11.1.6 Other 94
11.2 WI: Power saving enhancements for UMTS 95
11.3 WI: Support of EVS over UTRAN CS 95
11.4 WI: Network-Assisted Interference Cancellation and Suppression for UMTS 95
11.5 WI: Multiflow Enhancements for UTRA 95
11.6 WI: HSPA Dual-Band UL carrier aggregation 95
11.7 WI: Application specific Congestion control 96
11.8 WI: Indoor Positioning enhancements for UTRA and LTE 96
11.9 WI: Downlink TPC enhancements for UMTS 97
11.10 WI: Dual Carrier HSUPA Enhancements for UTRAN CS 97
11.11 UMTS TEI13 enhancements 98
11.12 UMTS ASN.1 review 100
11.12.1 Organisational 100
11.12.2 Other 100

12 Outgoing LSs and email discussions from UTRA session 101
12.1 Agreed outgoing LSs from UTRA session 101
12.2 Email discussions from UTRA 101

13 Comebacks 101
13.1 LTE breakout sessions 101
13.1.1 Report from the Legacy LTE User Plane session 101
13.1.2 Report from LTE Break-Out session 102
13.1.3 Report from LTE Break-Out session 103
13.1.4 Report from NB-IOT session 103
13.2 UMTS breakout session 104
13.3 Main session 104
13.4 Email Discussions from main session 107

14 Outgoing LS from LTE and Joint 107

15 Any other business 107

16 Closing of the meeting (17:50) 108

Annex A: List of participants 109

Annex B: List of Tdocs 109

Annex C: Incoming liaison statements for TSG RAN WG2 #93 109

Annex D: Outgoing liaison statements of TSG RAN WG2 #93 116

Annex E: List of agreed CRs for RAN #71 120

Annex F: RAN WG2 meeting #93 post processing 125
Email discussions/approvals 125
CRs from other WGs to be agreed/reviewed by RAN2 before RAN #71: 130

Samsung Exhibit 1025, Page 1378 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex G: LTE Breakout (UP) session 131

Annex H: LTE Breakout (ProSe and V2X) session 140

Annex I: LTE Breakout (NB-IoT) session 162

Annex K: History 192

Samsung Exhibit 1025, Page 1379 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Organisation of the meeting

Meeting:	3GPP TSG RAN WG2 #93	
Meeting location:	St. Julian's, Malta	
Duration:	Monday 15.02.2016 - Friday 19.02.2016	
Host:	European Friends of 3GPP (EF3)	
TSG RAN WG2 Chairman:	Richard Burbidge (Intel Corporation)	email: richard.c.burbidge@intel.com
TSG RAN WG2 Vice chairman:	Hu Nan (CMCC)	email: hunan@chinamobile.com
TSG RAN WG2 Vice chairman:	Diana Pani (Interdigital Communications)	email: diana.pani@interdigital.com
TSG RAN WG2 MCC Support:	Yong-Jun Chung (ETSI MCC)	email: Yong-jun.Chung@etsi.org
Email reflector:	3GPP_TSG_RAN_WG2@LIST.ETSI.ORG	
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/TSGR2_93/Docs	
Ad hocs:	Official parallel ad hocs held (see agenda item 2.1) on LTE Breakout session on UP matter chaired by SeungJune Yi (LGE), LTE Breakout session on ProSe and V2X matter chaired by Diana Pani (Interdigital), LTE Breakout session on NB-IoT chaired by Johan Johansson (MediaTek) UMTS sessions: Topics on UMTS legacy Rel-12 and earlier, DL enhancements WI, Dual Band HSUPA, Dual Carrier HSUPA enhancements, and TEI13 chaired by Diana Pani (Interdigital); Topic on Power saving enhancements for UMTS chaired by Francesco Pica (Qualcomm); Topics on Support of EVS over UTRAN CS and Study on Network-Assisted Interference Cancellation and Suppression for UMTS and DL TPC enhancements chaired by Mark Curran (Ericsson); Topics on ACDC and Indoor positioning chaired by Xudong Yang (Huawei).	
next meetings:	TSG RAN #71	07.03. - 10.03.2015 Goteborg, Sweden
	TSG RAN WG2 #93bis	11.04. - 15.04.2015 Dubrovnik, Croatia
	TSG RAN WG2 #94	23.05. - 27.05.2015 Nanjing, China
	TSG RAN #72	13.06. - 16.06.2015 Busan, South Korea
	TSG RAN WG2 #95	22.08. - 26.08.2015 Goteborg, Sweden
	TSG RAN #73	19.09. - 22.09.2015 TBD, USA

Statistics/Executive Summary

TSG RAN WG2 #93 was held in St. Julian's, Malta hosted by European Friends of 3GPP. This RAN WG2 meeting had 3 parallel sessions: UMTS session (see AI 8-11; Mon - Thu) and LTE Breakout sessions on (see AI 6.1.2, 6.2.9.2, 7.4.3 and 7.4.6 in R2-161771 (Annex G), AI 7.5 and 7.9 in R2-161810 (Annex H), AI 7.16 in R2-161774 (Annex I). All other topics were treated in the parallel main session.

- 186 participants (registered before the meeting: 260 participants). (See attahced participants list)
- xxxx Tdocs allocated with xxxx available contributions. (See attached Tdoc list)
- 63 incoming liaison statements (5 on UTRA, 57 on LTE; and 1 on joint aspects): 59 were noted and 4 were not treated as late incoming LSs. (See annex C)
- 19 outgoing liaison statements (1 on UTRA, 18 on LTE; and 0 on joint aspects), 3 of them approved by email. (See annex D)
- 44 email discussions scheduled after RAN2 #93 (plus email discussions of RAN2 WI/SI status reports and xx CR from RAN3 to RAN2 TS 36.300). (See Annex F)
- Among xxx change requests (CRs) in total: xxx agreed (xx for UTRA 25.xxx/34.xxx specs, xx for LTE 36.xxx specs and xx to 37.xxx specs) and xx technically endorsed CR for RAN #71. (See Annex E)
-

Samsung Exhibit 1025, Page 1380 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

1 Opening of the meeting (9 AM)

TSG RAN WG2 chairman Richard Burbidge (Intel Corporation) opened the meeting RAN WG2 #93 on Monday morning 15.02.2016 at 09:00 o'clock.

On behalf of the host, the European Friends of 3GPP (EF3), Youn Hyoung Heo (Intel Corporation) welcomed the delegates to St. Julian's, Malta and explained organisational issues.

Following RAN WG2 meeting rooms in the Intercontinental Malta hotel:		
Main RAN2 room:	Cettina de Cesare II (Level 2),	planned for 210 chairs, Mon-Fri
RAN2 LTE Breakout sessions room:	Cettina de Cesare III (Level 2),	planned for 80 participants, Mon - Thu
RAN2 UMTS session room:	Jupiter (Level 2),	planned for 35 participants, Mon - Thu
Following RAN WG2 meeting rooms in the Palace hotel:		
RAN2 LTE Breakout NB-IoT sessions:	State Hall,	planned for 80 participants, Tue - Thu

1 Opening of the meeting (9 AM)

1.1 Call for IPR

Richard Burbidge (TSG RAN WG2 chairman) made the following call for IPRs and reminded the delegates of their obligations with respect to IPRs:

> The attention of the delegates of this Working Group is drawn to the fact that **3GPP Individual Members have the obligation** under the IPR Policies of their respective Organizational Partners to **inform their respective Organizational Partners of Essential IPRs they become aware of**.
>
> The delegates were asked to take note that they were hereby invited:
>
> - to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.
> - to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Statement and the Licensing declaration forms (http://webapp.etsi.org/Ipr/).

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN WG2 Chairman.

1.2 Network usage conditions

The PCG has laid down the following network usage conditions that were shortly presented by the RAN2 chairman:

> 1. **Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws**.
>
> 2. **Users shall not engage in non-work related activities that consume excessive bandwidth** or cause significant degradation of the performance of the network.
>
> Since the **network is a shared resource**, users should exercise some basic etiquette when using the 3GPP network at a meeting. It is understood that high bandwidth applications such as

Samsung Exhibit 1025, Page 1381 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

downloading large files or video streaming might be required for business purposes, but delegates should be strongly discouraged in performing these activities for personal use. Downloading a movie or doing something in an interactive environment for personal use essentially wastes bandwidth that others need to make the meeting effective. The meeting chairman should remind end users that the network is a shared resource; the more one user grabs, the less there is for another. Email and its attachments already take up significant bandwidth (certain email programs are not very bandwidth efficient). In case of need the chair can ask the delegates to restrict IT usage to things that are essential for the meeting itself.

1. **DON'T place your WiFi device in ad-hoc mode**
2. **DON'T set up a personal hotspot in the meeting room**
3. **DO try 802.11a if your WiFi device supports it**
4. **DON'T manually allocate an IP address**
5. **DON'T be a bandwidth hog by streaming video, playing online games, or downloading huge files**
6. **DON'T use packet probing software which clogs the local network (e.g., packet sniffers or port scanners)**

1.3 Other

The PCG has laid down the following conditions that were shortly presented by the RAN2 chairman:

In accordance with the Working Procedures it is reaffirmed that:
(i) compliance with all applicable antitrust and competition laws is required;

(ii) timely submissions of work items in advance of TSG or WG meetings are important to allow for full and fair consideration of such matters; and

(iii) the chairman will conduct the meeting with strict impartiality and in the interests of 3GPP

Note on (i): In case of question please contact your legal counsel.

Note on (ii): WIDs don't need to be submitted to the RAN2 meeting and will typically not be discussed here either.

2 General

THANK YOU to companies that request TDoc numbers and submit contributions early before deadline (really appreciated). Will start to refrain from treating late documents.

2.1 Approval of the agenda

R2-161001 Proposed agenda for RAN2 #93 in St. Julian's, Malta, 15.02.-19.02.2016 Intel (RAN2 Chairman) agenda
=> Approved

Please note that the following schedule is indicative only - topics may move forward or backward. An updated schedule may be provided closer to the meeting and, specifically for this meeting, a more detailed schedule for the R13 corrections may be provided after the contribution submission deadline.

Samsung Exhibit 1025, Page 1382 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Schedule	Main room (meeting hotel)	LTE Breakout room (meeting hotel)	UMTS room (meeting hotel)	NB-IoT room (The Palace Hotel)
Mon 09:00 -> 13:00	[1], [2], [3], [4]			
10:30 ->	[5.1], [5.2] [5.3] [6.2.1.1] DC max UL TX timing difference [7.9] DRX corrections [7.18] CIoT optimisations for non NB-IoT UEs		[8][9] UMTS Rel-8/9/10/11 [10] Rel-12	
14:00 ->	[6.x] Legacy LTE *(start 7.x if time allows)*	[6.1.2, 6.2.9.2] Legacy LTE user plane [7.4.6, 7.4.3] MTCe user plane and random access *(any documents from 7.4.6, 7.4.3 not covered may be treated in main room later in the week)*	[12] ASN.1 review	
16:30 ->				
Tuesday				
08:30 ->	[7.4] MTC		[12] ASN.1 cont' if needed	
11:00 ->				
14:30 ->	[7.6] LTE/WLAN *(starting with LWI)* *(7.6.1, 7.6.3 LWI, 7.6.2.1 LWA Stage 2, 7.6.2.3 LWA UP)*	[7.5] ProSe corrections (may cover some ProSe specific papers from 7.19)	[11.2, 11.3, 11.4] NAICS, DL TPC, EVS [11.2] Power saving enh. [11.8] Indoor positioning	[7.16] NB-IOT (7.16.1, 7.16.2)
17:00 ->				
Wednesday				
08:30 ->	[7.19] ASN.1 review [7.x] R13 corrections (7.1 LAA)		[11.1] DL enhancements	[7.16] NB-IOT *(full day possible)* (7.16.3, 7.16.2)
11:00 ->			[11.6] Dual Band HSUPA [11.11] UMTS TEI13 Comebacks	
14:30 ->	[7.15] LTE/WLAN for legacy AP	[7.9] V2X		
17:00 ->	[7.6] LTE/WLAN (7.6.2.2 LWA CP)			
Thursday				
08:30 ->	[7.x] R13 corrections (7.2 CA-enh, 7.8 DC-enh, 7.3 SC-PTM)	[7.7] MCLD, [7.13] MDT, [7.3] SC-PTM corrections (to be determined by Wednesday if these will be in parallel session or main room)	[12] ASN.1 and comebacks	[7.16] NB-IOT (*full day possible)* (7.16.2, 7.16.1, comebacks)
11:00 ->				
14:30 ->	[7.x] R13 corrections (7.12 MIMO, 7.7 MCLD, 7.13 MDT, 7.14 IPos) [7.17] Other LTE R13 WIs [7.18] TEI13 (possibly some selected 7.x comebacks)	[7.5] ProSe correction comebacks		
17:00 ->				
Friday				
08:30 -> until 17:00	Left-overs, Comebacks including Joint LTE/UMTS			

Chairing of LTE Sessions:

User plane (legacy LTE, MTCe) will be chaired by SeungJune Yi (LGE).

ProSe, V2X will be chaired by Vice Chair Diana Pani (Interdigital)

MCLD, MDT and SC-PTM will be chaired by Vice Chair Hu Nan (CMCC)

NB-IOT will be chaired by Johan Johansson (MediaTek)

Chairing of UTMS Sessions

Samsung Exhibit 1025, Page 1383 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Diana Pani (Interdigital): UMTS legacy Rel-12 and earlier, DL enhancements WI, Dual Band HSUPA, Dual Carrier HSUPA enhancements, and UMTS TEI13

Francesco Pica (Qualcomm): "Power saving enhancements for UMTS"

Mark Curran (Ericsson): "Support of EVS over UTRAN CS" and "Study on Network-Assisted Interference Cancellation and Suppression for UMTS" and DL TPC enhancements

Xudong Yang (Huawei): ACDC and Indoor positioning

Breaks

Morning coffee: 10:30 to 11:00

Lunch: 13:00 to 14:30

Afternoon coffee: 16:30 to 17:00

2.2 Approval of the report of the previous meeting

RAN2#92

R2-161002 Draft Report v1.0 for RAN2 #92 in Anaheim, USA, 16.11.-20.11.2015 ETSI MCC report late
=> Comeback Friday to approve

R2-161067 Draft Report v2.0 for RAN2 #92 in Anaheim, USA, 16.11.-20.11.2015 ETSI MCC report
=> Approved in R2-161070

ASN.1 Ad-hoc

R2-161004 Draft Report of RAN2 Rel-13 LTE ASN.1 Review Ad-hoc Meeting in Helsinki, Finland, 13.01.-14.01.2016 ETSI MCC report late
=> Approved in R2-161068

NB-IoT Ad-hoc

R2-161003 Draft Report of RAN2 NB-IOT Ad-hoc Meeting in Budapest, Hungary, 19.01.-21.01.2016 ETSI MCC report late
=> Approved in R2-161069

2.3 Reporting from other meetings

RAN-70

Brief summary of RAN2 impacting decisions from RAN

- R13 exceptions sheets approved for 3 RAN2 led WIs:
  - 1 - Further LTE Physical Layer Enhancements for MTC
  - 2 - LTE-WLAN Radio Level Integration
  - 2 - LTE-WLAN RAN Level Integration supporting legacy WLAN
- In Q1 2016, RAN2 will focus on completion of Rel-13 including ASN.1 freeze. R14 work in RAN2 will begin in April 2016
- RAN started its 5G requirements study item, and the expectation is that the 5G technology study item will be agreed in March, with RAN2 starting work in April 2016.
- RAN agreed how to proceed with making the CIoT optimisations introduced for NB-IoT applicable for non-NB-IoT UEs.
- RAN agreed the RAN2 technically endorsed CR introducing new VoLTE cause value together with SIB control whether it can be used. RAN tasks RAN2 to define eNB handling in case that spare values are received in the uplink.

Samsung Exhibit 1025, Page 1384 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

2.4 Others

Rapporteur changes

Spec	former rapporteur	proposed new rapporteur
TS 25.300	BHATOOLAUL, David (Alcatel-Lucent)	ALI, Amaanat (Nokia Networks)
TS 25.302	BHATOOLAUL, David (Alcatel-Lucent)	ALI, Amaanat (Nokia Networks)
TS 25.321	SAYENKO, Alexander (Nokia Networks)	HE, Jing (Nokia Networks)
TS 25.327	SAYENKO, Alexander (Nokia Networks)	ALI, Amaanat (Nokia Networks)
TR 25.993	WONG, Shin horng (Alcatel-Lucent)	ALI, Amaanat (Nokia Networks)

=> Rapporteur changes approved

Additional Rapporteur changes

TS 25.301	VAN DER ZEE, Martin (Ericsson)	EKLÖF, Cecilia (Ericsson)
TS 25.306	VAN DER ZEE, Martin (Ericsson)	EKLÖF, Cecilia (Ericsson)
TS 34.109	VAN DER ZEE, Martin (Ericsson)	EKLÖF, Cecilia (Ericsson)

=> Rapporteur changes approved

Isolated impact analysis

Note that an isolated impact analysis is required for Rel-8 to Rel-12 CRs from Q2 2015 onwards.

Only corrections where there is a proven problem are allowed for frozen releases (Rel-8 to Rel-12).

RAN2 WG compendium

Latest version can always be found at ftp://ftp.3gpp.org/tsg_ran/WG2_RL2/Org/RAN2_Compendium/ 7

R2-161005 RAN2 Compendium v30.0 after RAN#70 ETSI MCC other
late

Drafting rules

Note that specification drafting rules in TR 21.801 must be followed when drafting a CR and draft TS/TR.

Latest version can always be found at http://www.3gpp.org/ftp/specs/archive/21_series/21.801/

Time Budget

The time budget endorsed at RAN-70 is available in RP-152298.

3 Incoming liaisons

Note: LSs are moved to the respective agenda items if any.

3.1 Joint UMTS/LTE relevance

The following LSin:
- R2-161022 will be treated under AI 5.1

3.2 LTE relevance

R2-160402 LS on S1 signalling solutions for non-NB-IoT UEs (RP-152296; contact: Ericsson) RAN LS in
to: RAN2 Rel-13 NB_IOT-Core

Samsung Exhibit 1025, Page 1385 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

NOTE: This was treated and noted (no response sent) in the NB-IoT ad hoc but it also impacts TEI13 and hence should be seen by RAN2 as a whole.
=> Noted

R2-161018 LS on distinction of intra-band non-contiguous CA types (R4-158226; contact: NTT DOCOMO) RAN4 LS in to: RAN2 Rel-11 TEI11
=> Noted

R2-161020 LS on maximum UL Transmission timing difference in dual connectivity (R4-158409; contact: Huawei) RAN4 LS in to: RAN2 Rel-13 LTE_dualC_enh-Core
- ZTE ask if the stopping behaviour is in the RAN4 specs or whether RAN2 need to specify. Huawei explain it is captured in RAN4 but RAN2 may also need to capture something.
=> Noted

R2-161021 LS on introduction of new establishment cause for mobile-originating calls (RP-152295; contact: Noka Networks) RAN LS in to: RAN2 Rel-12 TEI12
=> Noted

R2-161030 Reply LS to RP-152295 = R2-161021 on introduction of new establishment cause for mobile-originating calls (C1-160792; contact: Nokia Networks) CT1 LS in to: RAN2 Rel-12 TEI12
=> Noted

R2-161026 Reply LS to R2-153008 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols (SP-150829; contact: Samsung) SALS in cc: RAN2Rel-10 ECSRA_LAA
=> Noted

R2-161031 LS on request for information related to IoT (ISO/IEC
=> Noted. The LS will be seen in RAN.

R2-161036 Reply LS to S5-154454 on RAN Sharing Enhancements for LTE (R3-152873; contact: Ericsson) RAN3 LS in to: RAN2 Rel-13 RSE-RAN_LTE-Core
- Huawei explained that this was agreed in RAN
- Ericsson think that the expectation in RAN was that RAN2 should carefully check this.
=> The CR as agreed in RAN can be checked offline.
=> Noted

R2-161040 Reply LS to S4-151160 = R2-154019 on QoS for EVS-VBR Codec Operation (S2-160618; contact: Ericsson) SA2 LS in to: RAN2 Rel-13 EVS_codec, QOSE2EMTSI
=> Noted

R2-161049 LS on TM10 CRS-IM UE capability report signalling introduction (R4-158196; contact: Intel) RAN4 LS in to: RAN2 Rel-13 LTE_CRSIM-Perf
- Huawei ask if this capability if per CC, per band combination or per UE. Intel think more checking with RAN4 is needed.
=> Intel to provide a CR for 36.331 in R2-161764 and 36.306 in R2-161765
=> Noted

R2-161050 Response LS to C1-160784 on questions on CIoT (S2-160906; contact: Vodafone) SA2 LS in to: RAN2 Rel-13 NB_IOT-Core this LS also allocated in 7.16.1
- Q10, 14, 16, 17 affect RAN
- Companies invited to discuss offline and during NB-IOT session based on contributions if other questions have any RAN2 impact.
- Draft LS may be seen first time in NB-IOT session.
=> Draft LS to be provided in R2-161766 (Vodafone)

R2-161766 Draft reply LS to S2-160906 = R2-161050 on questions on CIoT (to: SA2; cc: -, contact: Vodafone) Vodafone GmbH LS out Rel-13 NB_IOT-Core

✉ **[93#xx][LTE/NB-IOT] Response LS to SA2 (Vodafone)**
Intended outcome: Agreed LS to SA2
Deadline: Thursday 25/02/2016

Samsung Exhibit 1025, Page 1386 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161051 Reply LS to R2-157131 on Control of Unattended/Background Traffic (S1-160326; contact: Verizon) SA1 LS in to: RAN2 Rel-13 TEI13
late
=> Noted

R2-161055 Reply LS to R2-157131 on Control of Unattended/Background Traffic (C1-161279; contact: Huawei) CT1 LS in to: RAN2 Rel-13 TEI13
late
=> Noted

R2-161058 LS on PDSCH collision with PSS/SSS/PBCH (R1-161276; contact: Huawei)RAN1 LS in to: RAN2 Rel-13 TEI13
late
=> Noted

R2-161059 Reply to R3-152873 LS from RAN3 to SA5 on RAN Sharing Enhancements for LTE (S5-161341; contact: Ericsson) SA5 LS in cc: RAN2
late
=> Noted

R2-161065 Reply LS to R2-157115 on SD-RSRP range (R4-161162; contact: Qualcomm) RAN4 LS in to: RAN2 Rel-13 LTE_eD2D_Prox-Core
late
=> Noted

R2-161066 LS on IEEE802.11 RSSI Measurement Report Mapping (R4-161185; contact: Ericsson) RAN4 LS in to: RAN2 Rel-13 LTE_WLAN_radio-Core
=> Noted

R2-161989 LS reply to R2-156978 on capability to distinguish UE between with or without HTF (R4-161343; contact: NTT DOCOMO) RAN4 LS in to: RAN2 Rel-13 LTE_CA-Core, TEI13
- DOCOMO explain we will need to add capability signalling for this and suggest to discuss details next meeting.
=> Noted

R2-161064 Reply LS on Paging Enhancements (R3-160516; contact: Huawei) RAN3 LS in to: RAN2 Rel-13 LTE_MTCe2_L1, TEI13
Not treated

R2-162017 LS on RRC parameters for LTE eMTC (R1-161545; contact: Ericsson) RAN1 LS in to: RAN2 Rel-13 LTE_MTCe2_L1-Core
Not treated

In addition, the following LSin:
- R2-161007 treated under AI 7.12
- R2-161008, R2-161009, R2-161010, R2-161029 treated under AI 7.5
- R2-161012, R2-161023, R2-161054 treated under AI 7.12
- R2-161013, R2-161039, R2-161043, R2-161046 treated under AI 7.6.1
- R2-161014, R2-161015, R2-161016, R2-161017, R2-161041, R2-161042, R2-161045, R2-161048, R2-161053, R2-161056, R2-161057, R2-161060 treated under AI 7.16.1
- R2-161019 treated under AI 7.7
- R2-161024, R2-161025, R2-161047 treated under AI 7.15
- R2-161027, R2-161028, R2-161033 treated under AI 7.4.1
- R2-161032, R2-161034, R2-161035, R2-161038 treated under AI 7.1
- R2-161052 treated under AI 7.2
- R2-161063 treated under AI 7.10

3.3 UMTS relevance

R2-161061 LS on RAN1 multi-carrier enhancements for UMTS agreements (R1-161185; contact: Huawei) RAN1 LS in to: RAN2 Rel-14 FS_UTRA_Mce
late

R2-161062 LS on RAN1 Cell Fach DTx/DRx Enhancements (R1-161187; contact: Qualcomm) RAN1 LS in

Samsung Exhibit 1025, Page 1387 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

to: RAN2 Rel-14 FACH_DTXDRX-Core
late
- New LSs in
Above 2 LSs not treated and will be treated in the next meeting

The following LSin:
- R2-161037 will be treated under AI 8
- R2-161006, R2-161011, R2-161044 will be treated under AI 11.3

4 Joint UMTS/LTE: Rel-12 and earlier releases

Contributions submitted under this agenda item will be handled in a joint UMTS/LTE session.

4.1 Joint UMTS/LTE: Rel-11 and earlier releases

(SIMTC-RAN_OC-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Sep. 12, WID: RP-111373)

(eMDT_UMTSLTE-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Dec.12, WID: RP-121204)

(SONenh2_LTE_UTRA-Core, leading WG: RAN3, REL-11, started: Sep.11, closed: Dec.12, WID: RP-120314)

(rSRVCC-GERAN, leading WG: GERAN2, REL-11, started: Sep.11, closed: Nov.13, WID: GP-111290)

Including corrections to joint LTE+UMTS TEI functionality in Rel-8 to 11. E.g. “Multiple Frequency Bands per Cell”, …

R2-161084 Correction to GLONASS IOD value range Intel Corporation CR 36.355 13.0.00138 - F Rel-13 LCS_LTE, TEI13
- Some offline checking needed.
=> Add impact analysis to coversheet. Revision in R2-161767 CR 0138r1

R2-161767 Correction to GLONASS IOD value range Intel Corporation CR 36.355 13.0.00138 1 F Rel-13 LCS_LTE, TEI13 R2-161084
=> Agreed

R2-161085 Correction to GLONASS IOD value range Intel Corporation CR 25.331 13.1.05826 - F Rel-13 RANimp-ANSS, TEI13
=> Add impact analysis. Revision in R2-161768 CR5826r1

R2-161768 Correction to GLONASS IOD value range Intel Corporation CR 25.331 13.1.05826 1 F Rel-13 RANimp-ANSS, TEI13 R2-161085
=> Agreed

R2-161133 LTE capability container size in UMTS networkNokia Networks, Qualcomm Incorp., Alcatel-Lucent, Alcatel-Lucent Shanghai Belldiscussion
- Intel confirm the problem but the proposal deviates UMTS and LTE behaviour. Would like to keep the LTE behaviour. Intel also wonders if the reduction in size is so significant for low number of bands requested.
- Nokia expect that today the gain could be 400bytes but biggest gain will be in future when more bands are supported. Intel agree gain in future will be larger but we also need keep alignment with LTE.
=> Can be discussed offline.
- Nokia gave update on offline discussion. The conclusion is that the specification text can be clarified and CRs will be brought to the next meeting.

R2-161464 Clarification for UE behaviour upon reception of requested E-UTRA frequency band list Nokia Networks, Qualcomm Incorp., Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 25.331 10.19.0 5837 - F Rel-10 TEI10
NOTE: cat.A CR for REL-11/12/13 missed?
Not treated

Samsung Exhibit 1025, Page 1388 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

4.2 Joint UMTS/LTE: Rel-12 WIs/SIs

Input to any other Rel-12 Joint UMTS/LTE WIs/SIs not explicitly listed above.

(EHNB_enh3-Core, leading WG: RAN3, REL-12, started: Sep.12, closed: Dec 13, WID: RP-130741)

(MTCe_RAN-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Sep.14, WID: RP-132053)

(UTRA_LTE_WLAN_interw-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Sep.14, WID: RP-132101)

(LTE_UTRA_IncMon-Core, leading: RAN4, REL-12, started: Dec.13, closed: Dec. 14, WID: RP-132061)

No contributions received.

5 Joint UMTS/LTE: Rel-13

5.1 WI: RAN aspects of Application specific Congestion control for Data Communication (ACDC)

(ACDC-RAN-Core; leading WG: RAN2; REL-13; started: Mar. 15; closed: Dec. 15; RP-150662)

Closed WI

Incoming LS:

R2-161022 Reply LS to R2-153876 on ACDC mechanism (S1-154287; contact: Intel) SA1 LS in
to: RAN2 Rel-13 ACDC-ST1
moved from 3.1 to 5.1
=> Noted

5.2 Other Joint UMTS/LTE Rel-13 WIs

No contributions received.

5.3 Joint UMTS/LTE TEI13 enhancements

Small Technical Enhancements affecting both LTE and UMTS Rel-13 that do not belong to any Rel-13 WI.

Note: A TEI enhancement proposal should be treated for only one meeting cycle and involve only one WG. Otherwise, a WI should be proposed at RAN plenary!

No contributions received.

6 LTE: Rel-12 and earlier releases

6.1 LTE: Rel-11 and earlier

(LTE-L23, leading WG: RAN2, REL-8, started: Sep. 06, closed: Dec. 08, WID: RP-080747)

(LTE_CA-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: RP-100661)

(LTE_UL_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: June 11, WID: RP-100959)

(LTE_eDL_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: March 11, WID: RP-100196)

(LTE_Relay-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: RP-110911)

(MBMS_LTE_enh-Core, leading WG: RAN2, REL-10, started: June 10, closed: March 11, WID: RP-101244)

(MDT_UMTSLTE-Core, leading WG: RAN2, REL-10, started: Dec. 09, closed: June 11, WID: RP-100360)

Samsung Exhibit 1025, Page 1389 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

(eICIC_LTE-Core, leading WG: RAN1, REL-10, started: March 10, closed: June 11, WID: RP-100383)

(SONenh_LTE-Core, leading WG: RAN3, REL-10, started: March 10, closed: June 11, WID: RP-101004)

(LTE_CA_enh-Core, leading WG: RAN1, REL-11, started: March 11, closed: Mar.13, WID: RP-121999)

(MBMS_LTE_SC-Core, leading WG: RAN2, REL-11, started: June 10, closed: Sep.12, WID: RP-120258)

(LTE_eDDA-Core, leading WG: RAN2, REL-11, started: March 11, closed: Dec.12, WID: RP-120256)

(LCS_LTE-NBPS-Core, leading WG: RAN2, REL-11, started: March 09, closed: June. 13, WID: RP-131259)

(eICIC_enh_LTE-Core, leading WG: RAN1, REL-11, started: March 11, closed: Dec. 12, WID: RP-120860)

(SPIA_IDC_LTE-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Dec. 12, WID: RP-111355)

(COMP_LTE_DL-Core, leading WG: RAN1, REL-11, started: Sep.11, closed: Dec.12, WID: RP-111365)

(COMP_LTE_UL-Core, leading WG: RAN1, REL-11, started: Sep.11, closed: Dec.12, WID: RP-111365)

(LTE_TDD_add_subframe, leading WG: RAN1, REL-11, started: March 12; closed: Sep. 12, WID: RP-120384)

(FS_HetNet_eMOB_LTE, leading WG: RAN2, REL-11, started: March 11, closed: Sep. 12, WID: RP-110709)

(LTE_enh_dl_ctrl-Core, leading WG: RAN1, REL-11, started: Dec. 11, closed: Dec. 12, WID: RP-120871)

6.1.1 Control Plane and Common

R2-161215 Supporting 4-layer MIMO in TM3 and TM4 Samsung Electronics Co., Ltd CR 36.306 10.15.0 0326 - F Rel-10 TEI10
- Intel think the supportedMIMO-CapabilityDL-r10 does not apply to TM3/4. We introduced a new capability for this.
- Nokia thinks it is not clear that supportedMIMO-CapabilityDL-r10 is applicable to TM3/4. The UE can support more but UE will not indicate with this field.
- Huawei think it could be clarified that if the UE support more layers than its category then it must support TM9/10. Hence a TM3/4 only UE can not support more layers. Intel think when we added 4 layer support for TM3/4, the capability is independent from TM9/10. Nokia shares Intel's view - the are supposed to be separate.

=> Not pursued

R2-161216 Supporting 4-layer MIMO in TM3 and TM4 Samsung Electronics Co., Ltd CR 36.306 11.13.0 0327 - A Rel-11 TEI10

R2-161217 Supporting 4-layer MIMO in TM3 and TM4 Samsung Electronics Co., Ltd CR 36.306 12.7.00328 - A Rel-12 TEI10

R2-161218 Supporting 4-layer MIMO in TM3 and TM4 Samsung Electronics Co., Ltd CR 36.306 13.0.00329 - A Rel-13 TEI10

Above 3 Tdocs not treated

R2-161365 Handling of uplink spare values Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

Proposal 1
- Qualcomm think the eNB behaviour should be mandatory and not just a recommendation.
- Samsung think only proposal 3 is needed. Ericsson agree we should focus on establishment cause. DOCOMO think the ASN.1 meeting discussed whether we can use spare values in the uplink. Vodafone suggest to focus on proposal 3.
- DOCOMO think there are other spare values in existing RRC Connection and Reestablishment Request and hence useful to consider proposal 1. Samsung think there may be no other spares but maybe some undefined code points. Ericsson think this will cause a decode error.
- Vodafone think we can specify from R13 but can't do anything with current eNBs in the field.
- Intel think that proposal 3 was discussed in R10 but it seems networks did not behave this way.
- DT think that proposal 3 can be accepted from R13.

Samsung Exhibit 1025, Page 1390 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Samsung think there are no cases beyond establishment cause that can not be handled by eNB configuration, and in AS-release we have used the spares.
- Nokia thinks that proposal 3 should be from release 12 as we agreed the CR in plenary from R12. We think we should not specify the eNB behaviour which is why we softened the proposal and wrote 'eNB not expected'.
- KDDI think we don't need to introduce guidelines. If something is introduced then prefer not strong language.
- Huawei think that proposal 3 should be from release 12. Prefer the original text 'not expected'. Vodafone think we should use our specification language.
- Qualcomm think the intent to to avoid the problem in the future. It is 'should' then it still doesn't fix the problem. Better to use 'shall'.
- KDDI think that should is too strong.

=> Introduce in R13 spec the following guideline in field descriptions of establishmentCause and reestablishmentCause: “eNB is not expected to reject calls due to unknown cause value being used by the UE.”

=> CR to be provided in R2-161903 36.331 CR 2098

R2-161903 36.331 CR on uplink spare values Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02098 - F Rel-13 TEI13

=> Agreed

R2-161366 Clarification for setting the intra-band contiguous capabilities introduced in Rel-12 Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

- Qualcomm think the observations are correct but it is clear in the spec and nothing more is needed.
- Intel ask why in example 4 the UE includes the empty perCC list. Nokia think the UE has to include an entry but as it doesn’t support 4 layer it doesn't include anything in the entry.

=> Noted.

R2-161399 Applicability of longCodeState1XRTT Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

=> longCodeState1XRTT parameter applicability to Inter-RAT ANT is only for reportCGI for 1xRTT

R2-161404 Applicability of longCodeState1XRTT Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 12.8.02038 - F Rel-12 LTE-L23

NOTE: TEI12 should be added in WI code

=> Updated to include TEI12

=> Agreed in R2-161904 rev 1

R2-161405 Applicability of longCodeState1XRTT Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02039 - A Rel-13 LTE-L23

NOTE: TEI12 should be added in WI code

=> Updated to include TEI12

=> Agreed in R2-161905 rev 1

R2-161562 Reference errors for inter-RAT capabilities Ericsson CR 36.306 12.7.00340 - F Rel-12 LTE-L23, TEI12

=> Not pursued

R2-161563 Reference errors for inter-RAT capabilities Ericsson CR 36.306 13.0.00341 - A Rel-13 LTE-L23, TEI12

=> Agreed in R2-161906 rev 1. WI LTE-L23, TEI13. CR Cat F.

R2-161620 Continuing discussion on intra-band non-contiguous CA capability NTT DOCOMO, INC. discussion related to LSin R2-161018

Proposal 1:

- Intel understand that there is currently no meaning to the sequence of bands in the band combination. i.e. if UE indicates Band C and A then it supports Band A and C.
- DOCOMO would like to understand the legacy UE behaviour.
- Huawei thinks the issue is for the UL because the UE needs to be indicate a band combination with an UL in each band. Ericsson agree that the UE needs to signal the UL with each band separately. Intel think if the content of the 2 bands is the same then there is no need to distinguish them and so need to include UL separate on each one.

Samsung Exhibit 1025, Page 1391 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- MediaTek share the same view as Ericsson and Huawei.

=> Continue discussion offline (DOCOMO). Update to the CRs may be provided as a result of the offline discussion.

- DOCOMO gave update from uplink and the agreement was to introduce a network based mechanism so the UE can omit the uplink information. CRs are provided

R2-161962 [DRAFT] Reply LS on distinction of intra-band non-contiguous CA types NTT DOCOMO, INC. LS out related with RAN4 LS R2-161018 Rel-13 LTE_CA-Core, TEI13

R2-161625 Modification of network requested CA band combination retrieval for intra-band non-contiguous CA NTT DOCOMO, INC. CR 36.331 11.14.0 2075 - C related to LSin R2-161018 Rel-11 LTE_CA-Core, TEI11

=> Revised in R2-161784

R2-161784 Modification of network requested CA band combination retrieval for intra-band non-contiguous CA NTT DOCOMO, INC. CR 36.331 13.0.02075 1 C related to LSin R2-161018 Rel-13 LTE_CA-Core, TEI13 R2-161625

- Ericsson has concerns for how this works for the simplist UL intra-band case and think there may be a compatibility issue with legacy UEs. DOCOMO received feedback from UE vendors that provide all combinations.

✉ **[93#01][LTE/ Intra band contiguous CA] (DOCOMO)**
Disucss legacy UE behaviour and CR to 331 and 306. After agreement of the CRs LS to RAN4 to be agreed.
36.331 CR R2-161784, 36.306 CR R2-161785 and LS to RAN4 R2-161962 will be revised after this email discussion
Intended outcome: Agreed CRs to RAN, Agreed LS to RAN4
Deadline: Thursday 25/02/2016

R2-161626 Modification of network requested CA band combination retrieval for intra-band non-contiguous CA NTT DOCOMO, INC. CR 36.306 11.13.0 0344 - C related to LSin R2-161018 Rel-11 LTE_CA-Core, TEI11

=> Revised in R2-161785

R2-161785 Modification of network requested CA band combination retrieval for intra-band non-contiguous CA NTT DOCOMO, INC. CR 36.306 13.0.00344 1 C related to LSin R2-161018 Rel-13 LTE_CA-Core, TEI13 R2-161626

R2-161645 Throughput measurement for Carrier Aggregation Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

- Ericsson think the that the gains of CA are no only for the UEs using CA. Others gain as well. Think the proposal doesn't work.
- Qualcomm think the existing mechanism should not be removed. This proposal can be in addition. Nokia explain this is the proposal. In case a UE supports CA then we can also measure the throughput due to CA activation.
- DT ask if you knows how much traffic goes by the Scell. Nokia think this can be seen if data collected for many UEs.
- Ericsson thinks it depends on scheduling strategy as well as whether the cell is activated. Ericsson think the measurement can be made before and after deployment of CA feature to see the benefit. Nokia think that after deployment it is not possible to assess the benefit. It is also not possible to judge the benefit from adding an SCell. Ericsson think the characteristics of the cell have a big impact.

=> Noted

R2-161646 Adaptation of Throughput measurement for Carrier Aggregation Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.314 12.0.00037 - C Rel-12 LTE_CA_enh-Core

=> Not treated

R2-161647 Adaptation of Throughput measurement for Carrier Aggregation Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.314 13.0.00038 - A Rel-13 LTE_CA_enh-Core

=> Not treated

Samsung Exhibit 1025, Page 1392 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161701 In-Device Coexistence for UL CA change of victim system QUALCOMM CR 36.331 11.14.0 2083 - F Rel-11 SPIA_IDC_LTE-Core
NOTE: cat.A CR for REL-12 & REL-13 missed?
- Huawei think the bullet above already covers this case.
- Samsung think the previous paragraph is not fully correct, as the frequencies are only reported for certain victim system types.

=> Agreed in R2-161871
=> Agreed Cat A CRs in R2-161907 CR 2099 Cat A Rel 12, R2-161908 CR 2100 Cat A Rel 13.

Withdrawn:

R2-161432 Handling of RRC Establishment spare cause KDDI Corporation discussion

6.1.2 User Plane

The documents in this AI treated in the Legacy LTE UP session. (See Annex G)

R2-161117 Clarification on MBMS ZTE Corporation, ZTE Trunking Technology Corporation discussion

6.2 LTE: Rel-12

6.2.1 WI: Dual Connectivity for LTE (SCE)

(LTE_SC_enh_dualC-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Dec.14, WID: RP-141797)

6.2.1.1 Dual Connectivity – Control Plane

Max UL Timing

R2-161209 Maximum UL transmission timing reference in DC NTT DOCOMO INC. CR 36.300 12.8.00828 - F Related to R2-161020; Rel-13 CR is already agreed in R2-156163 Rel-12 LTE_SC_enh_dualC-Core
Moved from 6.1.2 to 6.2.1.1

=> Correct reference in coversheet
=> Add new cause for triggering SCell failure
=> Agreed in R2-161891 CR rev 1.

R2-161917 Maximum UL transmission timing reference in DC NTT DOCOMO INC. CR 36.300 12.8.00848 - A Rel-13 LTE_SC_enh_dualC-Core
=> Agreed

R2-161557 Maximum UL timing difference for DC Ericsson discussion
- Nokia points out that the UE may stop transmission.
- DCM think RAN4 are assume PCell and PSCell only. In RAN2 we need to discuss more cases such as PScell and MCG SCell and triggering SCG failure may be overkill. Ericsson think it depends how complex we want the spec to be and think it can be discussed offline. Huawei think these are rare cases and don't need to distinguish.
- Samsung think another triggering condition may not be needed as it may be handled the network.
- LG think the existing MAC text can be extended to cover timing difference between MAC entities and this should be enough.
- Huawei think the key question is whether the eNB needs to know. Ericsson think this is needed to allow deconfiguring SCG. Huawei agree.
- Samsung think the SeNB can detect and take action. Doesn't need MeNB.
- CATT agree with Ericsson and Huawei.
- Interdigital support that MeNB should be aware.
- Samsung think it is not urgent for R12 and can be discussed for R13.
- ZTE think that MeNB should know.

Samsung Exhibit 1025, Page 1393 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> The UE triggers SCG-failure when the stops uplink transmission in the SCG due to exceeding maximum timing difference when power control mode 1 is configured.
=> Discuss offline whether this is further restricted to just the PTAG in the SCG.
=> Introduce a new failure type "maxUL-TimingDiff" from Rel-12.
- Huawei gave update of offline discussion. CR in R2-161892

R2-161558 Maximum UL timing difference for DC (Alt1) Ericsson CR 36.331 12.8.02063 - F Rel-12 LTE_SC_enh_dualC-Core
=> Not treated

R2-161559 Maximum UL timing difference for DC (Alt2) Ericsson CR 36.331 12.8.02064 - F Rel-12 LTE_SC_enh_dualC-Core
- Huawei think that we can not refer to RAN4 spec as they only introduce it in R13. We should refer to 36.300 where we capture this from R12. Ericsson would like to check what RAN4 will do in R12.
- Ericsson explain the legacy field can be sent to any value and the eNB will know from receiving the extension.
- Huawei ask if a capability is needed for this feature. Ericsson think this is base R12 dual connectivity behaviour
- Qualcomm think the reporting to the eNB is conditional to the UE stopping transmission, but once the UE supports the stopping then the reporting should be mandatory. Ericsson think this can be addressed by saying "if the UE stops then the UE shall report"
=> Revision in R2-161892

R2-161892 Maximum UL timing difference for DC Ericsson CR 36.331 12.8.02064 1 F Rel-12 LTE_SC_enh_dualC-Core R2-161559
=> Agreed

R2-161560 Maximum UL timing difference for DC (Alt1) Ericsson CR 36.331 13.0.02065 - A Rel-13 LTE_SC_enh_dualC-Core
=> Not treated.

R2-161561 Maximum UL timing difference for DC (Alt2) Ericsson CR 36.331 13.0.02066 - A Rel-13 LTE_SC_enh_dualC-Core
=> Revision in R2-161893

R2-161893 Maximum UL timing difference for DC Ericsson CR 36.331 13.0.02066 1 A Rel-13 LTE_SC_enh_dualC-Core R2-161561
=> Agreed

R2-161702 Maximum UL Transmission timing difference in dual connectivity Huawei, HiSilicon, China Telecom discussion
=> Not treated

R2-161704 Maximum UL Transmission timing difference in dual connectivity Huawei, HiSilicon, China Telecom CR 36.300 12.8.00845 - F Rel-12 LTE_SC_enh_dualC-Core
NOTE: cat.A CR for REL-13 missed?
=> Not treated. Covered by earlier agreements

R2-161707 Maximum UL Transmission timing difference in dual connectivity Huawei, HiSilicon, China Telecom CR 36.321 12.8.00847 - F Related to R4-158409 Rel-12 LTE_SC_enh_dualC-Core R4-158409
NOTE: cat.A CR for REL-13 missed?
- Ericsson thinks a small change to the previous paragraph to make it generic for any SCell may be sufficient. Huawei agree this can be done.
- Huawei also think that a MAC CR might not be needed if we decide not to distinguish between the more detailed cases.
=> Revision in R2-161894 CR rev 1. Cat A CR in R2-161895 CR 0852 rev '-'

R2-161894 Maximum UL Transmission timing difference in dual connectivity Huawei, HiSilicon, China Telecom CR 36.321 12.8.00847 1 F Related to R4-158409 Rel-12 LTE_SC_enh_dualC-Core R2-161707
=> Agreed

Samsung Exhibit 1025, Page 1394 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161895 Maximum UL Transmission timing difference in dual connectivity Huawei, HiSilicon, China Telecom CR 36.321 12.8.00852 - A Related to R4-158409 Rel-12 LTE_SC_enh_dualC-Core
=> Agreed

R2-161793 Draft response LS on maximum UL Transmission timing difference in dual connectivity Huawei LS out reply to R4-158409 = R2-161020 Rel-12 LTE_SC_enh_dualC-Core
=> To be updated to attach agreed CRs
=> Approved in R2-161998

R2-161338 UL suspension in DC NTT DOCOMO INC. CR 36.321 12.8.00829 - F Related to R2-161020 Rel-12 LTE_SC_enh_dualC-Core
=> Not treated

Moved from 6.2.1.2 to 6.2.1.1

R2-161339 UL suspension in DC NTT DOCOMO INC. CR 36.321 13.0.00830 - A Rel-13 LTE_SC_enh_dualC-Core
=> Not treated

Moved from 6.2.1.2 to 6.2.1.1

Other

R2-161616 PSCell change involving PSCell release NTT DOCOMO, INC., Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
- Samsung have a different understanding. We only have a release and addition of the PSCell. The existing SCell release procedure is also applicable for PSCell release. DOCOMO think this is not so clear from the current text.
- Ericsson think we should be clear whether we talk about PSCell change to SCell change. If we talk about PSCell then I is clear that we need to do release and add.
- DOCOMO gave update from offline discussion. SCell release can also be applied for PSCell release, but SCell release actions come after PSCell add/mod. So the order would need to be changed. Will discuss further whether any more is needed for clarification.

=> CR will be revised to change the order of SCell release and PSCell add/mod.

R2-161617 Procedural clarification on PSCell change involving PSCell release NTT DOCOMO INC, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 12.8.02073 - F Rel-12 LTE_SC_enh_dualC-Core
=> Revised (based on discussion of previous paper) in R2-161909 CR rev 1

R2-161909 Procedural clarification on PSCell change involving PSCell release NTT DOCOMO INC, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 12.8.02073 1 F Rel-12 LTE_SC_enh_dualC-Core R2-161617
=> Agreed

R2-161618 Procedural clarification on PSCell change involving PSCell release NTT DOCOMO INC, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02074 - A Rel-13 LTE_SC_enh_dualC-Core
=> Revised (based on discussion of previous paper) in R2-161910 CR rev 1

R2-161910 Procedural clarification on PSCell change involving PSCell release NTT DOCOMO INC, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02074 1 A Rel-13 LTE_SC_enh_dualC-Core R2-161618
=> Ageed

R2-161717 Correction on capability phy-TDD-ReConfig-FDD(TDD)-Pcell Huawei, HiSilicon, China Telecom CR 36.306 12.7.00345 - F Rel-12 LTE_TDD_eIMTA-Core
=> Agreed in R2-161899 CR0345 Rev1

R2-161718 Correction on capability phy-TDD-ReConfig-FDD(TDD)-Pcell Huawei, HiSilicon, China Telecom CR 36.306 13.0.00346 - A Rel-13 LTE_TDD_eIMTA-Core
=> Agreed in R2-161900 CR0345 Rev1

R2-161726 Clarification on the leftmost bit for the supportedCellGrouping Huawei, HiSilicon, China Telecom CR 36.331 12.8.02089 - F Rel-12 LTE_SC_enh_dualC-Core

Samsung Exhibit 1025, Page 1395 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Intel agree with the interpretation but wonder if we have every defined the bit string order differently. Huawei explain we have this definition for each such bitstring but no general text.

=> Agreed

R2-161728 Clarification on the leftmost bit for the supportedCellGrouping Huawei, HiSilicon, China Telecom CR 36.331 13.0.02090 - A Rel-13 LTE_SC_enh_dualC-Core
=> Agreed

R2-161737 Clarification on the value range of guaranteed power for the MeNB and SeNB Huawei, HiSilicon, China Telecom discussion
- Ericsson think that we could just change the ASN.1 range as the coding will not change, but can also change the field description.

=> We will change 36.331 field description.

R2-161738 Clarification on the value range of guaranteed power for the MeNB and SeNB Huawei, HiSilicon, China Telecom CR 36.331 12.8.02093 - F Rel-12 LTE_SC_enh_dualC-Core
=> Agreed

R2-161739 Clarification on the value range of guaranteed power for the MeNB and SeNB Huawei, HiSilicon, China Telecom CR 36.331 13.0.02094 - A Rel-13 LTE_SC_enh_dualC-Core
=> Agreed

R2-161740 draft LS on the value range of guaranteed power for the MeNB and SeNB Huawei LS out Rel-12 LTE_SC_enh_dualC-Core
=> Not treated following outcome of R2-161737

6.2.1.2 Dual Connectivity – User Plane

R2-161207 Clarification on Split bearer NTT DOCOMO INC. CR 36.300 12.8.00826 - F Rel-12 LTE_SC_enh_dualC-Core
=> Agreed

R2-161208 Clarification on Split bearer NTT DOCOMO INC. CR 36.300 13.2.00827 - A Rel-13 LTE_SC_enh_dualC-Core
=> Agreed

6.2.2 WI: Small Cell Enhancements – Physical Layer

(LTE_SC_enh_L1-Core, leading WG: RAN1, REL-12, started: Dec.13, closed: Dec.14, WID: RP-132073)

No contributions received.

6.2.3 WI: LTE Device to Device Proximity Services - Radio Aspects

(LTE_D2D_Prox-Core, leading WG: RAN1, REL-12, started: Mar.14, closed: Mar.15, WID: RP-142043)

RAN1 TR 36.843 on D2D

6.2.3.1 Control Plane and Common

R2-161473 Correction to SL-DiscConfig Ericsson CR 36.331 12.8.02052 - F Rel-12 LTE_D2D_Prox-Core
NOTE: cat.A CR for REL-13 missed?
=> Agreed (No Cat A CR needed as this is address in R13 by the ASN.1 review CR).

6.2.3.2 User Plane

Documents in this AI treated in the Legacy LTE UP session. (See Annex G)

No contributions received.

6.2.4 WI: Further MBMS Operations Support for E-UTRA

(MBMS_LTE_OS-Core, leading WG: RAN2, REL-12, started: Sep.13, closed: Dec.14, WID: RP-140282)

Samsung Exhibit 1025, Page 1396 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

No contributions received.

6.2.5 WI: Network-Assisted Interference Cancellation and Suppression

(LTE_NAICS-Core, leading WG: RAN1, Rel-12, started: Mar 14, closed: Dec.14, WID: RP-140519)

R2-161687 Clarification on NAICS subset capability QUALCOMM discussion
=> Comeback later in the week if we receive feedback from RAN4
- Qualcomm explain that no feedback has been received from RAN4. But tthink it can still be discussed in RAN2
=> We will continue to wait for RAN4
=> Noted

✉ **[93#02][LTE/NAICS] Discuss RAN4 LS ()**
Intended outcome: Agreed CR for RAN reflecting RAN4 agreements
Deadline: Thursday 25/02/2016

R2-161686 Clarification on NAICS subset capability QUALCOMM CR 36.331 12.8.02080 - F Rel-12 LTE_NAICS-Core
NOTE: cat.A CR for REL-13 missed?
Not treated

6.2.6 WI: Low Cost MTC for LTE

(LC_MTC_LTE-Core, leading WG: RAN1, REL-12, started: Jun 13, closed: Dec 14, WID: RP-140522)

R2-161564 T321 for Category 0 UE Ericsson CR 36.331 12.8.02067 - F Rel-12 LC_MTC_LTE-Core
- Qualcomm think that for a regular UE it has 90 ms but for cat 0 the UE it is only an additional 80ms. Not sure if this is enough. Suggest to send an LS to RAN4.
- Ericsson think that our timer should be similar to the RAN4 performance requirement. Ericsson think the CR in RAN4 was quite some time ago and something that we missed in our specs.
=> Delegates encouraged to discuss with RAN4 colleagues if there is any issue with the performance requirement.
=> Revisit the issue on Friday
- Ericsson had no updated information from RAN4 compared to what was agreed in their spec a year ago.
- Intel are ok to specifiy this in R13 for cat 0 and R13 for Cat M. Nokia agree.
=> Remove TEI12 from coversheet
=> Agreed in R2-161999 CR rev 1

R2-161573 T321 for Category 0 UE Ericsson CR 36.331 13.0.02068 - A Rel-13 LC_MTC_LTE-Core
=> Agreed in R2-162000 CR rev 1

6.2.7 WI: Group Call eMBMS congestion management for LTE

(GCSE_LTE-MBMS_CM-Core, leading WG: RAN3, started: Sep. 14, closed: Mar. 2015, WID: RP-141035)

No contributions received.

6.2.8 WI: FDD/TDD Carrier Aggregation

(LTE_CA_TDD_FDD-Core, leading WG: RAN1, REL-12, started: Jun 13, closed: Jun 14, WID: RP-140465)

No contributions received.

6.2.9 LTE Other Closed Rel-12 WIs

Input to any other Rel-12 WI/SI not explicitly listed above.

(LCS_BDS-LTE-Core, leading WG: RAN2, REL-12, started: Mar 13, closed: Dec 13, WID: RP-130416)

Samsung Exhibit 1025, Page 1397 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

(LTE_eDL_MIMO_enh-Core, leading WG: RAN1, REL-12, started: Sep 12, closed: June 14, WID: RP-121416)

(HetNet_eMOB_LTE-Core, leading WG: RAN2, REL-12, started: Dec.12, , closed: Sep 14, WID: RP-122007)

(Cov_Enh_LTE-Core, leading WG: RAN1, REL-12, started: Jun.13, closed: Jun.14, WID: RP-130833)

(LTE_TDD_eIMTA-Core, leading WG: RAN1, REL-12, started: Dec 12, closed: Jun.14, WID: RP-121772)

(SCM_LTE-Core, leading WG: RAN2, REL-12, started: Mar.14, closed: Sep.14, WID: RP-140434)

Including corrections to TEI12 enhancements introduced in Rel-12.

6.2.9.1 LTE Other Closed Rel-12 WIs – CP and common CP/UP

R2-161274 Correction on the RRC signalling configuration for 4Tx MIMO Huawei, HiSilicon CR 36.331 12.8.02021 - F Rel-12 LTE_eDL_MIMO_enh-Core
=> To be revised to clarify the wording ('ands' and 'ors')
=> Revised in R2-161911 CR rev 1. Change WI to LTE_eDL_MIMO_enh-Core

R2-161911 Correction on the RRC signalling configuration for 4Tx MIMO Huawei, HiSilicon CR 36.331 12.8.02021 1 F Rel-12 LTE_eDL_MIMO_enh-Core R2-161274
=> Agreed

R2-161275 Correction on the RRC signalling configuration for 4Tx MIMO Huawei, HiSilicon CR 36.331 13.0.02022 - A Rel-13 LTE_eDL_MIMO_enh-Core
=> Revised in R2-161912 CR rev 1.

R2-161912 Correction on the RRC signalling configuration for 4Tx MIMO Huawei, HiSilicon CR 36.331 13.0.02022 1 A Rel-13 LTE_eDL_MIMO_enh-Core R2-161275
=> Agreed

R2-161276 Correction on the RRC signalling configuration for 4Tx MIMO Huawei, HiSilicon CR 36.331 13.0.02023 - A Rel-13 LTE_eDL_MIMO_enh-Core
Withdrawn

R2-161683 Opportunistically using 60ms C-DRX Cycle for VoLTE QUALCOMM discussion
- Apple indicate that they have a TEI13 CR making the same proposal. But don't have strong position on R12 or R13.
- Intel think the 60ms is beneficial for UE power consumption but think it may have other impacts. Hence prefer R13. If RAN2 agrees the 60ms the we have to consider what to do with the SR period. At the 60ms wakeup there may be no opportunity to send SR.
- Nokia think the 60ms DRX is ok but it should come with a 60ms CQI periodicity, so eNb can also get some gain.
- Apple prefer to add a separate configuration instead of reusing the existing 60ms that is restricted to IDC. Would also support the 60s CQI period. But question whether we need to capability.
- Ericsson wonder how the DRX 60ms can be used and still meet the delay budget of 50ms. Apple think that in 80% of calls today the delay budget could still be met.
- Motorola Solutions support the 60ms DRX. This is useful for interworking between LTE and legacy public safety devices.
- Ericsson think a shorter on duration and shorter DRX cycle would give the power consumption gain without impacting the delay. Qualcomm think the number of wake ups is important as it consumes power.
- Ericsson wonder if we should focus more on uplink.

=> Offline discussion on whether to add 60ms DRX. If agreeable to add 60ms then can also discuss periodicity for CQI, SR, UE capability, etc (Qualcomm)
- Apple explained conclusion of offline was to progress with the R13 CR in R2-161657 submitted under 7.18
- Qualcomm explain that proposal 3 still needs to be discussed
- Intel think the proposal is interesting but one problem we see is that it is left to UE how to set this preference indication. Need to look as how to ensure deterministic behaviour. And it is up to network how to use this information.

=> Proposal 3 may be progressed at a future meeting.

Samsung Exhibit 1025, Page 1398 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161685 Opportunistically using 60ms C-DRX Cycle for VoLTE QUALCOMM CR 36.331 12.8.02079 - C Rel-12 TEI12
NOTE: cat.A CR for REL-13 missed?
Not treated

R2-161729 Handling of UE configuration in Handover procedure Huawei, HiSilicon, China Telecom discussion
- Samsung think that the ueConfigRelease can also be set based on the common configuration. Do we loose something is we remove this mechanism. Huawei think it is a valid comment and so the proposal would be that the eNB decides based on the completeness of the "HandoverPreparationInformation" message and the ueConfigRelease
- Nokia ask if this changes the existing principle. Huawei think it does change the principle as it was originally based on measConfig and RadioResourceConfigDedicated.
- Nokia ask what it means by 'incomplete'. Huawei think the eNB knows if there is some part of the message that can not be decoded.
- Ericsson think this is a change of principle and would prefer to keep to the existing principle. Would like to think now and there is no critical reason to do this now.

=> Can be progressed offline to try to find an agreeable approach to avoid problems in future where an intermediate version would be needed. Contributions can be submitted to release 13 at the next meeting.

R2-161730 Handling of UE configuration in Handover procedure Huawei, HiSilicon, China Telecom CR 36.331 12.8.02091 - F Rel-12 TEI12
Not treated

6.2.9.2 LTE Other Closed Rel-12 WIs – UP

The documents in this AI treated in the Legacy LT UP session. (See Annex G)

R2-161611 MCH MAC PDU for unscheduled or suspended MTCH LG Electronics Inc. discussion
R2-161614 Proposed CR to 36.321 on MCH MAC PDU for unscheduled or suspended MTCH LG Electronics Inc. CR 36.321 12.8.00842 - F Rel-12 TEI12
R2-161613 Proposed CR to 36.321 on MCH MAC PDU for unscheduled or suspended MTCH LG Electronics Inc. CR 36.321 13.0.00841 - A Rel-13 TEI12

R2-161710 TA timer behaviour QUALCOMM discussion
late
R2-161713 TA timer behaviour QUALCOMM CR 36.321 12.8.00848 - F Rel-12 TEI12
late
NOTE: cat.A CR for REL-13 missed?

7 LTE Rel-13

7.1 WI: Licensed-Assisted Access using LTE

(LTE_LAA-Core, leading WG: RAN1, REL-13; started: June 15, closed: Dec. 15, WID: RP-151045)

Closed WI

Incoming LSs:

R2-161032 LS on CR to 36.201 for Introduction of LAA (R1-157744; contact: Alcatel-Lucent) RAN1 LS in to: RAN2 Rel-13 LTE_LAA-Core
=> Noted

R2-161034 LS on CR to 36.201 for Introduction of LAA (R1-157900; contact: Alcatel-Lucent) RAN1 LS in to: RAN2 Rel-13 LTE_LAA-Core
=> Noted

R2-161035 LS on RAN1 agreements on LAA (R1-157905; contact: Ericsson) RAN1 LS in to: RAN2 Rel-13 LTE_LAA-Core

Samsung Exhibit 1025, Page 1399 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- BlackBerry understand that they have agreed some things that are only for LAA. Do we need to discuss whether they are mandatory and optional. Ericsson indicate that RAN1 will discuss this.

=> Noted

R2-161038 LS on LAA (RP-152280; contact: Qualcomm) RAN LS in
cc: RAN2 Rel-13 LTE_LAA-Core
Above 4 LSs moved from 3.2 to 7.1
=> Noted

7.1.1 LBT related aspects

Mapping of QCI to LBT priority class and capturing LBT requirements as described in RAN1 LS R2-157905 will be treated as corrections.

QCI to LBT mapping

R2-161548 Mapping between Channel Access Priority Classes and QCI values Ericsson, Huawei, HiSilicon, Qualcomm Incorporated discussion

- ETRI ask if we will use class 4. Ericsson think these could be used for operator specific classes but the standardised QCIs should not use 4 due to the delay budget. BlackBerry think that 9 is lower priority than 9 and hence should be class 4.
- Intel think that an eNB can use a lower class than indicated in the table.
- ZTE agree with BlackBerry to distinguish 8 and 9. Ericsson think that QCI 9 is not background traffic. Huawei agree with Ericsson and Intel.
- Qualcomm think it would not be correct to assign a QCI to class 4 is the delay budget can not be met.
- Orange think QCI 8 and 9 should be the same.
- CMCC ask if this is mandatory or optimal for eNB. BlackBerry think this defines the minimum class that the UE can use.
- ETRI think that MCPTT should only be transmitted in licensed carrier. Huawei think it is a reasonable approach but does not need to be restricted by the standard.
- BlackBerry think we should either define a mapping or state that eNB is not allowed to put it on LAA. There should not be traffic without a defined mapping.

Proposal 14

- BlackBerry think we should not have a case where no mapping is defined. The safest approach is to map these to class 4. Ericsson thinks that critical traffic could be mapped to an operator specific class (e.g. could be a voice service). Huawei agree with Ericsson and think the operator specific QCI is within one network and can not be compared between different networks. BlackBerry think that in the case of LAA then this does have a impact on another network.
- Qualcomm does not think the intent to map background to class 1, but it might have operator specific QCIs that are voice, for example. Depending on the traffic on the operator specific QCI it should follow the defined QCIs. BlackBerry think the operator can use QCI1 for voice and not an operator defined QCI. Ericsson think we need to consider cases where an operator has already used a specific QCI for voice then it should not have to change this for LAA.
- Intel share the view of BlackBerry but agree it is difficult to define for unknown QCIs.

Agreements:	
1	QCI 1 is mapped to priority class 1
2	QCI 3 is mapped to priority class 1
3	QCI 5 is mapped to priority class 1
4	QCI 2 is mapped to priority class 2
5	QCI 7 is mapped to priority class 2
6	QCI 4 is mapped to priority class 3
7	QCI 6 is mapped to priority class 3
8	QCI 8 is mapped to priority class 3
9	QCI 9 is mapped to priority class 3
10	QCI 65 is mapped to priority class 1
11	QCI 66 is mapped to priority class 1
12	QCI 69 is mapped to priority class 1
13	QCI 70 is mapped to priority class 1

Samsung Exhibit 1025, Page 1400 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Offline discussion on mapping of non standardized QCIs
- Ericsson gave update of offline discussion. Most companies felt that there should be guideance on the operator specific QCIs to be mapped to an appropriate class. Update is inclded in the CR (R2-161921)

R2-161302 Mapping of QCI to LBT priority class China Mobile Com. Corporation discussion
R2-161586 QCI mapping to Downlink Channel Access Priority Classes BlackBerry UK Limited discussion
R2-161356 Further Consideration on Mapping of LBT Priority Classes ZTE Corporation discussion
R2-161395 Mapping of QCI to LBT priority class in LAA ETRI discussion
Above 4 Tdocs not treated

R2-161549 Mapping between Channel Access Priority Classes and QCI values Ericsson, Huawei, HiSilicon, Qualcomm Incorporated CR 36.300 13.2.00842 - F Rel-13 LTE_LAA-Core
- Intel would prefer a mandatory mapping for LBT operation. It should be specified to ensure that LAA meets the co-existence requirements.
- BlackBerry clarify that they think the minimum class should be mandatory but the eNB can go lower.
- Ericsson think that the equivalent mapping in WIFI is a recommendation. Intel also understand this is correct but when WIFI was specified there was no LAA.
- Nokia agree with Ericsson.
- Samsung tend to agree with Ericsson. LG also agree. ETRI also agree.
- ZTE think the CR should mention it applies to DL.

=> Add DL clarification
=> Revised in R2-161921 CR rev 1

R2-161921 Mapping between Channel Access Priority Classes and QCI values Ericsson, Huawei, HiSilicon, Qualcomm Incorporated CR 36.300 13.2.00842 1 F Rel-13 LTE_LAA-Core R2-161549
=> Agreed

Other LBT requirements

R2-161550 Multiplexing of data in LAA Ericsson, Huawei, HiSilicon, Qualcomm Incorporated discussion
=> Noted

R2-161585 eNB procedures for multiple channel access priority classes BlackBerry UK Limited discussion
- Above 2 contributions discussed together
- BlackBerry think this is a normative requirement then it should be in a stage 3 spec. If necessary we could have a new stage 3 spec.
- Huawei think that MAC is not a good place and 36.300 is sufficient.
- Nokia think 36.300 should be sufficient.

=> Noted

R2-161551 Multiplexing of data in LAA Ericsson, Huawei, HiSilicon, Qualcomm Incorporated CR 36.300 13.2.00843 - F Rel-13 LTE_LAA-Core
Revised in R2-161920

R2-161920 Multiplexing of data in LAA Ericsson, Huawei, HiSilicon, Qualcomm Incorporated CR 36.300 13.2.00843 1 F Rel-13 LTE_LAA-Core
- BlackBerry think the agreement in RAN1 was that EUTRAN shall.

=> Offline discussion to ensure that the CR does capture exactly what RAN1 asked us to capture.
=> Revised in R2-161922 CR rev 2

R2-161922 Multiplexing of data in LAA Ericsson, Huawei, HiSilicon, Qualcomm Incorporated CR 36.300 13.2.00843 2 F Rel-13 LTE_LAA-Core R2-161920
=> Agreed

R2-161759 LAA LBT classes and data multiplexing BlackBerry UK Limited CR 36.321 13.0.0 0851 - F Rel-13 LTE_LAA-Core
Late

Samsung Exhibit 1025, Page 1401 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Not treated following discussion of previous documents

7.1.2 Other

R2-161107 L3 reset for LAA measurements ?Samsung R&D Institute UK discussion
- Intel think the case that the measurement is not available is due to LBT but this can be noticed by the eNB. Samsung think the UE will sill report a good RSRP in this case when it might actually not be in good coverage anymore. Network can not know this.
- Nokia think that this is carrier aggregation and the PCell should have full knowledge. Prefer not to reopen the discussion.
- Ericsson think the new element in the paper is the PCI confusion one. There is nothing else new to consider.
- DOCOMO acknowledge the issue but think the big problem in last meeting was whether to reset to lowest or Null value. Can agree to the CR.
- Qualcomm think that reset is useful and would support the CR.
- Huawei think nothing has changed.

=> Noted

R2-161109 LAA L3 filter output reset Samsung R&D Institute UK CR 36.331 13.0.02004 - F Rel-13 LTE_LAA-Core

=> Not treated.

R2-161158 corrections on RSSI measurment Beijing Xinwei Telecom Techn. CR 36.331 13.0.02006 - F Rel-13 LTE_LAA-Core
- Nokia agree the intent as this is not included in RAN1 or RAN4, but would like to to check. Some the field names may have changed.
- Intel agree to add the description but the rmtcSubframeOffset is optional and hence may need to be described differently (from DMTC).

=> Offline to work on the details.

=> Revision in R2-161916 CR rev 1

R2-161916 corrections on RSSI measurment Beijing Xinwei Telecom Techn. CR 36.331 13.0.02006 1 F Rel-13 LTE_LAA-Core R2-161158

=> Correct " fisrt "

=> Agreed in R2-162003 CR rev 2

R2-161342 RSSI measurment duration periodicity and subframe offset HTC Corporation CR 36.331 13.0.02032 - F Rel-13 LTE_LAA-Core
- Ericsson thinks this clashes with the ASN.1 review CR.

=> Discuss offline whether anything should be merged into the ASN.1 review CR.

=> Revised in R2-161902 CR rev 1
- HTC report from offline that no change to the spec was needed.

=> Not pursued

R2-161902 RSSI measurment duration periodicity and subframe offset HTC Corporation CR 36.331 13.0.02032 1 F Rel-13 LTE_LAA-Core R2-161342

=> Not pursued

R2-161633 Clarification on initial RSSI measurement reporting CATT draftCR 36.331 13.0.0 Rel-13 LTE_LAA-Core

NOTE: Tdoc type should be "CR", not "draftCR"

=> Agreed in R2-161915 CR 2101 rev '-'

R2-161249 Discussion of LAA related issues (I.015, I.048) Intel Corporation discussion

=> Agree approach 1 to address the first issue.

=> On second issue the ds-OccasionDuration-r12 should be ignored by the UE for an LAA SCell and the UE shall apply a value 1 instead.

=> To be included in the ASN.1 review CR.

R2-161235 Discussion on IDC support in LAA Intel Corporation, BlackBerry discussion
- Ericsson thinks this was discussed before and nothing needs to be done. Intel agrees that IDC mechanism doesn't need to be changed but the recommendation should be captured.

Samsung Exhibit 1025, Page 1402 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Qualcomm agree that something should be captured in stage 2 otherwise it is hard to know what to expect from the UE implementation perspective.
- ZTE prefer a simplified wording for stage 2.
- BlackBerry think there needs to be guidance for the UE to support this to solve IDC problems and the guidance for the network if needed as well.
- Huawei think we don't need to capture anything. Huawei think we didn't recommend anything for other IDC use cases.
- Qualcomm thinks this is a different use of IDC that warrants including.
- BlackBerry thinks that LAA introduces a new problem and we should capture something in the specs.
- Telecom Italia think this can be handled by eNB implementation.
- Intel would be ok to capture the eNB recommendation as a should. From UE point of view, if we don't have IDC then the UE implementation will have to find a different solution that may affect UE performance.
- Sony support this proposal and see no harm in recommending eNB behaviour.
- Qualcomm think this is not just about eNB. It is important for the UE to know what mechanism is available. Without reading the TR this information is lost to the implementer.
- Broadcom support capturing the should from the TR. Cablelabs support this and that the UE implementer needs to know they can rely on this.
- MediaTek has some sympathy but think it make be more confusing if it impacts UE behaviour.

=> Offline discussion (Intel)

- Intel report that offline did not reach agreement but people agreed that stage 2 description of IDC should be updated. CR providedin R2-161978

R2-161236 IDC support in LAA Intel Corporation, BlackBerry CR 36.300 13.2.00829 - F Rel-13 LTE_LAA-Core

=> Revised in R2-161978

R2-161978 IDC support in LAA Intel Corporation, BlackBerry, Samsung CR 36.300 13.2.00829 1 F Rel-13 LTE_LAA-Core R2-161236

- Huawei ask if operation in UE of WLAN and LAA on the same carrier is a valid operation mode. Intel explain that in order to use one then the other needs tro be disabled but this can also be considered as an IDC problem.
- Qualcomm explain that there is a requirement that WLAN scanning while in LAA operation is needed.
- Ericsson think that nothing is needed to clarify, but could accept the first change.

✉ **[93#03][LTE/LAA] IDC for LAA (Intel)**
Intended outcome: Agreed CR for RAN (conclusion could be no CR to be sent to RAN)
Deadline: Thursday 25/02/2016

R2-161552 Leftover UE capabilities for LAA Ericsson discussion
Not treated

R2-161553 Leftover UE capabilities for LAA Ericsson CR 36.306 13.0.00338 - F Rel-13 LTE_LAA-Core

R2-161554 Leftover UE capabilities for LAA Ericsson CR 36.331 13.0.02061 - F Rel-13 LTE_LAA-Core

- Comeback Friday if input received from RAN1

✉ **[93#04][LTE/LAA] 36.331 and 36.306 CRs (Ericsson)**
36.331 CR R2-161553 and 36.306 CR R2-161554 will be revised after the email discussion
Intended outcome: Agreed CRs to RAN (if RAN1 provide input from their meeting)
Deadline: Thursday 25/02/2016

R2-161358 Initial Thoughts on LAA DL+UL Data Transmission ZTE Corporation discussion

=> Not treated.

7.2 WI: CA enhancements

(LTE_CA_enh_b5C-Core, leading WG: RAN1, REL-13; started: Dec. 14, closed: Dec. 15, WID: RP-151984)

Samsung Exhibit 1025, Page 1403 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Closed WI

Incoming LS:

R2-161052 LS on Transmission Power Offset Values for PUCCH Format 4/5 (R1-161212; contact: Samsung) RAN1 LS in to: RAN2 Rel-13 LTE_CA_enh_b5C-Core late
=> Needs to be included in a CR agreed this meeting.
=> Noted

7.2.1 Control Plane and Common

measObjectId extension

R2-161154 Corrections and missing agreement on the eCA Beijing Xinwei Telecom Techn. CR 36.331 13.0.02005 - F Rel-13 LTE_CA_enh_b5C-Core
=> format5-r13 change is agreed
- Qualcomm don't see the need for a capability for the measObjectId extension. It should be linked to support of more than 5 carriers. Intel ask if it is clear that this extension only applies to UEs supporting more than 5 CCs.
- Xinwei think that we had a capability bit to the measID ext in release 12.

=> Capability will be introduced
=> Revision in R2-161859 CR rev 1

R2-161859 Corrections and missing agreement on the eCA Beijing Xinwei Telecom Techn. CR 36.331 13.0.02005 1 F Rel-13 LTE_CA_enh_b5C-Core R2-161154
=> Agreed

R2-161191 Introduction of extended number of measurement object identies HTC Corporation CR 36.331 13.0.02013 - B Rel-13 LTE_CA_enh_b5C-Core
NOTE: CR cat.B is not allowed for closed WI
=> Revised in R2-161762

R2-161762 Introduction of extended number of measurement object identies HTC Corporation CR 36.331 13.0.02013 1 B Rel-13 LTE_CA_enh_b5C-Core R2-161191
Not treated

R2-161345 Introduction of the extension of maxObjectId ZTE Corporation CR 36.331 13.0.02033 - F Rel-13 LTE_CA_enh_b5C-Core
Not treated

R2-161426 The extension of measObjectId Huawei, HiSilicon, China Telecom CR 36.331 13.0.0 2044 - F Rel-13 LTE_CA_enh_b5C-Core
=> Revised in R2-161794

R2-161794 The extension of measObjectId Huawei, HiSilicon, China Telecom CR 36.331 13.0.0 2044 1 F Rel-13 LTE_CA_enh_b5C-Core R2-161426
- Discussed jointly with R2-161856

=> Merged into R2-161976

R2-161157 Capture the UE capability for the extension of the MeasObjectId to 64 Beijing Xinwei Telecom Techn. CR 36.306 13.0.00323 - F Rel-13 LTE_CA_enh_b5C-Core
=> Consider linking between this capability and support for measID extension and support for more than 5 CCs at next meeting.
=> CR number to be added to coversheet
=> Agreed in R2-161860 CR rev 1

R2-161192 Introducing capability signalling for extended number of measurement object identities HTC Corporation CR 36.331 13.0.02014 - B Rel-13 LTE_CA_enh_b5C-Core
NOTE: CR cat.B is not allowed for closed WI

R2-161193 Introducing capability signalling for extended number of measurement object identities HTC Corporation CR 36.306 13.0.00324 - B Rel-13 LTE_CA_enh_b5C-Core
NOTE: CR cat.B is not allowed for closed WI
Above 2 Tdocs not treated

R2-161856 Introduction of the extension of measObjectId range Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, China Telecom, Ericsson, HTC, Samsung, Xinwei, ZTE Corporation CR

Samsung Exhibit 1025, Page 1404 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

36.331 13.0.02103 - F Rel-13 LTE_CA_enh_b5C-Core late

- Nokia explain the difference compared to R2-161794 is that measObjectEUTRA is not critically extended and for IDC part the affectedCarrierFreqCombListExt field is introduced.

=> Offline discussion to conclude
=> Revised in R2-161976

R2-161976 Introduction of the extension of measObjectId range Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, China Telecom, Ericsson, HiSilicon, HTC, Huawei, NTT Docomo, Samsung, Xinwei, ZTE Corporation CR 36.331 13.0.02103 1 F Rel-13 LTE_CA_enh_b5C-Core R2-161856
=> Agreed

UE capability related

R2-161629 [D.012][D.013][H.040][E.228] Class 4 issues on enhanced CA band combination retrieval NTT DOCOMO, INC. discussion

Proposal 1

- ZTE is not clear that fallback combination is defined in 36.306. DOCOMO think the definition could be added. Qualcomm think the definition was previously moved form 301 to 331.
- Ericsson think what is really important is that we very carefully define what a fallback combination is as now we are really relying on it.
- Qualcomm prefer it to be defined in 36.306

=> Description of the fallback combination can be removed from procedure text. Exact definition and location to capture it to be concluded offline.
=> The field name, additionalFallbackSupported is changed to differentFallbackCapabilitySupported.

Proposal 3

- Ericsson are not fond of the eNB generation of the capabilities.
- Intel think that in the current mechanism the eNB can still request the UE to report all combinations, including all the fallback combinations.
- Qualcomm understand the proposal is that it wants to be able to request the UE to only send additional fallback combinations.
- Qualcomm think this is not something we should do in the last meeting of R13.
- Huawei is not convinced that this will save much. If eNB wants all the capabilities then it can request all capabilities with the old format.
- Intel think we already have 2 mechanisms to skip combinations and reduce size.

Proposal 4

- Ericsson would prefer the eNB to be able to request both formats and not rely on eNB generation of the old format.
- Huawei wonders if anything is saved if both formats are requested. Nokia shares Huawei's view.

R2-161347 corrections on eCA 36.331 CRZTE Corporation discussion
=> Remove either of the duplicate sentences as in proposal 1

Proposal 2

- Ericsson would prefer a clear separate of what the eNB requested and the UE reports back. Qualcomm also prefer the Ericsson approach.
- Intel think that this is a different issue.
- Huawei think this is related to how to ensure backward compatibility.
- Ericsson think it is important that the target eNB can determine exactly how the capabilities where requested and constructed.
- Huawei think it depends is only the legacy format is provided to the target or whether the new format is provided.

Proposal 2

- Qualcomm think there can be a case where the eNB wants to use reduced format with the fallback combinations. Intel think the 2 indication relate to different approaches.

=> Add a restriction like “except where conflicting with rules defined below” at the end of “include all other CA band combinations”.

R2-161348 Discussion on backward compatible capability signaling forwarding ZTE Corporation discussion

Samsung Exhibit 1025, Page 1405 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Not treated

R2-161423 Remaining issues for capability of B5C Huawei, HiSilicon, China Telecom discussion
Not treated

R2-161424 Capbility for CA enhancement Huawei, HiSilicon, China Telecom CR 36.331 13.0.02042 - F Rel-13 LTE_CA_enh_b5C-Core
=> Revision in R2-161934 CR rev 1
=> This revision will be used to capture all agreements related to band combination signalling and the conclusion of the offline discussions on band combination signalling.

R2-161934 Capbility for CA enhancement Huawei, HiSilicon, China Telecom CR 36.331 13.0.02042 1 F Rel-13 LTE_CA_enh_b5C-Core R2-161424

✉ **[93#05][LTE/eCA] Capabilty CR (Huawei)**
Intended outcome: Agreed CR to RAN
Deadline: Thursday 25/02/2016

R2-161583 Compatibility aspects for Rel-13 band combination capability signaling Ericsson discussion
- Huawei think if the if the eNB requests the old format then he UE can report combinations up to 4DL and 2UL but if the eNB requests the new format the UE can report more then it doesn't report up to the 4DL and 2UL using the old format..
- Ericsson clarify that even if the UE requests the new format then it can additionally request the UE to report up to 4D+2UL in the legacy format.
- Intel think we need to see the CR to see the details. Qualcomm agree with Intel and not keen on adding this proposal in the last meeting.
- ZTE ask if the UE support more than 5CC then it will be necessary for the eNB to use the new format. Huawei agree this is the case.
- Nokia think that that 2DL and 1 UL is appropriate for the legacy format.
- Samsung suggest it might be possible for the eNB to perform 2 requests one with ld format and one for new format.

=> Can be discussed offline. Scope of offline: a/ whether UE reports with both old format and new format if the eNB requests the new format b/ whether the eNB forwards the old format and the new format to the target eNB / MME c/ whether to report at least 4DL and 2 UL for the legacy format. d/ details related to E.208 (Huawei)
- Huawei updated from offline. For issue a/ the conclusion was no change. For issue b/ there was not conclusion and companies would like to continue to discuss. For issue c/ the agreement was up to 5DL and 5 UL (captured in the previous CR)
- Huawei assume there will be not ASN.1 impact from the email discussion.

✉ **[93#37][LTE/eCA] Capability backward compatibility (Huawei)**
Intended outcome: Email discussion report and agreeable CR for next meeting.
Deadline: Thursday 24/03/2016

R2-161584 Parameters controlling band combination capability signalling (E.208) Ericsson discussion
Not treated

Other

R2-161479 ASN.1 review – aperiodic CSI issues Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
=> Text proposal agreed to be merged into the ASN.1 review CR

R2-161480 SCell addition and release related ASN.1 issues (Z.043) Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
- Samsung ask if the new list can be used to add all the cells. Nokia clarify that eNB can use only the new list of a combination of the old and new list.
- Samsung understood that we would keep them separate, for example by some text restriction.
- Qualcomm prefer to keep the current structure and it can even cause some conflicts.
- Ericsson ask what the critical extension is really solving.
- ZTE agree with Nokia
- Nokia suggest if we have a limitation then it should be that the first 4 SCells are configured with the old list. But we should allow the new list to use any index otherwise we limit legacy eNB to always use the low indexes.

Samsung Exhibit 1025, Page 1406 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Offline discussion to conclude how to address issue Z.043. Conclusion can be captured in he ASN.1 review CR.

R2-161200 Support of extended RLC AM SN for SCG HTC Corporation CR 36.331 13.0.02016 - F Rel-13 LTE_CA_enh_b5C-Core
=> Agreed

R2-161425 Some corrections on CA enhancement Huawei, HiSilicon, China Telecom CR 36.331 13.0.02043 - F Rel-13 LTE_CA_enh_b5C-Core
=> 'or PSCell' can be removed from the pucch-SCell field description
=> Condition should be revised to refer to fields within the message. If not possible then it should not be captured in a condition.
=> Field description should be revised to say " Indicates whether PUCCH feedback of this SCell is sent on PCell ". Further changes to field description can be discussed offline.
=> CR number to be corrected on coversheet.
=> Revision in R2-161936 CR rev 1

R2-161936 Some corrections on CA enhancement Huawei, HiSilicon, China Telecom CR 36.331 13.0.02043 1 F Rel-13 LTE_CA_enh_b5C-Core R2-161425
=> Agreed

R2-161427 Correction on CA enhancement Huawei, HiSilicon, China Telecom CR 36.302 13.0.0 0065 - F Rel-13 LTE_CA_enh_b5C-Core
=> Remove the " When k is 2, j = 1 and vice versa" from Note 5 and Note 8
=> Revised in R2-161937 CR rev 1

R2-161937 Correction on CA enhancement Huawei, HiSilicon, China Telecom CR 36.302 13.0.0 0065 1 F Rel-13 LTE_CA_enh_b5C-Core R2-161427
=> Agreed

R2-161555 Minor corrections for CA enhancements Ericsson CR 36.306 13.0.00339 - F Rel-13 LTE_CA_enh_b5C-Core
=> IE to be changed to field
=> Agreed in R2-161939 CR rev 1

R2-161556 Minor corrections for CA enhancements Ericsson CR 36.331 13.0.02062 - F Rel-13 LTE_CA_enh_b5C-Core
=> Remove parts already covered in the ASN.1 review CR.
=> Revised in R2-161938 CR rev 1

R2-161938 Minor corrections for CA enhancements Ericsson CR 36.331 13.0.02062 1 F Rel-13 LTE_CA_enh_b5C-Core R2-161556
=> Agreed

R2-161662 Uplink Power Control configuration for PUCCH format 4/5 NEC discussion
=> Noted

R2-161663 Correction to uplink power control configuration for PUCCH format 4/5 NEC pCR 36.331 13.0.0 F Rel-13 LTE_CA_enh_b5C-Core
NOTE: wrong Tdoc Type used; Type should be "CR"
- Samsung think the parameters are the same for all the cells.
=> Revision in R2-161940 CR 2104 rev '-'
=> Offline discussion can conclude whether to merge into ASN.1 review CR
- NEC reported from offline and the CR is not required. The changes are captured in CR from Nokia.
=> Not pursued

R2-161940 Correction to uplink power control configuration for PUCCH format 4/5 NEC CR 36.331 13.0.02104 - F Rel-13 LTE_CA_enh_b5C-Core R2-161663
=> Withdrawn

R2-161679 Proposed CR to 36.331 on cross-carrier scheduling with 32CCs LG Electronics Inc. CR 36.331 13.0.02078 - F Rel-13 TEI13
- CATT explain this was agreed in ASN.1 ad-hoc in a different way. But it was not included in the ASN.1 review CR.

Samsung Exhibit 1025, Page 1407 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Issue to be fixed and merged in the ASN.1 review CR.

R2-161931 ASN.1 review – Grouping issues Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell Discussion
=> Revision in R2-161935
=> Offline checking of the document.

R2-161935 ASN.1 review – Grouping issues Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
=> To be includedin ASN.1 review CR

Moved from 7.18 to 7.2.1

Withdrawn:

R2-161334 Corrections on eCA MAC specification ZTE Corporation CR 36.321 13.0.00827 - F Rel-13 LTE_CA_enh_b5C-Core

R2-161336 Corrections on eCA MAC specification ZTE Corporation CR 36.321 13.0.00828 - F Rel-13 LTE_CA_enh_b5C-Core

R2-161344 Corrections on eCA MAC specification ZTE Corporation CR 36.321 13.0.00831 - F Rel-13 LTE_CA_enh_b5C-Core

R2-161367 Clarifications to of enhanced CA capability signalling Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

7.2.2 User Plane

R2-161615 Correction to L field in MAC PDU Sequans Communications CR 36.321 13.0.00843 - F Rel-13 LTE_CA_enh_b5C-Core
- ZTE technically agree but think there are not too many use cases for this. Samsung think the future extensibility is not so important.
- Huawei think when this was discussed before most companies felt the current approach was simpler.

=> Not pursued

R2-161277 Power headroom reporting of carrier aggregation enhancement beyond 5 CCs Huawei, HiSilicon, China Telecom CR 36.321 13.0.00825 - F Rel-13 LTE_CA_enh_b5C-Core
- Nokia think the text relating to DC with 32 cells is not required. Qualcomm support the Nokia proposal as it improved readability.
- LG think the text can be reformulated to improve readability.

=> Work offline to find a good way to reformulate the text in a clearer way (e.g. a list of conditions).
=> Revision in R2-161933 CR rev 1

R2-161933 Power headroom reporting of carrier aggregation enhancement beyond 5 CCs Huawei, HiSilicon, China Telecom CR 36.321 13.0.00825 1 F Rel-13 LTE_CA_enh_b5C-Core R2-161277
=> Agreed

R2-161680 Proposed CR to 36.321 on Correction to Pcmax and PH field in PHR MAC CE LG Electronics Inc. CR 36.321 13.0.00844 - F Rel-13 LTE-L23, TEI13
=> Agreed

Moved from 7.18 to 7.2.2

R2-161351 Corrections on eCA MAC specification ZTE Corporation CR 36.321 13.0.00833 - F Rel-13 LTE_CA_enh_b5C-Core
- LG think it has been discussed and still not clear.
- Ericsson think if we say anything then it can clarify when it can not be transmitted.
- Samsung think we need some clarification.
- CATT think the discussion so far could not find a good wording for a note.

Samsung Exhibit 1025, Page 1408 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Nokia think it is clear even without a note.
=> Not pursued.
=> Spelling mistake can be fixed in implementation of CRs after this meeting.

Moved from 7.2.1 to 7.2.2

7.3 WI: Single-Cell point-to-multipoint transmission

(LTE_SC_PTM-Core, leading WG: RAN2, REL-13; started: June 15, closed: Dec. 15, WID: RP-151110)

Closed WI

Stage 2

R2-161194 Clarification on SC-PTMHTC Corporation CR 36.300 13.2.00824 - F Rel-13 LTE_SC_PTM-Core
=> Add tdoc number to coversheet
=> Remove the multiplexing box.
=> Agreed in R2-161863 CR rev 1

R2-161203 Clarification related to SC-MCCH Change Notification Samsung Electronics Co., Ltd CR 36.300 13.2.00825 - F Rel-13 LTE_SC_PTM-Core
=> Add CR number to coversheet
=> Agreed in R2-161864 CR rev 1

R2-161118 Clarification on the use of neighbor cell information ZTE Corporation, ZTE Trunking Technology CorporationdraftCR 36.300 13.0.0 Rel-13 LTE_SC_PTM-Core
NOTE: Tdoc type should be "CR", not "draftCR"
- Huawei think the intent was never to mandate this. It is in the UE interest to do it. It would also not be testable as a requirement.
- Qualcomm think we can't mandate this in AS spec.
=> Not pursued.

User plane

R2-161119 Corrections on SC-PTM MAC specification ZTE Corporation, ZTE Trunking Technology Corporation draftCR 36.321 13.0.0 Rel-13 LTE_SC_PTM-Core
NOTE: Tdoc type should be "CR", not "draftCR"
=> Wording to be reformulated offline
=> Revised in R2-161865 CR 0853 rev '-' CAT F

R2-161865 Corrections on SC-PTM MAC specification ZTE Corporation, ZTE Trunking Technology Corporation CR 36.321 13.0.00853 - F Rel-13 LTE_SC_PTM-Core R2-161119
=> Agreed in R2-162004 CR rev 1 Cat F

R2-161205 Miscellaneous correction for SC-PTM Samsung Electronics Co., Ltd CR 36.321 13.0.00824 - F Rel-13 LTE_SC_PTM-Core
- Nokia wonder if there is any technical reason to limit reception on the PCell.
- Huawei don't see a motivation for the restriction. The second change need to cover the case the UE may be in idle.
- Qualcomm do not want to come back to the PCell limitation.
=> Reformulate to say 'for the cell corresponding to this G-RNTI and SC-RNTI'
=> Restriction to PCell to reflect outcome of the interest indication issue.
=> Revision in R2-161866 CR rev 1

R2-161866 Miscellaneous correction for SC-PTM Samsung Electronics Co., Ltd CR 36.321 13.0.00824 1 F Rel-13 LTE_SC_PTM-Core R2-161205
- Samsung think there is no consensus so suggests to discuss next meeting.
- Nokia think no-one knows the technical reason for the PCell restriction. Suggest a 1 week email discussion on the capability to indicate that the UE can receive SC-PTM on PCell and SCell.

Samsung Exhibit 1025, Page 1409 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

✉ **[93#06][LTE/SC-PTM] PCell restriction (Nokia)**
Need to support SC-PTM from PCell, SCell and non serving cell and associated UE capabilites.
✉ Intended outcome: 36.300, 36.306, 36.331 CRs for RAN if agreement can be reached
Deadline: Thursday 25/02/2016

Counting

R2-161120 Discussion on SC-PTM counting ZTE Corporation, ZTE Trunking Technology Corporation discussion
- Kyocera agree with the intent to use the counting but wonders whether interaction with eNB and MCE is sufficient. ZTE think the eNB can not know the capability of the SC-PTM UE.
- Huawei think this has not been considered this in the work item which has not been closed. Not realistic to consider this problem now.
- Nokia agrees with Huawei and think we should just try to close the open issues.

=> Noted

R2-161121 Discussion on SC-PTM counting ZTE Corporation, ZTE Trunking Technology Corporation draftCR 36.331 13.0.0 Rel-13 LTE_SC_PTM-Core
NOTE: Tdoc type should be "CR", not "draftCR"
Not treated

R2-161122 Clarification on the SC-PTM UE capability ZTE Corporation, ZTE Trunking Technology Corporation draftCR 36.306 13.0.0 Rel-13 LTE_SC_PTM-Core
NOTE: Tdoc type should be "CR", not "draftCR"
- Samsung prefer to keep implementation free and not link the 2 features.
- Intel think that an SC-PTM UE does not have to support the MBMS functionality
- Huawei agree and SC-PTM and there are many things of MBMS that are not needed at all.
- Ericsson think it is late to agree this but think if a UE supports both SC-PTM and MBMS in an MBMS only network should support MBMS in same way as legacy UE.

=> Not pursued

R2-161123 Draft LS on SC-PTM counting ZTE Corporation, ZTE Trunking Technology Corporation other
Not treated

Other

R2-161167 Corrections on SC-PTM Huawei, HiSilicon discussion
- ZTE prefer option 2 for the first option. Nokia also thinks option 2 is more aligned with similar cases in RRC.
- Samsung ask why we need more than one subframe for SC-PTM when it was ok for MBMS.
- Qualcomm think that SC-PTM support is indicated implicitly by presence of the field. It would be better to have a separate explicit field. Samsung is ok with the proposal 1.

=> Proposal 1/2 can be discussed offline.
=> Proposal 3 is agreed
=> Add explicit capability for SC-PTM support
=> CR to 36.306 to be provided in R2-161873 CR 0350 (Huawei)

R2-161873 Corrections on SC-PTM Huawei, HiSilicon CR 36.306 13.0.00350 - F Rel-13 LTE_SC_PTM-Core
=> Revised in R2-162006 CR rev 1

R2-162006 Corrections on SC-PTM Huawei, HiSilicon CR 36.306 13.0.00350 - F Rel-13 LTE_SC_PTM-Core
=> Agreed

R2-161168 Corrections on SC-PTM Huawei, HiSilicon CR 36.331 13.0.02010 - F Rel-13
=> Revision to include outcome of R2-161167
=> Revised in R2-161872 CR rev 1

Samsung Exhibit 1025, Page 1410 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161872 Corrections on SC-PTM Huawei, HiSilicon CR 36.331 13.0.02010 1 F Rel-13 LTE_SC_PTM-Core R2-161168
- Modification period needs to be changed to repetition period
- 'is scheduled' change to 'may be scheduled'

=> Agreed in R2-162005 CR rev 2

R2-161634 Use PCI as cell identify in SC-PTM neighbour cell list Qualcomm Incorporated CR 36.331 13.0.02076 - F Rel-13 LTE_SC_PTM-Core
=> Not treated based on discussion of above papers.

R2-161206 Miscellaneous corrections for SC-PTM Samsung Electronics Co., Ltd CR 36.331 13.0.02017 - F Rel-13 LTE_SC_PTM-Core
=> Add space after the '1'
=> Remove the additions of 'sc' that are already addressed in ASN.1 review CR
=> Agreed in R2-161874 CR rev 1

R2-161295 Correction on cell reselection for SC-PTM TD Tech Ltd CR 36.304 13.0.00292 - F Rel-13 LTE_SC_PTM-Core
- ZTE think that packet loss can be avoided based on the network implementation. We don't need to change reselection. Nokia think this is a cat B CR and the problem is not well justified. Ericsson agree with Nokia, and it would be difficult in the network to set these parameters.

=> Not pursued

R2-161297 Correction on cell reselection for SC-PTM TD Tech Ltd CR 36.331 13.0.02026 - F Rel-13 LTE_SC_PTM-Core
=> Not pursued

R2-161708 Reporting of MBMS frequencies of interest for SC-PTM Nokia Networks discussion
- Nokia reported that offline discussion seems to be going in the direction of reporting multiple frequencies.

=> Noted

R2-161858 Clarifications on SC-PTM Huawei, HiSilicon Discussion
=> Will be covered in the email discussion PCell only restriction.

R2-161605 Inadequacy of Release 13 SC-PTM service continuity for public safety use Motorola Solutions Danmark A/S discussion
Not treated

R2-161997 Correction on SC-MCCH change notification CR 36.300 Huawei
=> Agreed

7.4 WI: Further LTE Physical Layer Enhancements for MTC

(LTE_MTCe2_L1-Core, leading WG: RAN1, REL-13; started: Sep. 14, target: Mar. 16, WID: RP-150492)

Time budget: 2 TU + 2 TUs user plane

Focus this meeting should be on finalising the stage 3 CRs. Proposals in discussion papers should accompanied by text proposals to show how they would impact the current running CRs.

7.4.1 Organizational and stage 2

Including correction CRs to the 36.300

Incoming LSs

R2-161027 Response LS to R4-156699 = R2-156036 on measurement gap based intra-frequency cell detection for narrow band operation of LC UE (R1-157861; contact: Ericsson) RAN1 LS in cc: RAN2 Rel-13 LTE_MTCe2_L1-Core

Samsung Exhibit 1025, Page 1411 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Noted

R2-161028 Reply LS to R2-155509 = R1-156492 and R2-157082 = R1-157808 on direct indication of system information update and other fields (R1-157925; contact: Qualcomm) RAN1 LS in to: RAN2 Rel-13 LTE_MTCe2_L1-Core
=> Treated and Noted under eDRX agenda item.

R2-161033 LS on RRC parameters for LTE eMTC (R1-157891; contact: Ericsson) RAN1 LS in to: RAN2 Rel-13 LTE_MTCe2_L1-Core
Above 3 LSs moved from 3.2 to 7.4.1
- Already captured in the running CR
=> Noted

Running CRs

The technically endorsed running CRs from RAN2-92 are available in:

36.331 - R2-157138

36.304 - R2-157141

36.306 - R2-157139

36.321 - R2-157140

R2-161086 Addition of low complexity UEs and coverage enhancement features Ericsson CR 36.331 13.0.02003 - B Rel-13 LTE_MTCe2_L1-Core
=> Replaced by R2-161579
=> Not treated

R2-161579 Addition of low complexity UEs and coverage enhancement features Ericsson CR 36.331 13.0.02069 - B Rel-13 LTE_MTCe2_L1-Core
=> Endorsed to be used as baseline for changes agreed this meeting. Detail comments can be provided offline.
=> Revised in R2-161973

R2-161973 Addition of low complexity UEs and coverage enhancement features Ericsson CR 36.331 13.0.02069 1 B Rel-13 LTE_MTCe2_L1-Core

✉ **[93#07][LTE/MTC] 36.331 CR (Ericsson)**
Intended outcome: Agreed CR for RAN
Deadline: Thursday 25/02/2016

36.302 CR

R2-161429 The introduction of eMTC features Huawei, HiSilicon CR 36.302 13.0.00066 - B Rel-13 LTE_MTCe2_L1-Core
- Intel think a combination of PDSCH carrying SIB1 without SI-RNTI is missing. Also think that some merging is possible.
- Intel prefer the Huawei approach over the Ericsson approach.
=> Details to be progressed offline
=> Revision in R2-161778 CR rev 1

R2-161778 The introduction of eMTC features Huawei, HiSilicon CR 36.302 13.0.00066 1 B Rel-13 LTE_MTCe2_L1-CoreR2-161429
- Intel would be ok to have a new table for MTC UEs. A note on parallel reception has been.

✉ **[93#08][LTE/MTC] 36.302 CR (Huawei)**
Intended outcome: Ageed CR for RAN
Deadline: Thursday 25/02/2016

R2-161696 Introduction of low complexity UE and enhanced coverage features Ericsson CR 36.302 13.0.00068 - B Rel-13 LTE_MTCe2_L1-Core
=> Not pursued

36.304 CR

Samsung Exhibit 1025, Page 1412 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161769 The introduction of the Idle procedure for eMTC UE Huawei, HiSilicon CR 36.304 13.0.00299 - B Rel-13 LTE_MTCe2_L1-Core
- Intel that that the note on prioritisation of NC over EC has not yet been agreed.

=> Endorsed to be used as baseline for changes agreed this meeting. NC vs EC part will be discussed based on contributions. Detail comments can be provided offline.
- Revised in R2-161979 CR rev 1

R2-161979 The introduction of the Idle procedure for eMTC UE Huawei, HiSilicon CR 36.304 13.0.00299 1 B endorsed for further update Rel-13 LTE_MTCe2_L1-Core R2-161769

=> Revised in R2-161994

R2-161994 The introduction of the Idle procedure for eMTC UE Huawei, HiSilicon CR 36.304 13.0.00299 2 B Rel-13 LTE_MTCe2_L1-Core R2-161979
- LG think it does not correctly capture the agreement between EC and NC cells.

✉ **[93#09][LTE/MTC] 36.304 CR (Huawei)**
Intended outcome: Agreed CR for RAN
Deadline: Thursday 25/02/2016

UE capabilities

R2-161581 UE capabilities for LC and CE Ericsson CR 36.306 13.0.00342 - B Rel-13 LTE_MTCe2_L1-Core

=> Endorsed to be used as baseline for changes agreed this meeting. Detail comments can be provided offline.
- Ericsson understand that none of the agreements from this meeting impact the 36.306 CR

=> Agreed

7.4.2 SIB

SI Scheduling/Acquisition

R2-161694 Scheduling parameters for SIBs other than SIB1-BR Ericsson discussion

Proposal 1
- Samsung thinks we can use the starting point of the si-window and so don't need a subframe offset. UE can avoid the possible MBSFN subframes based on information received in SIB2.
- Intel think there is a trade-off between network flexibility and simplicity. Networks may not want to fully occupy the SI window with repetitions. Intel prefer the approach from Ericsson.
- Huawei want to be able to have the starting subframe within the window and so support the offset although have some concerns about the range.
- CATT is ok with a start offset and asks if TTD UL subrames are considered unavailable.. Ericsson explain that unavailable subframes are MBSFN or TDD UL subframes.
- Samsung wonder what is the motivation to have the offset other than avoiding MBSFN subframes. Ericsson explain this is the only reason, for the case that MBSFN subframe information is not provides.
- Panasonic think that the network has to provide the MBSFN information in SIB1 if MBMS is configured in the cell.
- Samsung explain that in legacy the MBSFN information is in SIB2 and the drawback is limited if the information is not available in SIB1.
- LG agree with Samsung.
- Panasonic think it is better for the MBMSN information be provided in SIB1. Don't like the idea of the UE excluding all possible MBSFN subframes.
- Intel explain that the RAN1 said that if the unavailable subframe information is not provided in SIB1 then the UE can get the information in SIB2 and that is where we see the problem.

=> Necessity of subframe offset can discussed offline.

Proposal 2
- Samsung ask if this is per SI message or a single for all SI messages. Ericsson this the repetition is the same for all SI messages.

Samsung Exhibit 1025, Page 1413 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Samsung ask if any more information is needed more than the unavailable subframes. Ericsson explain that we don't have PDCCH scheduling but still want time diversity to spread out the repetitions. Samsung think that the unavailable subframe information can provide time diversity.
- Intel assume that the networks will want flexibility to not send in every available subframe.

=> Offline discussion to progress the remaining details (Ericsson)

- Ericsson update from offline:
- i/ subframe offset does not need to be provided from the network
- ii/ in SIB1bis if the MBSFN bitmap is provided then only the repetition info (bitmap or otherwise) within the radio frame need to be provided. If MBSFN info is not provided then the UE can assume that all subframes are available.
- iii/ info is provided for all SI messages (not per SI message)

Agreements
- i/ subframe offset does not need to be provided from the network
- ii/ available subframes can be determined from SIB1bis from the 'availableDLsubframe' bitmap (10 or 40 bits) if it is provided. If 'availableDLsubframe' bitmap is not provided then the UE can assume that all subframes are available.
- iii/ the repetition of radio frames within the SI window which contain SI transmissions is provided in SIB1bis (e.g by a bitmap or some other means)
- iv/ info is provided for all SI messages (not per SI message)

- Ericsson explained offline discussion on the radio frame repetition. Conclusion was to have 4 code points: All radio frames, every 2nd radio frame, every 4th , every 8th

=> the repetition of radio frames within the SI window is indicated by 4 code points: All radio frames, every 2nd radio frame, every 4th , every 8th

R2-161521 ASN.1 proposals for SIB scheduling for Rel-13 low complexity and coverage enhanced UEs
Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

Proposal 1
- Intel ask if the proposal comes from the RAN1 parameter spreadsheet. Intel think that frequency hopping can be used for SI transmissions.

=> Proposal 1 can be discussed offline to determine how it relates to the information provided from RAN1.

- Ericsson indicate the offline discussion conclude that the proposal is correct.

Proposal 2
- Nokia explain the TB sizes come from RAN1.
- Intel understand that the SIB1bis sizes are different.
- Ericsson explain for SI messages RAN1 could not conclude and so it was left to RAN2 to agree. For SIB1bis we also need to define TB sizes and provide to RAN1 and they have an LS.
- Ericsson propose the values 208256 328 504 712 936 for SIB1bis in the LS.

Agreements

=> si-TBS-r13 IE with transport block size information needed for the SI messages (not SIB1bis) broadcast towards LC/EC UEs where si-TBS-r13 is an ENUMERATED {b152, b208, b256, b328, b408, b504, b600, b712, b808, b936}.

=> For SIB1 bis we need to decide a subset of 6 of the values

=> Proposal 1 si-Narrowband-r13 IE with narrowband information needed for the SI messages broadcast towards LC/EC UEs where si-Narrowband-r13 is an INTEGER (1..maxAvailNarrowBands-r13)

R2-161244 SI scheduling without M-PDCCH in Rel-13 eMTC Samsungdiscussion

=> Not treated (covered by previous discussion)

R2-161450 SI Acquisition for eMTC Huawei, HiSilicon discussion

Proposal 1
- Ericsson think this has been discussed already.
- Intel think this is the common understanding.

Samsung Exhibit 1025, Page 1414 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> RAN2 understanding is that for SI acquisition across SI window, it is left to UE implementation to accumulate and decode SI message between SI-window. Nothing needs to be captured in the specs.

R2-161451 Corrections on SI repetition occasions indication for eMTC Huawei, HiSilicon CR 36.331 13.0.02050 - F Rel-13 LTE_MTCe2_L1-Core
Not treated

R2-161145 Acquisition of an SI message CATT discussion
- Intel of ok with the proposal but it will need to be updated based on discussions.
- Ericsson need to check if this is already covered in the running CR
=> Work offline to check if this is already covered in the running CR.

Change indication/value tag/validity time

R2-161098 Increased SIB validity introduction to TS36.331 Gemalto N.V. discussion
- Gemalto explain that the only part not covered in the running CR is the field description.
=> Capturing the field description in the running CR is progressed offline.
=> Noted

Moved from 7.4.1 to 7.4.2

R2-161612 Further discussion on system information valid timer in EC HTC Corporation discussion
- Intel think the spec is clear and not convinced that further clarification is needed.
- LG think the first change implies that the UE needs to store the system information for EC also when the UE has changed to EC.
=> Noted

R2-161246 Handling value tags in Rel-13 low complexity MTC Samsung discussion
- Intel has sympathy for the proposal.
- Ericsson think the value tag is only needed for out of coverage. If the UE is out of coverage for a short time then the UE should be able to rely on both value tags. Qualcomm think the UE can identify an overall change from the legacy value tag and can then detect which individual SI value tag has changed. The proposal is too broad. Could clarify that if the UE can't identify which SI s have changed then it acquires all.
- Huawei ask why we should define this case. All cases can be handled today.
- Ericsson think the eNB should not wrap around within the validity time.
- Samsung think in the legacy spec the UE behaviour is left to UE implementation.
- Samsung understand the new value tag is additional optimisation for the UE. UE implementation can choose to read or not.
=> Can be left to UE implementation what system information to read based on the legacy systemInfoValueTag and the systemInfoValueTag-SI.

R2-161452 SI Change Huawei, HiSilicon discussion
Not treated

ASN.1

R2-161179 Message classes and logical channels (related to E.231) Ericsson discussion
Not treated

Other

R2-161144 SIB Acquisition Based on EC level CATT discussion
R2-161610 Further discussion on system information handling in enhanced coverage HTC Corporation discussion
R2-161630 Allowing different frequency bands between eMTC/NB-IoT UEs and legacy UEs NTT DOCOMO, INC. discussion
R2-161631 [DRAFT] LS on Frequency band setting in eMTC/NB-IoT SIB NTT DOCOMO, INC. LS out Rel-13 LTE_MTCe2_L1-Core, NB_IOT-Core
Above 4 Tdocs not treated
R2-161753 Providing SI parameters in connected mode Ericsson France S.A.S discussion
late
Proposal 1

Samsung Exhibit 1025, Page 1415 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Intel ask why the UE would be required to acquire MIB, why isn't all information provided in the handover command. Ericsson explain the key information is SFN which is not needed for RACH but it needed later on in the connection.
- Ericsson thinks the solution is simple but introduces delay.
- Qualcomm support the proposal and think that RAN4 should be informed.

=> Rel-13 LC acquire MIB of the target cell before triggering random access at handover.
=> All other SI information required by the UE in connected is provided by the eNB at handover. (no new signalling is required for this). Consequence for the UE is that the UE will have to reacquire when it goes to idle.
=> FFS whether Cat 0+ UE that is operating in CE acquires MIB before random access.
=> Can also check whether previously agreed T304 extended value is still reasonable.

- Ericsson gives conclusion of offline discussion that Cat 0+ UEs in EC need to acquire MIB before access.

=> Cat 0+ UE that is operating in CE acquires MIB before random access. To be captured in RRC spec.

R2-161770 Draft LS (to RAN1) on TBS ranges for SIB1-BR and paging for eMTC Ericsson LS out Rel-13 LTE_MTCe2_L1-Core
late; Tdoc also related with AI 7.4.4 paging
=> Companies can provide views on the TB sizes offline.
✓ => Approved in R2-161779

7.4.3 Random Access

The documents in this AI treated in the LTE UP session. (See Annex G)

R2-161134 Remaining issues on eMTC random access ZTE Corporation discussion
R2-161245 On the PREAMBLE_TRANSMISSION_COUNTER in Rel-13 eMTC Samsung discussion
R2-161271 RA-RNTI calculation in Rel-13 low complexity MTC Samsung discussion
R2-161340 Discussion on the start time of a RAR window HTC Corporation discussion
R2-161693 Remaining random access issues for BL UEs and UEs in EC Ericsson discussion
R2-161697 RAR 12 bit UL grant size for mode B Ericsson CR 36.321 13.0.00846 - B Rel-13 LTE_MTCe2_L1-Core

Moved from 7.4.1 to 7.4.3

7.4.4 Paging

Inlcuding output of email discussion [92#40][LTE/MTC] Remaining paging issues (Huawei)

R2-161455 Email discussion report on [92#40][LTE/MTC] Remaining paging issues Huawei report Late
Proposal 9
- Nokia what information is actually provided from eNB to MME. That should be defined.

Agreements:
1 - The number of paging narrowbands should be configured by eNB through SIB2.
2 - The UE_ID is needed for the paging narrowband selection.
3 - The UE's paging narrowband is determined irrespective of the UE's coverage enhancement level.
4 - The number of paging record included in one paging message can be flexible. It is up to eNB implementation on the multiplexing number of paging record.
5 - PF and PO calculation should indicate the starting position of the M-PDCCH.
6 - The Rmax_Paging for M-PDCCH is cell specific and shall be indicated in SIB2. The UE will decode blindly the M-PDCCH candidates for each EC level and there is no need to broadcast the number of repetitions required per EC level.
7 - How to derive the EC level related information to be provided from eNB to MME should be left to network implementation. (The information to be provided will need to be defined)

R2-161692 Remaining paging issues for BL UEs and UEs in EC Ericsson discussion
Proposal 5/6

Samsung Exhibit 1025, Page 1416 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Ericsson explain that the BW refers to the system BW and not the number of narrowbands for paging. Intel ask if the same issue exists if the paging narrowband is within the centre 6 PRBs. Ericsson agree it is correct but the network can configure to avoid the problem.

Agreements
1 For system BW 1.4 and 3 MHZ FDD; only paging occasion at subframe#5 is valid for Rel-13 LC/CE UEs.
2 For system BW 1.4 and 3 MHz TDD; only paging occasions at subframe#1 and subframe#6 are valid for Rel-13 LC/CE UEs.

Paging occasion calculation

R2-161146 The Extension of Parameter nB CATT discussion
- Samsung support to extend the value and would like to understand the impact of extendinf indicated from Ericsson.
- Ericsson think if we extend the values then it should just be for MTC and not legacy. Reason is that extending concentrates UEs on certain occasions.

=> For MTC UEs and UEs in EC, extend the value of parameter nB to T/64, T/128 and T/256.

R2-161749 Paging narrowband determination for eMTC QUALCOMM CDMA Technologies discussion
- Ericsson think we would need a change of the S1 message as more information would be needed. The large UE ID is not currently provided. Today the id provided in the S1 paging message is already modded. Huawei see the same problem as Ericsson as UEs using the same PO have a high probability of selecting the same NB.
- CATT think we can still achieve the distribution of the UE using the existing UE ID mod 1024.
- Qualcomm think we somehow need to increase he UE ID space in order to spread across more resources.
- Ericsson think it is essential to spread as much as possible. CATT agree but don't see the UE id needs to be extended to allow this. Huawei don't want to use a new UE ID.
- Samsung share the view of Huawei and CATT.

=> Offline discussion to conclude on the narrowband selection formula. The paging occasions should be evenly distributed across all resources. (Qualcomm).

R2-161578 Narrowband selection at paging Ericsson discussion
R2-161147 Distribution of UEs in multiple paging narrowbands CATT discussion
R2-161453 MTC Paging Transmission Huawei, HiSilicon discussion
R2-161454 Corrections on paging narrowband selection and nB extension Huawei, HiSilicon CR 36.304 13.0.00297 - F Rel-13 LTE_MTCe2_L1-Core
Above 4 Tdocs not treated

R2-161957 Discussion and Text Proposal on paging narrowband determination for eMTC Qualcomm
=> Text proposal can be merged into the running 36.304 CR

R2-161956 draft LS on Paging Narrowband for eMTC to RAN3 Qualcomm
=> Approved in R2-161968

S1 signalling

R2-161576 Enhanced coverage information in S1AP signalling Ericsson discussion
- Intel ask why the existing RRC message can not be used. Ericsson explain that the existing one contains static capability information and it is sent when capability are provided. This information is provided at the end of the connect.
- Nokia agree we need a new message.
- Intel thinks there would be no problem if the same capability information was repeated in the release.
- Ericsson think that RAN3 are assuming this.
- Samsung asks if this means that at paging we will have 2 containers to provide.

=> Introduce a new Inter-node RRC message to carry UE radio coverage information used by eNB at paging

Samsung Exhibit 1025, Page 1417 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161971 Encoding of coverage information in inter-node RRC message Ericsson discussion related with R2-161576
- Nokia think the agreement has been until now that the information is CE level.

=> TP can be included in the running CR.

R2-161577 DRAFT LS Inter-node RRC message for coverage information at paging Ericsson other
=> To be redrafted as a response to the LS from RAN3 several meetings ago.
=> Revised in R2-161780

R2-161780 Draft Reply LS Inter-node RRC message for coverage information at paging (to: RAN3; cc: -; contact: Ericsson) Ericsson LS out Rel-13 LTE_MTCe2_L1-Core R2-161577
- Qualcomm think the encoding needs to be defined in RAN2 although the setting of the information is eNB implementation.

=> Remove the sentence " The detailed encoding of the coverage information is left to eNB implementation."
=> Approved in R2-161788

Late

R2-161250 Discussion of paging and other issues (I.027, I.049, I.055, I.057, I.008, N.129) Intel Corporation discussion
late
- Only proposals 1 and 2 discussed.

Proposal 1
- Samsung ask if the EC information is for all UEs or just MTC UEs. Intel explain that it is for all UEs. Samsung thinks the eNB would need to know whether the UE is a normal UE supporting EC or not as the paging approach is different.

=> Proposal 1 can be progressed offline.

Proposal 2
- Intel ask if the information should be transparent to the MME. Ericsson explain that they assume the information will be transparent. Intel think the NAS timer issue may have an impact.

=> Noted

7.4.5 Mobility Support

R2-161428 How to prioritise NC cells over EC cells Huawei, HiSilicon discussion
- Sony understand that the proposal is actually about when to enable measurement. Huawei think there are 2 questions, how to enable measurement and how to reselection. The proposal is meant to cover both steps of the process.
- Intel think the agreement was that the UE in EC will always do ranking. The UE in EC will be making measurements all the time and think there is no need for further specification.
- Qualcomm think this would mean there is no performance target and the we would have to inform RAN4. LG agree with Qualcomm.
- Ericsson think it will be up to RAN4 to define what making measurements all the time really means. They might define a reduced performance.
- Nokia do not want to leave to UE implementation.
- Sony things we did agree last meeting to do ranking for UEs in EC.
- Ericsson think it was not well captured in the CR but we have an agreement.
- Huawei explain that depending on how we capture this in the CR will impact the performance requirements that are applicable.

=> Check to ensure that the previous agreement is captured in the CR.
=> Noted

R2-161667 Cell reselection for Enhanced Coverage LG Electronics Francediscussion
=> For the UE in enhanced coverage, coverage specific values Qrxlevmin_CE and Qqualmin_CE are only applied for the suitability check in enhanced coverage (i.e. not used for measurement and reselection thresholds)

R2-161748 Open issues for mobility in Rel.13 eMTC QUALCOMM CDMA Technologies discussion
Proposal 1

Samsung Exhibit 1025, Page 1418 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Ericsson ask the change from legacy. Qualcomm explain that the UE needs tobe able to assume that the same parameter applies for all neighbour. Ericsson think it is clear that the legacy principle applies. Qualcomm think it may need clarification is needed. Ericsson think this was not a problem in legacy.

=> For inter-frequency re-selection, the enhanced coverage parameters q-RxLevMinCE and q-QualMinRSRQ-CE are broadcast per-frequency and apply to all neighbour cells in that frequency. Can check offline whether any extra clarification is required.

Proposal 2

=> Connected mode mobility is supported in CE Mode A (this includes normal coverage and "shallow" coverage scenarios).

Proposal 3

- Nokia ask if it means that the UE doesn't provide measurement reports when in CE Mode B. Qualcomm think we need to consider whether to modify the procedures related to measurements and radio link monitoring. Nokia think it can be left to the network to decide whether to configure measurement, perform handover, etc.
- Ericsson think that RAN4 can decide whether to specify requirements for the CE Mode B case. Qualcomm explain the issue is UE power consumption and it would be good to avoid the measurements in CE Mode B.
- LG think eNB can release measurements when CE Mode B is configured.

=> Proposal 3 can be discussed further offline.

- Qualcomm indicate that there was no progress offline.

7.4.6 User Plane aspects

The documents in this AI treated in the LTE UP session. (See Annex G)

Including output of email discussion [92#44][LTE/MTC] MAC open items (Ericsson)

R2-161734 Email discussion report on 92#44 LTE - MTC MAC Open Items Ericsson France S.A.S discussion
late

R2-161695 Introduction of low complexity UE and enhanced coverage features Ericsson CR 36.321 13.0.0 0845 - B Rel-13 LTE_MTCe2_L1-Core
late

Moved from 7.4.1 to 7.4.6

R2-161270 Open UP Issues in Rel-13 eMTC Samsung discussion
R2-161273 Text proposal on PCH reception Samsung discussion
R2-161456 User Plane Remaining Issues for eMTC Huawei, HiSilicon discussion
R2-161652 PRACH power ramping and power calculation INTERDIGITAL COMMUNICATIONS discussion
R2-161675 Consideration on RA-RNTI for eMTC LG Electronics Inc. discussion
R2-161689 MAC impacts of asynchronous HARQ for BL UEs and UEs in EC Ericsson discussion
R2-161691 Remaining DRX issues for BL UEs and UEs in EC Ericsson discussion

7.4.7 Other

UE capabilities

R2-161654 UE capability signalling for eMTC UEs NTT DOCOMO, INC. discussion

- Ericsson is concerned by the amount of work required to define a new capability container. There is a different between MTC and NB-IOT as in NB-IOT there are a lot of mandatory features that are not support.
- DOCOMO think for MTC we can agree that there are some features that can not be supported.
- Intel is concerned that we don't get gains if all legacy capabilities can be included.
- Huawei ask if the intent is that a MTC UE can support NB-IOT. DOCOMO explain that this is not the intention but MTC and NB-IOT would have the same structure.
- Qualcomm support the intention. Defaults could be defined without any ASN.1 impact.
- Ericsson think we anyway will need the new capabilities (at least EC) in the existing container and could still continue the option to define a new container.

Samsung Exhibit 1025, Page 1419 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Samsung think we could define a default for MTC and just signal differences compared to that default.
- Huawei think NB-IOT and MTC should not share the same container.

=> MTC capabilities will be added to the existing capability container

=> Definition of a default set of some capabilities for MTC UEs can be discussed further. Will not impact ASN.1 structure.

R2-161251 Capabilities for Release 13 low complexity UE category and coverage enhancement mode
Intel Corporation discussion

Proposal 5

- LG is ok with the proposal by the window size must be large enough to contain enough repetitions. Intel think this is up to the eNB implementation to decide. Qualcomm have the same understanding. Ericsson think 5 doesn't need to be agreed. Huawei also think that proposal 5 is not needed. Think the network can configure the repetitions as it likes. Panasonic thinks it is likely that the network will provide a large enough SI window.

Agreements

1 To specify that within one TTI, the new DL category M1 UEs do not need to support simultaneous reception of multiple transport blocks. To be captured in 36.302.
2 For all UE categories, the support of CE mode A as conditional mandatory to CE mode B i.e. A UE can support only CE mode A, while if CE mode B is supported, CE mode A is supported implicitly. (already in current running 306 CR)
3 For Rel-13 Low Complexity (LC) UE ("Rel-13 reduced BW UE"), to define the support of CE mode A as mandatory and the support of CE mode B as optional. (already in current running 306 CR)
4. For other UEs, e,g., Cat 0, Cat 1, etc., to define the support coverage enhancement is optional.
5. We will review the Rel-8/9/10/11/12/13 mandatory features (with a FGI or capability indicator) and conclude which are mandatory / optionally for Rel-13 Low Complexity (LC) UE ("Rel-13 reduced BW UE"). Email or the next meeting (DOCOMO)

✉ **[93#10][LTE/MTC] R8-13 Mandatory features (DOCOMO)**
Review the Rel-8/9/10/11/12/13 mandatory features (with a FGI or capability indicator) and conclude which are mandatory / optionally for MTC UEs
Intended outcome: Email discussion report to next meeting
Deadline: Thursday 24/03/2016

R2-161272 UE capability on non-LC UE capable of EC operation Samsung discussion

- Ericsson explain that this is already addressed in the running CR.

=> Noted

Timers

R2-161688 Discussion on the remaining CP timers Ericsson discussion

Agreements

1 The following timers are not extended for Rel-13 LC/CE UEs: T320, T330, T340, T350, T310, T311, and T-Reselection. No updates are needed for the start and stop conditions, and actions that follow the timer expiry for these timers. Configuration is done using the legacy mechanism.
2 T301 is extended for Rel-13 LC/CE UEs with same values as T300.No update is needed for the start and stop conditions, and actions that follow the timer expiry. For T301, configuration is done using the legacy mechanism.
3 The extended value range for T300 and T301 is {ms2500, ms3000, ms3500, ms4000, ms5000, ms6000, ms8000, ms10000}.
4 No update is needed for the start and stop conditions, and actions that follow the timer expiry for T321. Value of T321 based on RAN4 conclusion.
5 For T304, no updates are needed for the start and stop conditions, and actions that follow the timer expiry for these timers. Configuration is done using the legacy mechanism.
6 T304 is extended for Rel-13 LC/CE UEs in enhanced coverage. The following value is added: {ms10000}, i.e. spare1=ms10000. Further offline discussion whether an extra value is needed for handover in CE Mode B.

Samsung Exhibit 1025, Page 1420 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161252 Impacts on RRC and NAS timers for eMTC Intel Corporation discussion
- Ericsson think that even the static capability is not know in the MME.
- Ericsson suggest we just tell CT1 that we extended some RRC timers and give some access times, data rates, etc.
- ZTE suggest just providing CT1 the worst case situation.

=> To inform to CT1, that RAN2 agreed to extend the maximum range of the various RAN2 timers that might have implication in the NAS ones.
=> Provide worst case estimates of access times, etc
=> Further details of response to CT1 to be discussed offline.
=> Response to CT1 to be provided in R2-151781 (Intel)

R2-161781 Response LS to C1-160739 = R2-160404 to CT1 on Extended coverage impact on NAS timers (to: CT1; cc:-; contact: Intel) Intel Corporation LS out Rel-13 LTE_MTCe2_L1-Core
=> Approved in R2-162008

Other

R2-161247 Clarification to use Cat.0 LCID for Rel-13 eMTC Samsung discussion
R2-161248 Open CP Issues in Rel-13 eMTC Samsungdiscussion
R2-161690 Mode A and B impact on Random Access, Paging, and cell selection Ericsson discussion
Above 3 Tdocs not treated

late

R2-161210 Discussion on extension of RLC parameter for MTCeNTT DOCOMO INC. discussion
late
R2-161211 Extension of RLC parameter for MTCe (Alt1) NTT DOCOMO INC. CR 36.331 13.0.0 2018 - B Related to R2-161210 Rel-13 LTE_MTCe2_L1-Core
late
R2-161212 Extension of RLC parameter for MTCe (Alt2) NTT DOCOMO INC. CR 36.331 13.0.0 2019 - B Related to R2-161210 Rel-13 LTE_MTCe2_L1-Core
late
Above 3 Tdocs not treated

7.5 WI: ProSe enhancements

(LTE_eD2D_Prox-Core, leading WG: RAN2, REL-13; started: Dec. 14, target: Mar. 16, WID: RP-150441)

WI complete from RAN2 perspective

Documents in this agenda item handled in the LTE Break Out session. (See Annex H)

Incoming LSs:

R2-161008 Reply LS to R2-154998 on ProSe UE-to-Network relay (S2-154369; contact: LGE)SA2 LS in to: RAN2 Rel-13 eProSe-Ext-SA2, LTE_eD2D_Prox-Core
R2-161009 Reply LS to R3-152366 = R2-156022 on ProSe UE Relaying Support (S2-154426; contact: Ericsson) SA2 LS in to: RAN2 Rel-13 LTE_eD2D_Prox-Core
R2-161010 Reply LS to R2-154999 on ProSe Direct Discovery out of coverage (C1-154853; contact: LGE) CT1 LS in to: RAN2 Rel-13 eProSe-Ext-CT

R2-161029 Reply LS to R2-154998 on ProSe UE-to-Network relay (C1-154880; contact: LGE) CT1 LS in
to: RAN2 Rel-13 eProSe-Ext-CT
Above all LSs are moved from 3.2 to 7.5

R2-161401 Correction for KD-sess Identity in 36.323 ZTE Corporation CR 36.323 13.0.00155 - F Rel-13 LTE_eD2D_Prox-Core
R2-161403 Miscellaneous corrections for sidelink in 36.331 ZTE Corporation CR 36.331 13.0.0 2037 - F Rel-13 LTE_eD2D_Prox-Core
=> Revised in R2-161932

Samsung Exhibit 1025, Page 1421 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161932 Miscellaneous corrections for sidelink in 36.331 ZTE Corporation CR 36.331 13.0.0 2037 1 F Rel-13 LTE_eD2D_Prox-Core R2-161403

R2-161418 Corrections for sidelink discovery gap in 36.321 ZTE Corporation CR 36.321 13.0.0 0834 - F Rel-13 LTE_eD2D_Prox-Core
R2-161419 Miscellaneous corrections for sidelink in 36.321 ZTE Corporation CR 36.321 13.0.0 0835 - F Rel-13 LTE_eD2D_Prox-Core
R2-161420 Miscellaneous corrections for sidelink in 36.300 ZTE Corporation CR 36.300 13.2.0 0833 - F Rel-13 LTE_eD2D_Prox-Core
R2-161587 eD2D Capability Qualcomm Incorporated CR 36.331 13.0.02070 - C Rel-13 LTE_eD2D_Prox-Core
R2-161588 Introdusction of eD2D Capability Qualcomm Incorporated CR 36.306 13.0.00343 - C Rel-13 LTE_eD2D_Prox-Core
R2-161589 Miscelaneous eD2D corrections Qualcomm Incorporated CR 36.331 13.0.02071 - F Rel-13 LTE_eD2D_Prox-Core
R2-161597 eD2D Capability aspects Qualcomm Incorporated discussion

7.5.1 UE-to-Network Relays

R2-161072 Discussion on Multiple Relay UE IDs for a Relay UE Huawei, HiSilicon discussion
R2-161073 Corrections for sidelink operation in TS 36.321 Huawei, HiSilicon CR 36.321 13.0.00822 - F Rel-13 LTE_eD2D_Prox-Core
R2-161076 Discussion on conditions to be Remote Ues Huawei, HiSilicon discussion
R2-161077 Corrections of conditions to be remote Ues Huawei, HiSilicon CR 36.331 13.0.02000 - F Rel-13 LTE_eD2D_Prox-Core
R2-161079 Discussion and TP on sidelink relay communication Huawei, HiSilicon discussion
R2-161080 Discussion and TP on Relay eMBMS service Huawei, HiSilicon discussion
R2-161182 Discussion on Relay UE serving multiple sidelinks for one Remote UE ASUSTEK COMPUTER (SHANGHAI) discussion
R2-161183 Discussion on Relay UE serving multiple sidelinks for one Remote UE ASUSTEK COMPUTER (SHANGHAI) CR 36.331 13.0.02012 - F Rel-13 LTE_eD2D_Prox-Core
R2-161221 Remaining issues on eSL Samsung Telecommunications discussion late
R2-161222 eD2D relay: inter layer interaction regarding threshold checking Samsung Telecommunications discussion
R2-161322 Correction on the conditions for establishing RRC Connection for sidelink communication ITRI CR 36.331 13.0.02027 - F Rel-13 LTE_eD2D_Prox-Core
R2-161326 Correction on the conditions for establishing RRC Connection for sidelink discovery ITRI CR 36.331 13.0.02029 - F Rel-13 LTE_eD2D_Prox-Core
R2-161327 Correction on relay related sidelink discovery announcement ITRI CR 36.331 13.0.0 2030 - F Rel-13 LTE_eD2D_Prox-Core
R2-161328 Correction on AS-conditions discovery transmission for remote UE ITRI CR 36.331 13.0.02031 - F Rel-13 LTE_eD2D_Prox-Core
R2-161330 Clarifications to Resource Allocation for ProSe UE-to-Network Relay discovery ITRI discussion
R2-161331 Separations of Resource Allocation for relay related/non-relay related Sidelink Discovery ITRI CR 36.300 13.2.00831 - F CR related to R2-161330 Rel-13 LTE_eD2D_Prox-Core
R2-161343 Clarification on the conditions for SidelinkUEInformation transmission and RRC connection establishment Intel Corporation discussion
R2-161357 Correction for PC5 to Uu Mobility PANASONIC R&D Center Germany CR 36.331 13.0.02036 - F Rel-13 LTE_eD2D_Prox-Core
R2-161443 Corrections on description of commTxAllowRelayCommon CATT CR 36.331 13.0.02045 - F Rel-13 LTE_eD2D_Prox-Core
R2-161445 Miscellaneous corrections to 36.331 CATT CR 36.331 13.0.02047 - F Rel-13 LTE_eD2D_Prox-Core
R2-161513 Clean up and corrections for eD2D Interdigital Asia LLC CR 36.300 13.2.00841 - F Rel-13 LTE_eD2D_Prox-Core

Samsung Exhibit 1025, Page 1422 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

7.5.2 ProSe discovery in partial- and outside network coverage

R2-161078 Discussion and TP on the carrier for PS discoveryHuawei, HiSilicon discussion
R2-161441 Corrections on sidelink related description in TS36.302 CATT CR 36.302 13.0.00067 - F Rel-13 LTE_eD2D_Prox-Core

7.5.3 ProSe discovery for inter-carrier and inter-PLMN

R2-161292 Reporting of system information with T370 LG Electronics FranceCR 36.331 13.0.02025 - F Rel-13 LTE_eD2D_Prox
R2-161303 Clarification on UL HARQ operation due to sidelink gap Innovative Technology Lab Co. CR 36.321 13.0.00826 - F Rel-13 LTE_eD2D_Prox-Core
late
R2-161421 Clarification on the sidelink discovery gap ZTE Corporation discussion
R2-161439 MAC Impacts of Sidelink Discovery GapCATT discussion
R2-161442 MAC impacts of Sidelink Discovery Gap CATT CR 36.321 13.0.00836 - F Rel-13 LTE_eD2D_Prox-Core
R2-161447 Clarification of discovery announcement and monitoring CATT CR 36.331 13.0.02049 - F Rel-13 LTE_eD2D_Prox-Core
R2-161469 Prioritization of Discovery and Communication in the presence of gaps Ericsson discussion
R2-161470 Correction of prioritization during sidelink discovery gaps Ericsson CR 36.300 13.2.0 0837 - F Rel-13 LTE_eD2D_Prox-Core
R2-161471 Correction of prioritization during sidelink discovery gaps Ericsson CR 36.321 13.0.0 0837 - F Rel-13 LTE_eD2D_Prox-Core
R2-161519 Corrections to gaps for discovery for inter-carrier and inter-PLMN Interdigital Asia LLC CR 36.321 13.0.00839 - F Rel-13 LTE_eD2D_Prox-Core
R2-161655 Reporting of system information with T370 LG Electronics Francediscussion

7.5.4 Group priorities for ProSe communication

R2-161074 Constraint for Multi-transmission in a SC period Huawei, HiSilicon discussion
R2-161472 Correction on Sidelink LCP Ericsson CR 36.321 13.0.00838 - F Rel-13 LTE_eD2D_Prox-Core
R2-161524 Corrections to group priorities Interdigital Asia LLC CR 36.321 13.0.00840 - F Rel-13 LTE_eD2D_Prox-Core

Withdrawn:
R2-161075 Corrections on Multi-transmission in a SC period Huawei, HiSilicon CR 36.321 13.0.0 0823 - F Rel-13 LTE_eD2D_Prox-Core

7.5.5 Other

R2-161071 Corrections on description of eProSe in TS 36.300 Huawei, HiSilicon CR 36.300 13.2.00822 - F Rel-13 LTE_eD2D_Prox-Core
NOTE: CR number duplicated due to a system error so another CR number will be provided during the meeting
R2-161290 Alignment with 36.331 LG Electronics FranceCR 36.304 13.0.00291 - F Rel-13 LTE_eD2D_Prox-Core
R2-161291 Clarification on informing upper layer of tx resources avaiability LG Electronics FranceCR 36.331 13.0.02024 - F Rel-13 LTE_eD2D_Prox-Core
R2-161341 Clarification on Public Safety Sidelink discovery China Unicom, Huawei, HiSilicon discussion
R2-161440 Corrections on sidelink related description in TS36.300 CATT CR 36.300 13.2.00835 - F Rel-13 LTE_eD2D_Prox-Core
R2-161444 Correction on the conditions for sidelink operation CATT CR 36.331 13.0.02046 - F Rel-13 LTE_eD2D_Prox-Core
R2-161699 Conditions for establishing RRC connection for sidelink operation Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai BellCR 36.331 13.0.02081 - F Rel-13 LTE_eD2D_Prox-Core
R2-161700 Updates to sidelink introduction section Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02082 - F Rel-13 LTE_eD2D_Prox-Core

Samsung Exhibit 1025, Page 1423 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161703 Sidelink synchronisation Information transmission procedure Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02084 - F Rel-13 LTE_eD2D_Prox-Core
R2-161705 Sidelink UE Information procedure Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02085 - F Rel-13 LTE_eD2D_Prox-Core
R2-161706 General clarifications to 36.300 for sidelink operation Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.300 13.2.00846 - F Rel-13 LTE_eD2D_Prox-Core
R2-161752 Index to combined destinationInfoList and destinationInfoListUC Nokia Networks discussion

7.6 WI: LTE-WLAN Radio Level Integration

(LTE_WLAN_radio-Core, leading WG: RAN2, started: Mar. 15, target: Mar. 16, WID: RP-152213)

Time budget: 3 TU

Focus this meeting should be on finalising the stage 3 CRs. Proposals in discussion papers should accompanied by text proposals to show how they would impact the current running CRs.

7.6.1 Organizational

Incoming LSs:

R2-161013 LS on WLAN mobility set configuration for LWA (R3-152905; contact: Intel) RAN3 LS in cc: RAN2 Rel-13 LTE_WLAN_radio-Core
=> Noted

R2-161039 Reply LS to R2-154935 on System Aspects for LTE-WLAN Radio Level Integration and Interworking Enhancement (S2-154456; contact: Huawei) SA2 LS in to: RAN2 Rel-13 LTE_WLAN_radio-Core
=> Noted

R2-161043 LS on Co-existence between LTE-WLAN Radio Level Integration and other WLAN offloading solutions (e.g. ANDSF) (S2-160894; contact: Nokia Networks) SA2 LS in to: RAN2 Rel-13 LTE_WLAN_radio-Core
- Intel think that SA2 worked on the assumption that RCLWI works only in connected. If we change this then we should inform SA2.

=> Noted

R2-161046 Reply LS to R2-157123 on LTE-WLAN Aggregation (S3-160272; contact: Nokia Networks) SA3 LS in to: RAN2 Rel-13 LTE_WLAN_radio_legacy-Core
Above 4 LSs moved from 3.2 to 7.6.1
- Broadcom: The WLAN security solution assume that there is end to end security. Do we have any requirement our specs that PDCP encryption is required. Chair explains that DRBs can not be established without security and hence here is always security.

=> Noted

Running CRs

The technically endorsed running 36.331 CR after RAN2-92 is available in R2-157095

7.6.2 LTE+WLAN Aggregation

7.6.2.1 Stage 2

Including correction CRs to the 36.300

Including UE capabiltiies; security aspects based on input from SA3; etc

Samsung Exhibit 1025, Page 1424 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

UE capabilities

R2-161126 Discussion on LTE-WLAN capabilities Guangdong OPPO Mobile Telecom. Discussion
- Discussed jointly with R2-161242

Proposal 1:
- Ericsson thought we had discussed to provide the band information. Intel think this is a different proposal to make the eNB aware of the BW.
- BlackBerry think it makes sense for the UE to provide the UE supported bandwidth. Ericsson does not think it provides any useful information as the data rate experienced is much more complex that the BW. Intel think it is useful for the eNB to know if the UE supports 20 or 160 MHz for example.
- Qualcomm think this is a proxy of the throughput that may be achieved on WLAN.
- MediaTek think by the same logic the UE could provide the WLAN version.
- Huawei think that the eNB can't really use this to select mobility set. It should provide as many APs as possible.
- Ericsson think that signal quality is much more important to determine the content of the mobility set.
- CATT do not see the benefit of the version and BW to the UE.
- Nokia also don't see this is as needed as eNB can't know what is actually used by the AP.

Proposal 3.
- Ericsson think this feature should not be per band combination. Huawei have the same view as Ericsson.
- OPPO think there could be interference issues between different band combinations.
- Ericsson think LWA capability is not dependent on RF.

=> WLAN versions and capabilities information of UE are not informed to eNB.

R2-161242 LWA and RCLWI UE capabilities Intel Corporation discussion
=> Noted

R2-161502 Introducing LWA and RCLWI UE capabilities Intel Corporation CR 36.306 13.0.00337 - B Rel-13 LTE_WLAN_radio-Core
- Sony think we are missing capabilities for the switch and split case. Intel think this was taken out during the ASN.1 review. Chair indicates this topic is discussed in R2-161110

=> Comeback after discussion of Samsung paper
=> Revised in R2-161980

R2-161980 Introducing LWA and RCLWI UE capabilities Intel Corporation CR 36.306 13.0.00337 1 B Rel-13 LTE_WLAN_radio-Core
=> Revised in R2-162012 CR rev 1

R2-162012 Introducing LWA and RCLWI UE capabilities Intel Corporation CR 36.306 13.0.00337 2 B Rel-13 LTE_WLAN_radio-Core
=> Agreed

Moved from 7.6.2.2 to 7.6.2.1

R2-161503 Introducing LWA and RCLWI UE capabilities Intel Corporation CR 36.331 13.0.02057 - B Rel-13 LTE_WLAN_radio-Core
=> The agreed capabilities can be included directly into the LWA CR from the rapporteur.
=> Not pursued.

Moved from 7.6.2.2 to 7.6.2.1

R2-161539 Capabilities for WLAN measurements Ericsson discussion
- Qualcomm supports proposal 2 and thinks they can be reused or LAA or other purposes.
- Intel doubts the proposed used case. ANR is a beneficial but doubts the measurements as they are provide ANR functionality. Would like more info about how they could benefit LAA.
- DT support the proposal. Could be used for MDT and for LAA.

Samsung Exhibit 1025, Page 1425 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Broadcom support the proposal. BlackBerry also support but think there something on how this is used in LAA. Think it may be tied to the LBT behaviour that has been defined.
- ZTE think the WLAN measurements we have defined are specific to the use cases for WLAN interworking. CATT share the view of ZTE. The events are related to the mobility set but for the LAA there would be no mobility set. Ericsson think that event w1 would be the one used.
- Intel think it strange to take measurements defined for one purpose and use them for something else.
- Nokia think the proposal makes no harm to LWA but provides some possible benefit.
- China Telecom support the proposal. Sony think it could be mandatory for UEs supporting LAA as well.
- Intel think the user consent aspect of MDT has not been considered.
- Samsung thinks this discussion is not part of the WI.

=> UEs supporting RCLWI, LWA or LWIP support WLAN measurements
=> Add a capability for WLAN measurements separate from RCLWI/LWA/LWIP support.

R2-161540 Capabilities for WLAN measurements (Text Proposal for 36.306) Ericsson discussion
R2-161541 Capabilities for WLAN measurements (Text Proposal for 36.331) Ericsson discussion
=> For previous 2 documents, CR rapporteurs to work on details to include the relevant parts.

R2-161370 UE capabilities for LWA Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

Proposal 1
- Qualcomm think the max WLAN bit rate is not something we can define. Nokia think if we don't define anything then the number of PDCP SDUs supported then the UE might support the number according to the LTE category only. Qualcomm agree with the issue and think it might be better to indicate the supported WLAN rate. Nokia think we don't need to define any maximum rate on WLAN, just the number of PDCP SDUs.
- Samsung think this is an important parameter and think the intent of the WI is not to increase the data rate of a UE category and hence we should not increase the number PDCP SDUs. Nokia ask if data rate is not increased what is the point of the WI. Samsung think the purpose is about efficient use of resources.
- Intel is not sure of the proposal given the view of most companies that the eNB doesn't need to know the UE WLAN capabilities

Proposal 2
- BlackBerry explain there is no buffering in WLAN MAC. If the UE supports split bearer then it supports reordering. Qualcomm thinks all UEs need to support PDCP reordering and the previous discussion was just about buffer size.
- LG think there should be no difference between the bearers from PDCP point of view.
- Samsung have the same understanding as Qualcomm and LG. Ericsson agree.
- Sony thinks we need to keep the 2 bearer types.
- Huawei don't see the need to keep the 2 types.
- BlackBerry think we have an agreement on this. Discussion should be what the 2 capabilities mean.
- Ericsson thinks the agreement was before more analysis had been performed.

Proposal 5
- Qualcomm think it is very difficult to take into account what WLAN MAC does. BlackBerry think the WLAN MAC doesn't buffer the PDCP PDUs. Nokia explain that the lower layers will deliver some PDUs when WLAN MAC is reconfigured from LWA to MCG
- Ericsson think the issue can be addressed by flow control . eNB can know what has been sent.

=> Offline discussion on whether we change the previous agreement to have 2 capabilities for split and switched bearer. (Qualcomm)
=> For the purpose of UE's L2 buffer-size dimensioning, RAN2 needs to discuss whether LWA, like LTE dual connectivity, is subject to the requirement of supporting Xw latencies up to 30ms.

R2-161969 Summary of Offline Discussion on UE capability for LWA Qualcomm Incorporated discussion
- MediaTek think the agreement inplies that split bearers can not be used with smaller buffer sizes. BlackBerry explain that the concern from MediaTek could be addressed by an additonal bit on top of what was agreed. MediaTek would be ok without proposal 6 or a spearate capability for L2 buffer sizes.

Samsung Exhibit 1025, Page 1426 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Huawei think it is important for the network to be sure that the UE has enough buffer. MediaTek think we did not do a detailed review of the required buffer sizes and would be ok with the non DC values. BlackBerry is ok with adding a L2 buffer capability.
- Sony think the DC buffer sizes could be ok for a UE that supports split bearer.
- Nokia explain that the buffer sizes for DC were calculated carefully based on the delay. MediaTek think that WLAN is difference from an SCell.
- Intel think that we don't have to specify the L2 buffer sizes for LWA

Agreements
On capturing the split and switched bearers in RAN2 specifications, the following were agreed:
1. Keep the current definition and text for split and switched bearers in 36.300
2. Keep the current capability for split bearer support in 36.331 (wlan-LWA-SplitBearerSupport in the baseline CR in R2-161162) and refer to 36.300 for the definition of split bearer
3. Use only "LWA bearer" in 36.323 CR and adopt the changes in the CR provided in R2-161422 by removing "split"
4. Capture in 36.306 that all UEs with LWA capability will support switched bearer and the capability for LWA split bearer indicates the capability to receive data transmission for the same DRB on both LTE and WLAN simultaneously.

On the L2 buffer sizes for LWA, the following were agreed:
5. Do not introduce new L2 buffer sizes for LWA

Proposal 6.A UE with both LWA split bearer capability will support the L2 buffer size defined for DC split bearer while a UE with only LWA switched bearer capability will support the baseline L2 buffer size (columns 4 and 3 respectively in 36.306 Table 4.1A-3).
=> Proposal 6 can be discussed more offline
- Qualcomm report there is no progress offline. Without any agreement it means that LWA split would not be required to support the large buffer size.
=> Add a capability to indicate support of he larger buffer sizes.

L2 buffer sizes

R2-161499 Total L2 buffer size for LWA capable UE Huawei, HiSilicon discussion
R2-161591 LWA L2 buffer sizes Ericsson discussion
R2-161500 Total Layer2 buffer size for LWA capable UE Huawei, HiSilicon CR 36.306 13.0.00336 - C Rel-13 LTE_WLAN_radio-Core
=> Later 2 buffer sizes will be discussed together with the UE capability discussion on split bearer/switched bearer (Qualcomm)
Above 3 Tdocs not treated during the meeting
Moved from 7.6.2.2 to 7.6.2.1

Security

R2-161368 On authentication procedure in LWA Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
Proposal 1
- Nokia explain that this is not quite what SA3 concluded. Intel ask if the UE implementing this has an effect on out specs. Ericsson think this is an SA3 topic.
- Nokia thinks that the UE using the same SKwt within the mobility set can make the authentication faster. Intel agree this will be used by the UE but it doesn't have impact on our specs.
- Qualcomm think it is useful to avoid the authentication but we would not need to specify anything.

Proposal 2
- MediaTek think the UE is not compelled to use eNB based authentication. It is also possible to use a legacy mechanism. Intel have the same view as MediaTek. Qualcomm think that SA3 agreed what happens if the keys are provided but not that the keys must be provided by eNB.

Proposal 3
- Ericsson think the timer should allow the timer without the success indication.
- Qualcomm think CR is captured in this way.
- LG agree with Ericsson.

Samsung Exhibit 1025, Page 1427 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Proposal 4
- Intel think this is already in stage 2.

Proposal 5
- Think it is easier to discard the mobility set.

Comeback to UE discard of mobility set
- Samsung, CATT, TCL think that the UE should not discard the mobility set. Should wait for the eNB to take action. Huawei think the UE should discard. If the mobility set is kept then the UE will continue to keep trying to connect.
- Samsung think the eNB will have to change the bearer back to LTE only bearer.
- Ericsson think it is easier to just release the mobility set.
- Chair suggest an option for the UE to stop trying to connect to the mobility set at failure but the configuration remains
- BlackBerry thinks it is simpler for the UE to just discard. Qualcomm wonder if there is any benefit in the configuration being kept but not used.
- Samsung think the purpose of the status report was to inform the eNB to take action. We had the same discussion in DC.
- CATT supports the chairs suggestion.

Agreements
1 Separate configuration for T351 and the request for success status reports.
2 When UE completes authentication upon MS change or when the UE completes re-authentication after a key refresh from the eNB, WLAN connection status report shall be sent to eNB. Two cases only apply when the eNB has requested success indication.
3 Upon WLAN connection failure and transmitting the report the UE keeps the mobility set configuration but stops attempting to connect to the mobility set.

Other

R2-161110 LWA bearer type inconsistency Samsung R&D Institute UK discussion
R2-161111 LWA bearer type inconsistency Samsung R&D Institute UK CR 36.300 13.2.00823 - F Rel-13 LTE_WLAN_radio-Core
R2-161465 Correction to switched bearer definition Nokia Networks CR 36.300 13.2.00836 - F Rel-13 LTE_WLAN_radio-Core
Above 3 Tdocs not treated

R2-161509 Remaining LWA stage-2 issues Intel Corporation discussion
=> Capture, at least in stage-2, a statement reflecting that only RLC AM bearer can be configured as LWA bearer.

R2-161510 TS 36.300 Stage-2 CR correction for LWA Intel Corporation CR 36.300 13.2.00840 - F Rel-13 LTE_WLAN_radio-Core
=> Agreed to fix the bearer label for the bearer using LTE only.
=> Revised in R2-161786 CR rev 1 to capture all stage 2 agreements from the meeting.
R2-161786 TS 36.300 Stage-2 CR correction for LWA Intel Corporation CR 36.300 13.2.00840 1 F Rel-13 LTE_WLAN_radio-Core
=> Show deleted figure in revision marks
=> Change last sentence to " Only RLC AM can be configured for an LWA bearer."
=> Agreed in R2-162011 CR rev 2

R2-161298 WLAN Activation/Deactivation during LTE-WLAN aggregation SAMSUNG Electronics Co., Ltd. discussion
R2-161498 Co-existence between ANDSF and LWA QUALCOMM CDMA Technologies discussion
R2-161486 Estimated UE throughput reporting NEC Telecom MODUS Ltd. Discussion
Moved from 7.6.2.3 to 7.6.2.1

Above 3 Tdocs not treated

Withdrawn:

R2-161373 Correction to switched bearer definition Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

Samsung Exhibit 1025, Page 1428 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

7.6.2.2 Stage 3 - Control Plane

Including corrections to RRM measurements and issues identified in ASN.1 review that require discussion and specific to LWA

R2-161161 Introduction of LTE-WLAN Aggregation QUALCOMM CDMA Technologies CR 36.331 13.0.02007 - B Rel-13 LTE_WLAN_radio-Core
Not treated

R2-161162 LWA Miscellaneous Corrections QUALCOMM CDMA Technologies CR 36.331 13.0.0 2008 - B Rel-13 LTE_WLAN_radio-Core
- Qualcomm explains that this version now fixes a number of the smaller issues from the ASN.1 review.
- BlackBerry point out that the capability will need to be updated to reflect the outcome of the offline discussion on split /switched bearer.

=> Endorsed as the baseline for changes from this meeting
=> Revised on R2-161955

R2-161955 LWA Miscellaneous Corrections QUALCOMM CDMA Technologies CR 36.331 13.0.0 2008 1 B endorsed for further update Rel-13 LTE_WLAN_radio-Core R2-161162
=> To be captured that failure report is sent only once (consistent with stage 2 agreements)
- Hauwei ask if the variable for the mobility set configuration is needed.

=> Revised in R2-161984 CR rev 2

R2-161984 LWA Miscellaneous Corrections QUALCOMM CDMA Technologies CR 36.331 13.0.0 2008 2 B Rel-13 LTE_WLAN_radio-Core R2-161955

✉ **[93#11][LTE/WLAN] 36.331 CR (Qualcomm)**
Intended outcome: Agreed CR for RAN
Deadline: Thursday 25/02/2016

R2-161178 LWA Issue List for ASN.1 Freeze QUALCOMM CDMA Technologies discussion
Not treated

RRM/Mobility set related

R2-161113 LWA carrier/AP identification Samsung R&D Institute UK discussion
Proposal 1
- Intel asks of he information is critical as the UE implementation generally cache measurement results and hence the UE will have the information. Samsung think the intent is to align with general principles. Qualcomm think the intent to so refine the mobility set to be a WLAN ID plus a band or channel. Qualcomm think we should do this.
- Samsung think that adding band means that we can limit LWA to2.4 or 5 GHz bands but by using the IEEE terminology there is more flexibility.
- Intel think the operating classes were designed by IEEE as capabilities but they were never designed to be used for configuration of measurements.
- Huawei thinks we previously agreed not to add channel information as WLAN implementation anyway scan all channels.

Proposal 4
- Qualcomm prefer not to change this. CATT think the benefit is only significant if there is frequent addition and deletion. Intel also prefer to keep it as it is in the CR.

=> Noted

R2-161115 LWA Measurement aspects Samsung R&D Institute UK discussion
- Qualcomm explain that proposal 1 and 2 is captured in CR 2008.

=> Agreed to add " all identities " into the CR 2008.
=> Noted

R2-161088 Discussion on WLAN Mobility Set Configuration for LWA CATT discussion
Proposal 1
- Ericsson thinks that the UE any needs to take immediate action and do not support this. Huawei share the same view.

Samsung Exhibit 1025, Page 1429 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Intel agree with Ericsson. Qualcomm also.

=> Noted

R2-161537 Remaining issues for WLAN measurements Ericsson discussion

Agreements:
1 WLAN RSSI is mandatory present in the WLAN measurement report. Other metrics are optionally present based on (individual/per-metric) configuration by the eNB
2 If configured, UE includes the WLAN band information for the WLAN (identified by BSSID) in the measurement report. FFS whether WLAN channel information can also be reported.
3 Only RSSI is Layer-3 filtered.

FSS:WLAN measurement report always includes measurement on the one AP that the UE is connected to, if any.

R2-161985 Measurements for connected WLAN Ericsson, LG Electronics Inc., Sony, NEC, TeliaSonera, MediaTek, NTT DOCOMO INC., Kyocera

- Intel still has concerns that this breaks the agreement that eNB is not aware of what happens in the mobility set.
- CATT does not support the proposal.
- Qualcomm can see the benefit and is ok with he proposal. Apple woul like more time to understand the impacts.

=> The UE includes measurement results in the measurement report for the WLAN which the UE is connected to (if any).

R2-161538 Remaining issues for WLAN measurements (Text Proposal) Ericsson discussion
Not treated

R2-161546 Minor issues regarding the mobility set Ericsson discussion

=> In 5.6.X.1 remove " The mobility to a WLAN outside the WLAN mobility set may be triggered by WLAN measurement events described in 5.5.4"

=> Proposal 2 is agreed and can be included in the running CR.

R2-161622 Multiple trigger quantities for WLAN measurement reportingLG Electronics Inc. discussion

=> Noted

Status report - other

R2-161369 Final details of RLM for LWA Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

Agreements:
1 Add cause values for : wlanRadioProblem, wlanUnavailable (e.g connected to a different WLAN, WLAN off), t351expiry (success previously agreed)
2 Use spare values for the remaining code points. Do not utilize ellipsis.

R2-161089 Discussion on LWA Status Report Cause Value CATT discussion
R2-161512 Remaining issue on WLAN Status Reporting Kyocera discussion
R2-161490 Proposed corrections on WLAN radio link monitoring Huawei, HiSilicon discussion
Above 3 Tdocs not treated

R2-161542 Remaining issues for WLANConnectionStatusReport Ericsson discussion

=> Failure report does not include any WLAN identifier

=> Success report does not include any WLAN identifier

R2-161543 Remaining issues for WLANConnectionStatusReport (Text Proposal) Ericsson discussion
R2-161621 Further discussion on WLAN connection status reporting LG Electronics Inc. discussion
Above 2 Tdocs not treated

LWA Configuration

R2-161114 LWA Configuration Control Samsung R&D Institute UK discussion
Not treated

Samsung Exhibit 1025, Page 1430 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161223 LWA DRB reconfiguration, RRC PDU and procedural aspects Samsung Telecommunications discussion

Agreements RAN2 confirms the following assumptions: a) When configuring a UE with LWA, EUTRAN always configures the UE with at least one LWA DRB (as in DC), as well as a (non-empty) mobility set b) For LWA, there is only one DRB type to consider that uses WLAN resources i.e. the LWA DRB. As a result, there are only 2 transitions to consider i.e. to and from LWA.. An LWA DRB always uses LTE resources in uplink. c) LWA can be configured for DRBs using RLC AM (as for DC) Change the LWA specific DRB reconfiguration procedure as follows • Remove the DRB identity within the LWA configuration and indicate establishment of/ change to LWA DRB by field in legacy drb-ToAddModList • Introduce a section covering LWA specific DRB procedures in accordance with Tab. 4

R2-161090 Discussion on LWA Association Timer Setting CATT, Broadcom discussion
- Current CR as 10, 30, 60, 120, 240 (plus spares)
=> Values in the CR are confirmed.

R2-161156 LS on UE WLAN Connection Timing CATT LS out Rel-13 LTE_WLAN_radio-Core
R2-161112 User Preference Handling Samsung R&D Institute UK discussion
R2-161547 LWA bearer reconfiguration procedures Ericsson discussion

R2-161580 LWA configuration handling upon handover Huawei, HiSilicon discussion
R2-161598 Solving inconsistencies in LWA procedure calls Huawei, HiSilicon discussion
Moved from 7.6.2.3 to 7.6.2.2

Above 5 Tdocs not treated

Status report - related to user preference/ANDSF policies

R2-161482 User preference for LWA/LWI (related to SA2 LS) NEC discussion
R2-161520 Coexistence of LWA, RCLWI, and LWIP with User Preference and ANDSF MediaTek Inc. discussion
Above 2 Tdocs not treated

Other

R2-161225 Some general LWA PDU specification aspects Samsung Telecommunications discussion
R2-161488 Remaining issues on RRM measurements Huawei, HiSilicon discussion
R2-161497 Remaining Open Issues for LWA Control Plane QUALCOMM CDMA Technologies discussion
R2-161507 Remaining LWA stage-3 issues Intel Corporation discussion
R2-161508 Miscellaneous stage-3 TS 36.331 corrections for LWA Intel Corporation CR 36.331 13.0.02058 - B Rel-13 LTE_WLAN_radio-Core
R2-161483 Serving WLAN reporting in LWA NEC Telecom MODUS Ltd. discussion
R2-161544 IDC for WLAN integration Ericsson, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
R2-161545 IDC for WLAN integration (Text Proposal) Ericsson, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
Above 8 Tdocs not treated

7.6.2.3 Stage 3 - User Plane

Including output of [92#41][LTE/WLAN] 36.323 CR for UE feedback (Intel)

R2-161506 Introduction of LWA PDCP status report Intel Corporation CR 36.323 13.0.00158 - B result of e-mail discussion [92#41][LTE/WLAN] Rel-13 LTE_WLAN_radio-Core
=> Endorsed as baseline for any further changes from this meeting.
=> Revised in R2-161981

Samsung Exhibit 1025, Page 1431 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161981 Introduction of LWA PDCP status report Intel Corporation CR 36.323 13.0.00158 1 B
result of e-mail discussion [92#41][LTE/WLAN] Rel-13 LTE_WLAN_radio-Core
- CATT think there are other alternative to the polling bit.
- Intel think this was based on the working assumption from last time. MediaTek agree with Intel and we also agree not to touch LWAAP for the flow control mechanism
- LG think the polling bit change applies to all UEs and not just those supporting LWA. Would like see the polling bit in a new type of PDU. Intel point out that the poll uses a reserved bit. CATT shares LGs concern. And also the polling is not useable for UEs that only support 15 bit SN. BlackBerry agee with Intel. Samsung think that everything is under network contrl and the bit will not be used towards non LWA UEs.

=> Discuss offline whether it is needed to specify that UE behaviour on receipt of the polling bit should be applicable only to UEs that support LWA.
=> Revised in R2-161987 CR rev 2

R2-161987 Introduction of LWA PDCP status report Intel Corporation CR 36.323 13.0.00158 2 B
Rel-13 LTE_WLAN_radio-Core R2-161981
=> Revsied in R2-162014

R2-162014 Introduction of LWA PDCP status report Intel Corporation CR 36.323 13.0.00158 3 B
Rel-13 LTE_WLAN_radio-Core R2-161981

✉ **[93#12][LTE/WLAN] PDCP CR (Intel)**
Intended outcome: Agreed CR to RAN
Deadline: Thursday 25/02/2016

Including output of [92#42][LTE/WLAN] New specification (LG)

R2-161087 Introduce an LWAAP specification: TS 36.360 v0.0.0 on LTE-WLAN Aggregation Adaptation Protocol (LWAAP) LG Electronics Inc. draft TS
result of e-mail discussion [92#42][LTE/WLAN]Rel-13 LTE_WLAN_radio-Core
- Broadcom think the figure doesn't reflect that the interface between UE and eNB may be via WLAN.

=> Remove 'radio interface' and remove 'WLAN'.
=> Revision in R2-161787 for this change and others from the discussion.

R2-161787 TS 36.360 v0.0.1 on LTE-WLAN Aggregation Adaptation Protocol (LWAAP)LG Electronics Inc. draft TS 36.360 0.0.1 Rel-13 LTE_WLAN_radio-Core R2-161087
=> Sentence referring to EtherType to be removed and something like "The PDU is transmitted by WLAN using EtherType 0x9e65" to be captured in 36.300.
=> Revision in R2-161986 v 0.0.2

R2-161986 TS 36.360 v0.0.2 on LTE-WLAN Aggregation Adaptation Protocol (LWAAP)LG Electronics Inc. draft TS 36.360 0.0.2 Rel-13 LTE_WLAN_radio-Core R2-161787
=> Agreed in R2-162023 v 0.1.0 and R2-162024 v1.0.0
=> Will be sumbitted to RAN#71 for 1 step approval

PDCP status reporting

R2-161091 Discussion on Support of UE based Flow Control in LWAAP CATT, LG, ITRI discussion
- MediaTek think all the existing feedback uses PDCP SNs and hence the new feedback should also be in PDCP.
- Intel ask if LWAAP would also be used on Uu. CATT think it would only be on the WLAN side and don't see any issues.
- Broadcom think there is no point to have LWAAP on both WLAN and Cellular so we should use PDCP.

=> Stay with current agreements to use PDCP.

R2-161504 Analysis of LWA status reporting Intel Corporation discussion
- Qualcomm prefer to stay with working assumption from last meeting. Sending the bit map is not efficient and the parameters agreed last time are sufficient to know what is missing.
- Ericsson support the optimised proposal over what was agreed last meeting.
- Intel explain the main difference is the highest received SN on LTE which can be fully known based on RLC operation. Qualcomm think the report may come before the RLC status report.
- Nokia prefer to keep the working assumption. Would like the eNB to estimate the WLAN data rate.

Samsung Exhibit 1025, Page 1432 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- LG agree highest receive in LTE is not needed. Think that FMS only is needed and all the information is in the legacy report. All we need is a new trigger.

=> LWA status report carries FMS, NMP and HRS (Highest Received SN on WLAN).

R2-161505 Optimized LWA status report Intel Corporation CR 36.323 13.0.00157 - B Rel-13 LTE_WLAN_radio-Core
Not treated

R2-161590 On new PDCP status report for UE based flow control Ericsson discussion
Proposal 2 and 3
- Nokia support the proposals
- Intel also support.
- Chair clarifies the previous agreement was for periodical reporting of the new or legacy status report). LG think the working assumption paper just said that the legacy may be used.
- Intel explain that polling would trigger one or both of the reports depending on what was configured.
- BlackBerry point out that flow control is not needed for switched bearer. MediaTek think the HFN desync is a problem for both

Agreements
- Periodical reporting of legacy status report.
- Periodical reporting for new status report.
- Periods for legacy and new status report can be different
- An offset can be configured in order to start the reporting periodicities at different time instants.

R2-161092 Support of eNB based Polling for LWA Status Report in LWAAP CATT discussion
Not treated

R2-161371 Value range of statusPDU-Periodicity for LWA Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
=> statusPDU-Periodicity has value range {ms5, ms10, ms20, ms30, ms40, ms50, ms60, ms70, ms80, ms90, ms100, ms150, ms200, ms300, ms500, ms1000, ms2000, ms5000, ms10000, ms20000, ms50000}

R2-161422 Extending the scope of PDCP reordering function to LWA Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.323 13.0.00156 - B Rel-13 LTE_WLAN_radio-Core
NOTE: souce companies not matched with CR coversheet
=> Remove the second 'split'
=> First 'split' may be removed based on outcome of split/switched bearer discussion
=> Include into the PDCP CR for the flow control.

Intel report that the Ethertype value is assigned by IEEE and asks where it should be captured
=> To be specified and merged in the new spec LWAAP

Withdrawn:

R2-161467 Introduction of RAN controlled LTE-WLAN interworking Huawei, HiSilicon, Ericsson, China Telecom, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.304 13.0.00298 - B Rel-13 LTE_WLAN_radio-Core
late

7.6.3 Interworking Enhancements

7.6.3.1 Stage 2

Steering command; Idle mode behaviour;

Including output of email discussion [91bis#18][LTE/WiFi] LTE/WLAN Interworking enhancements (Huawei)

R2-161599 Summary of email discussion: [91bis#18][LTE/WiFi] LTE/WLAN Interworking enhancements Huawei discussion

Samsung Exhibit 1025, Page 1433 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Proposal 3
- Ericsson thinks this refers to indicating to higher layers at failure to move the bearers back to LTE. BlackBerry think this is necessary.
- Broadcom ask what is meant by 'all' PDNs.
- ZTE have a concern about the autonomous behaviour of the UE in connected mode.
- Kyocera think this proposal refers to idle and not connected. Intel wonders if any network would keep the traffic on WLAN when it fails. Huawei think that even in idle the UE will trigger a connection to transfer data. BlackBerry think this is not really new behaviour. Broadcom agree.

Proposal 4
- Intel support the proposal. Qualcomm also. Samsung think that this command is not needed as we can just provide the mobility set. I.e. the mobility set is an implicit indication. Ericsson think his would add some un-clarity between LWA and LWI. Qualcomm also think steering and mobility can be included in different messages.
- Nokia also support the proposal to keep the spec clean.

Agreements
- When a UE which has steered traffic to WLAN, autonomously moves all the offloaded PDN connections to LTE when connection to WLAN fails.
- In RRC_CONNECTED, the UE follows a traffic steering command from the eNB indicating either "WLAN" and providing a WLAN mobility set, or indicating "LTE"

R2-161463 RAN controlled LTE WLAN Interworking Huawei, HiSilicon, Ericsson, China Telecom, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
=> Discussed together with R2-161241

Proposal 1
- Qualcomm think the previous agreement was that it only applies to failure and not success. But Qualcomm is ok with the success case.
- BlackBerry wonder why the eNB needs to know about the failure. The UE will steer traffic back.
- Nokia think the simplest will be to completely reuse LWA agreements.
- Ericsson support having the exact same procedures for LWA and LWIP. Intel are also ok.

Proposal 4:
- Qualcomm thinks these enhancements were discussed in R12 and not agreed.
- Nokia thinks it is a small enhancement in line with the SA2 feedback and we support.
- MediaTek agree with the view of Qualcomm. Intel think it is the same as release 12 and these are late proposals for optimisation. Ericsson think it was submitted in previous meetings
- CATT think these are not necessary.
- Qualcomm expect the UE to implement something to minimise the switching. Ericsson think SA2 were commenting on ANDSF and RAN mechanism, the problem here is RAN rules and the steering mechanism.
- Huawei think these changes are quite simple and agree it doesn't relate to SA2. The proposal in SA2 is that it is fully UE implementation but this is completely not predictable.
- Qualcomm think it is not part of this WI.

=> The UE in RRC_CONNECTED with traffic steered to WLAN by Rel-13 LWI performs WLAN radio link monitoring / WLAN connection status report using the same procedures like LWA.

R2-161241 Way forward on RCLWI Intel Corporation, Qualcomm Incorporated, MediaTek Inc., InterDigital, Sony, LGE, China Telecomdiscussion

Proposal 2
- Ericsson think it is important to push a user to idle if it is not sending traffic on LTE. Qualcomm think if the UE supports R12 RAN rules then they could be used. Ericsson are proposing a separate capability for the RAN rules and if the UE does not support then the UE will behave as per proposal 2.
- BlackBerry agree that it would be good for the UE to be moved to idle but doesn't see why this means that it should support RAN rules. Prefer to keep the features separate.

Samsung Exhibit 1025, Page 1434 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Huawei explain that RAN rules support would not be mandatory for the UE but if supported they can be used.
- DT agree with Ericsson's comment.
- Ericsson explain that the RAN rules support in connected would not be supported. Intel think if a network supports both approaches then we will have to define some rules. Qualcomm think this would be a bad eNB behaviour.
- MediaTek think it is easy to have RAN rules active as well but the dedicated signalling would take priority.

Agreement
1 UE supporting RCLWI may support RAN rules.
1a If UE supports RAN rules then the UE applies those rules in idle for the WLAN identifiers listed in the WLAN mobility set if configured in connected. Rules are the same as R12 rules but apply to the WLAN identifiers listed in the WLAN mobility set provided in connected instead of the broadcast identifiers.
1b If the UE doesn't support RAN rules then UE in idle keeps traffic on WLAN until WLAN fails (WLAN failure detection is UE implementation). No more detail will be defined about when the UE moves traffic back to connected.
1c If UE in idle doesn't have WLAN identifiers from WLAN mobility set then UE uses the broadcast WLAN identifiers.
2: RCLWI re-uses the same NAS messaging used in Rel-12 RAN assisted interworking to indicate which PDN connections are offloadable.

Idle mode behaviour

R2-161093 UE behaviour in RRC_IDLE mode CATT, Fujitsu, ZTE discussion
R2-161299 UE behaviour in RRC_IDLE during RCLWI SAMSUNG Electronics Co., Ltd. discussion
R2-161304 Views on Idle Mode Behaviour in RAN Controlled WLAN Interworking ITRI discussion

=>Above 3 documents not treated based on previous discussion.

Connected mode behaviour

R2-161094 Procedures of LTE-WLAN Interworking Enhancements CATT discussion
- Intel explain that we have some stage 2 for RCLWI. We should have some call flows but not to this level of detail.
- Intel suggests putting some call flows together consistent with LWA.
- Broadcom support including the calls flows presented by CATT as a base.

=> Stage 2 CR for all RCLWI agreement in R2-161782 CR 0849.
=> Offline discussion to prepare calls flows for including in the stage 2

R2-161782 Stage 2 CR on LTE-WLAN Radio Level Integration Intel Corporation CR 36.300 13.0.00849 - B Rel-13 LTE_WLAN_radio-Core
=> Add clarification how higher layers treats the indication to move traffic to WLAN.
=> Sentence on 'offloaded PDN' can be revised to align with text on indication to higher layers.
=> Revised in R2-161990 CR rev 1

R2-161990 Stage 2 CR on LTE-WLAN Radio Level Integration Intel Corporation CR 36.300 13.0.00849 1 B Rel-13 LTE_WLAN_radio-Core R2-161782

✉ **[93#13][LTE/WLAN] Stage 2 CR (Intel)**
Intended outcome: Agreed CR to RAN
Deadline: Thursday 25/02/2016

R2-161305 Design of Steering Command in RAN Controlled WLAN InterworkingITRI discussion
R2-161352 Further Consideration on RCLWI ZTE Corporation discussion
R2-161514 Traffic steering failure in interworking enhancements Kyocera discussion
R2-161515 UE behaviour for LTE-WLAN interworking enhancements Kyocera discussion
Above 4 Tdocs not treated

Other

Samsung Exhibit 1025, Page 1435 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161536 Blind offloading in LWI Ericsson discussion
R2-161624 Clarification on RCLWI command LG Electronics Inc. discussion
Moved from 7.6.3.2 to 7.6.3.1

Above 2 Tdocs not treated

7.6.3.2 Stage 3

R2-161466 Introduction of RAN controlled LTE-WLAN interworking Huawei, HiSilicon, Ericsson, China Telecom, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02051 - B Rel-13 LTE_WLAN_radio-Core
=> Common parts of the 'LWA' CR need to be updated to include reference to RCLWI for the common parts.
=> Separate CR for the additional parts that are specific to RCLWI.
=> eNB does not configure dedicated RAN rules and steering command for a UE in RRC Connected.
=> eNB does not configure steering command and LWA for a UE in RRC Connected
=> If UE supports RAN rules and steering command then it support the use of the RAN rules with the WLAN ids listed in the WLAN mobility set.
=> To be revised to take into account above agreements and other agreements from this meeting.
=> Revision in R2-161783 CR rev 1

R2-161783 Introduction of RAN controlled LTE-WLAN interworking Huawei, HiSilicon, Ericsson, China Telecom, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02051 1 B Rel-13 LTE_WLAN_radio-Core R2-161466
✉ **[93#14][LTE/WLAN] 36.331 CR (Huawei)**
Intended outcome: Agreed CR for RAN
Deadline: Thursday 25/02/2016

R2-161164 Introduction of RCLWI QUALCOMM CDMA Technologies CR 36.331 13.0.02009 - B Rel-13 LTE_WLAN_radio-Core
=> Not treated following discussion of previous paper.

Moved from 7.6.2.2 -> 7.6.3.2

R2-161300 How to signal the steering command in RCLWI SAMSUNG Electronics Co., Ltd. discussion
R2-161623 Steering command for RCLWI based on LWA configuration LG Electronics Inc. discussion
Above 2 Tdocs not treated

R2-161972 Introduction of WLAN RSSI measurements CR 36.304 Intel
- RRC CR may also need to be updated
=> Agreed

7.6.4 Other

R2-161372 Structure of LWA procedure Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
Not treated

7.7 WI: Multicarrier Load Distribution in LTE

(LTE_MC_load-Core, leading WG: RAN2, started: Mar. 15, closed: Dec. 15, WID: RP-152181)

Closed WI

Incoming LSs:
R2-161019 Further LS to R4-156637 = R2-156034 on RS-SINR measurement report mapping (R4-158389; contact: Ericsson) RAN4 LS in to: RAN2 Rel-13 LTE_MC_load-Core
moved froom 3.2 to 7.7

Samsung Exhibit 1025, Page 1436 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Noted

R2-161224 Idle mode load distribution Samsung Telecommunications CR 36.304 13.0.00290 - F Rel-13 LTE_MC_load-Core
=> Correct name of redistrFactor
=> Correct index in formula
=> Correct text relating to redistributionFactorServing as the field is mandatory present.
=> Revision in R2-161954 CR rev 1

R2-161954 Idle mode load distribution Samsung Telecommunications CR 36.304 13.0.00290 1 F Rel-13 LTE_MC_load-Core R2-161224
=> Agreed

R2-161317 Correction to E-UTRAN Inter-frequency Redistribution procedure_alt1 ITRI CR 36.304 13.0.00294 - F Alt. 1 CR for Correction to E-UTRAN Inter-frequency Redistribution procedure Rel-13 LTE_MC_load-Core
=> Not pursued

R2-161318 Correction to E-UTRAN Inter-frequency Redistribution procedure_alt2 ITRI CR 36.304 13.0.00295 - F Alt. 2 CR for Correction to E-UTRAN Inter-frequency Redistribution procedure Rel-13 LTE_MC_load-Core
=> Replace ':' with ';'
=> Agreed in R2-161951 CR rev 1

R2-161396 Correction on MCLD trigger ZTE Corporation CR 36.304 13.0.00296 - F Rel-13 LTE_MC_load-Core
=> Not treated based on discussion of previous papers.

R2-161397 Introduction of T360 in RRC ZTE Corporation CR 36.300 13.2.00832 - F Rel-13 LTE_MC_load-Core
NOTE: it is actually a CR to 36.331 with 36.300 CR number so it should be revised
- Intel point out that it is already covered in the ASN.1 review CR.
=> Check the ASN.1 review CR and make any updates to tha CR if necessary.
=> Not pursued.

R2-161448 The introduction of UE capability concerning extended E-UTRA frequency priorities Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.306 13.0.00334 - B Rel-13 LTE_MC_load_Core
NOTE: CR cat.B is not allowed for closed WI
=> Change " reflected " to "indicated"
=> Agreed in R2-161952 CR rev 1 Cat F

R2-161446 The introduction of UE capability concerning extended E-UTRA frequency priorities Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02048 - B Rel-13 LTE_MC_load_Core
NOTE: CR cat.B is not allowed for closed WI
=> Change " reflected " to "indicated"
=> Agreed in R2-161953 CR rev 1 Cat F

Withdrawn:

R2-161354 The introduction of UE capability concerning extended E-UTRA frequency priorities Nokia Networks CR 36.331 13.0.02035 - B Rel-13 LTE_MC_load-Core

R2-161355 The introduction of UE capability concerning extended E-UTRA frequency priorities Nokia Networks CR 36.306 13.0.00332 - B Rel-13 LTE_MC_load-Core

7.8 WI: Dual Connectivity Enhancements

(LTE_dualC_enh-Core, leading WG: RAN2, started: Mar. 15, closed: Dec. 15, WID: RP-151739)

Closed WI

R2-161095 The correction on the description of 5.5.4.1 CATT draftCR 36.331 13.0.0 F Rel-13 LTE_dualC_enh-Core
NOTE: Tdoc type should be "CR", not "draftCR"

Samsung Exhibit 1025, Page 1437 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Remove changes to the Notes
=> Revised in R2-161861 CR 2105 rev '-'
=> Agreed in R2-161988

R2-161204 Clarification on Polling for last data NTT DOCOMO INC. CR 36.322 13.0.00116 - F Rel-13 LTE_dualC_enh-Core
- Samsung agrees with the intent but think this was common understanding from R8, not new for DC.
- Qualcomm agree with Samsung.
- Huawei think the PDCP PDU may never be transmitted through tis RLC entity. Ericsson suggest this can be solved by add' by this RLC entity.
- DOCOMO also think this is required for NB-IOT.

=> Offline to find a better formulation. Coversheet should also be clear that this has been he assumption even before DC.
=> Revision in R2-161862 CR rev 1

R2-161862 Clarification on Polling for last data NTT DOCOMO INC. CR 36.322 13.0.00116 1 F Rel-13 LTE_dualC_enh-Core R2-161204
=> Agreed

R2-161350 Using SCG-configuraiton at fullConfig ZTE Corporation CR 36.331 13.0.02034 - C Rel-13 LTE_dualC_ext-Core
- Samsung thinks thiswas discussed previously and we agreed not to do this. ZTE think that the fullConfig should be supported by R13 UEs. Nokia asks the use case. ZTE think it could be for a R14 UE that support some extension not understood by the target eNB.

=> Not pursued

Withdrawn:
R2-161349 Using SCG-configuraiton at fullConfig ZTE Corporation CR 36.321 13.0.00832 - C Rel-13 LTE_dualC_ext-Core

7.9 WI: RAN enhancements for extended DRX in LTE

(LTE_extDRX-Core; leading WG: RAN2; started: Mar. 15; target: Mar. 16; WID: RP-150493)

WI complete from RAN2 perspective

R2-161028 Reply LS on direct indication of system information update and other fields RAN1
- Qualcomm think his means defining a new transport channel.
- Intel ask if this can only be sent when there is no paging message to be sent.
- MediaTek thinks it is not clear if this is a change in one place or several places but should be straight forward.
- Ericsson suggest that we define the meaning of the 8 bits in 36.331.
- Nokia thinks the procedure can refer to 'bit X of the DCI field'.
- MediaTek think this only used with P-RNTI and hence it makes 36.331 the best choice.
- Intel think that if a paging message is sent then all the information that would have been included in the DCI format has to be included in the RRC message.
- Ericsson think this only applies for MTC UE that is using eDRX.

=> We will specify the meaning of the 8 bit “Direct Indication Information” field carried in DCI format 6-2 field. We will at least specify a bit for cases where we have already agreed to have a DCI indication.
=> Discuss offline where and how to capture this.
=> Discuss if this DCI can be used for UEs that support eDRX but not MTCe.
=> CR and tdoc number to be requested when spec is concluded

R2-161970 Direct Indication Information Ericsson discussion
related with RAN LS R2-161028
=> To be includedin the RRC CR for MTC

Samsung Exhibit 1025, Page 1438 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

7.9.1 eDRX for idle mode

R2-161294 Paging occasion monitoring when eDRX is configured Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.300 13.2.00830 - F Rel-13 LTE_extDRX-Core
=> Agreed

R2-161172 Corrections on eDRX FUJITSU LIMITED CR 36.331 13.0.02011 - F Rel-13 LTE_extDRX-Core
- Qualcomm would like one CR that captures all the changes from ASN.1 review. The changes could be merged into R2-161533.
- Intel ask if the need to acquire SIB14 before connection establishment is just for DRX longer than modification period. Qualcomm agree and think this is captured in the Qualcomm CR.

=> Changes can be merged into revision of R2-161533

R2-161173 Correction on PO monitoring during paing window in eDRX FUJITSU LIMITED CR 36.304 13.0.00289 - F Rel-13 LTE_extDRX-Core
- Intel think that 'all' POs may be misleading but the UE does need to check one PO per legacy DRX cycle. Qualcomm agree the 'all' is not needed as the UE follows legacy, but 'all' is in the agreement text from the previous meeting, and OK with the change.
- Nokia think he same text as proposed in stage 2 can be added. I.e. that the paging message must include the UEs NAS identity.
- Ericsson think we discussed last time that the UE is allowed to miss the first PO but it aims to monitor all of them.
- Samsung think that 'all' is misleading. The existing text is clear that the UE has to monitor the relevant POs.

=> The 'all' is not needed
=> Second change needs rewording. Something like 'until a paging message is received in the window for the UEs NAS identity'. Can refine the wording offline.
=> Revised in R2-161896 CR rev 1

R2-161896 Correction on PO monitoring during paing window in eDRX FUJITSU LIMITED CR 36.304 13.0.00289 1 F Rel-13 LTE_extDRX-Core R2-161173
=> Agreed

R2-161296 PTW terminology alignment Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.304 13.0.00293 - F Rel-13 LTE_extDRX-Core
=> Two other references to PW need to be corrected
=> Agreed in R2-161897 CR rev 1

R2-161533 Miscelanous corrections to TS 36.331 related to eDRX QUALCOMM CDMA Technologies draftCR 36.331 13.0.0 F Rel-13 LTE_extDRX-Core
NOTE: Tdoc type should be "CR", not "draftCR"
- Intel wonders whether we need to add the terminology " system information acquisition boundaries " but it is needs to be added then it should be used in all cases. Qualcomm think we do have new boundary compared to legacy behaviour.
- Intel think that " system information acquisition boundaries " is not very explicit that it refers to eDRX.
- Nokia this that we could just define that modification period for eDRX UEs is according to the new definition. Qualcomm think the legacy modification period should not be reused a for DRX we are referring to when the UE acquires and not when it changes.
- MediaTek agree that some terminology is nice and suggest thing like "eDRX system information acquisition boundary". Also think the condition would need to be changed.
- Samsung suggest we could say "UE considers the system information modification boundary" then it doesn't impact the system.
- Intel ask if the mechanism needs to be restricted to idle. In R13 if connected DRX is extended then this mechanism could be applicable.
- Ericsson think the eDRX-Allowed can not be set to false.
- Ericsson whether the 'UE using eDRX cycle...' is appropriate. The CN and the UE need to be on the same page. Qualcomm explain the intent is to cover the case that the eNB doesn't support eDRX and hence the UE falls back to legacy DRX.

Samsung Exhibit 1025, Page 1439 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Terminology and other aspects can be discussed offline.
=> eDRX-Allowed text to be fixed.
=> Changes already captured in the ASN.1 review CR should be removed.
=> Revision in R2-161898 CR 2097 rev'-'

R2-161898 Miscelanous corrections to TS 36.331 related to eDRX QUALCOMM CDMA Technologies CR 36.331 13.0.02097 - F Rel-13 LTE_extDRX-Core R2-161533

R2-162001 Miscelanous corrections to TS 36.331 related to eDRX QUALCOMM CDMA Technologies CR 36.331 13.0.02097 1 F Rel-13 LTE_extDRX-Core R2-161533
=> " at most equal " to "smaller than or equal to"
=> Revised in R2-162015 CR rev 2

R2-162015 Miscelanous corrections to TS 36.331 related to eDRX QUALCOMM CDMA Technologies CR 36.331 13.0.02097 2 F Rel-13 LTE_extDRX-Core R2-161533
=> Agreed

R2-161651 Clarification for application of systemInfoModification LG Electronics Inc. CR 36.331 13.0.02077 - F Rel-13 LTE_extDRX-Core
- Intel agree think the text may not be fully accurate. It should only be for the case that UE is using eDRX cycle above the modification period.

=> Change to be captured in the R2-161898. Text to be finalised offline.

R2-161681 Text Proposal on System Information Update for eDRX LG Electronics Inc. discussion
- Intel agree with the intent but think the text needs to rewording. The phrase " related with UE reachability " may not be the best way to describe this.
- Nokia think this is best left to eNB implementation. MediaTek agree this doesn't need to be captured.
- LG suggest to capture in stage 2.
- Samsung think the eNB behaviour is not needed in stage 2. Ericsson think there is no need to capture. Huawei also agree.
- Qualcomm think that the UE behaviour is clear. The eNB can decide what to do and the implication are that the UE may not be reachable if the eNB does not consider the UE behaviour.

=> Noted

7.9.2 eDRX for connected mode

No contributions received.

7.10 SI: Study on Latency reduction techniques for LTE

(FS_LTE_LATRED; leading WG: RAN2; started: Mar. 15; target: June 16; WID: RP-150465)

WI complete from RAN2 perspective

No contributions received.

R2-161063 LS on TR update for latency reduction (R1-161421; contact: Ericsson) RAN1 LS in to: RAN2 Rel-14 FS_LTE_LATRED late
=> Noted

R2-161869 TR 36.881 v0.5.1 for Study on Latency reduction techniques for LTE Ericsson draft TR 36.881 0.5.1 related with RAN1 LS R2-161063 Rel-14 FS_LTE_LATRED
=> Revision history to be added
=> Revised in R2-161963 v0.5.2
=> Agreed in R2-161964 v0.6.0

7.11 SI: Feasibility Study on LTE-based V2X Services

(FS_LTE_V2X; leading WG: RAN1; started: June. 15; target: June 16; WID: RP-151109)

Time budget: 1.0 TU

Including output of email discussion [92#45][LTE/V2X] Capacity Analysis - LG

Samsung Exhibit 1025, Page 1440 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Documents in this agenda item handled in the LTE Break Out session. (See Annex H)

Incoming LSs:

R2-161012 LS on clarification of RSU types (R1-157821; contact: CATT) RAN1 LS in to: RAN2 Rel-14 FS_LTE_V2X

R2-161023 Reply LS R2-155003 on V2X message characteristics (S1-154509; contact: Qualcomm) SA1 LS in to: RAN2 Rel-14 FS_LTE_V2X

Above 2 LSs moved froom 3.2 to 7.12

output of email discussion [92#45][LTE/V2X] Capacity Analysis - LG

R2-161116 Summary of email discussion [92#37][LTE/V2X] Latency analysis LG Electronics France discussion result of email discussion [92#37][LTE/V2X] Rel-14 FS_LTE_V2X

R2-161099 Discussion on V2I/V2N/V2P transport based on PC5 Huawei, HiSilicon discussion

R2-161100 Operating Scenarios for the Uu-based V2I Huawei, HiSilicon discussion

R2-161101 QoS Support for V2X transmission Huawei, HiSilicon discussion

R2-161102 Draft LS on V2X QoS support Huawei, HiSilicon LS out

R2-161103 Further Considerations and Text Proposals for Scenario 1 Huawei, HiSilicon discussion

R2-161104 Capacity analysis for Uu transport of V2V service Huawei, HiSilicon discussion

R2-161105 Uu-based V2V Transport Based on Location Information Huawei, HiSilicon discussion

R2-161106 Further consideration and TP for V2V Scenario 2 and Scenario 3 Huawei, HiSilicon discussion

R2-161108 Capacity analysis for UL Uu based V2V Sequans Communications discussion

R2-161124 Discussion on UE type RSU Guangdong OPPO Mobile Telecom. discussion

R2-161125 Discussion on Uu-based V2X Guangdong OPPO Mobile Telecom. discussion

R2-161159 Capacity analysis for Uu transport of V2V service ZTE Corporation discussion

R2-161163 Considerations on eNB type RSU and UE type RSU ZTE Corporation discussion

R2-161174 Capacity analysis for the case of high density FUJITSU LIMITED discussion

R2-161185 [draft] Reply LS on RSU Scenarios CATT LS out

R2-161186 Latency Evaluation and Enhancements CATT discussion

R2-161187 Considerations on Mobility Enhancements CATT discussion

R2-161188 Consideration on V2X Congestion CATT discussion

R2-161189 Uu/PC5 V2V Link Selection CATT discussion

R2-161190 Discussion on V2X Architecture CATT discussion

R2-161240 Considerations and enhancements for V2X Intel Corporation discussion

R2-161243 Uu for V2V and V2P Qualcomm Incorporated discussion

R2-161293 Discussion on UE Reporting Issues for V2X Shenzhen Coolpad Technologies discussion

R2-161320 Discussion on the need of PC5 link measurement for V2X ITRI discussion

R2-161335 Discussion on resource allocation for PC5 based V2V KT Corporation discussion

R2-161402 Discussion on Multi-PLMN for V2X GM - OnStar Europe discussion
late

R2-161430 Discussion on the eMBMS based V2X broadcast ZTE Corporation discussion

R2-161431 Some considerations on multi-carrier and multi-operator support for V2V scenarios ZTE Corporation discussion

R2-161436 Discussion on Latency for Uu-based V2V transport Huawei, HiSilicon discussion

R2-161468 V2X Scenario 2 capacity analysis Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
late

R2-161565 Discussion on Uu Enhancements for V2X Ericsson discussion

R2-161566 Sidelink Resource Allocation in V2X Ericsson discussion

R2-161567 Traffic Management in V2X Ericsson discussion

R2-161568 V2X Scenarios Ericsson discussion

R2-161569 DRAFT LS on V2X Subscriber Classification Ericsson LS out

R2-161570 On the Role of the RSU Ericsson discussion

R2-161571 Overview of V2X Enhancements for Further RAN2 Work Ericsson discussion

R2-161572 Layer- 2 Protocol Stack for PC5-based V2X Ericsson discussion

R2-161636 Resource allocation mechanism for PC5 interface of V2X Potevio Company Limited discussion

R2-161648 Some consideration of RSU Potevio Company Limited response

R2-161656 UL and DL resource utilization for Uu-based V2V service Intel Corporation discussion

Samsung Exhibit 1025, Page 1441 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161658 Summary of email discussion on [92#45][LTE/V2X] Capacity Analysis LG Electronics discussion
late
R2-161659 Challenges and potential enhancements for Uu based V2V LG Electronics discussion
R2-161670 Further discussion on V2X scenarios LG Electronics discussion
R2-161677 Proposed LS on Uu based V2X LG Electronics LS out
R2-161678 Proposed TP update for V2X LG Electronics discussion
late

Withdrawn:

R2-161635 Some consideration of RSU Potevio Company Limited discussion

7.12 WI: Elevation Beamforming/Full-Dimension (FD) MIMO for LTE

(LTE_EBF_FDMIMO-Core; leading WG: RAN1; started: June. 15; closed: Dec. 15; WID: RP-151085)

Closed WI

Incoming LS:

R2-161007 LS on Support of EBF/FD-MIMO Features for TM9 (R1-157829; contact: Samsung) RAN1 LS in
to: RAN2 Rel-13 LTE_EBF_FDMIMO-Core
moved from 3.2 to 7.12
=> Noted

R2-161054 LS on EB/FD-MIMO Terminologies (R1-161220; contact: Nokia Networks) RAN1 LS in
to: RAN2 Rel-13 LTE_EBF_FDMIMO-Core
late
=> Noted

R2-161219 Remaining issues on EBF/FD-MIMO parameters Samsung Telecommunications discussion

Agreements:

- Remove value na for codebookOverSamplingRateConfig-O1/2 and make the codebook oversampling rate field for O2 optional, need OR. Use nX rather than anX for the values of codebook configurations.
- Introduce additional interference measurement flags to support independent configurability per subframe set (for TM10, non-precoded) and for up to 8 CSI IM configurations (for beamformed, TM9 and TM10)
- Introduce support for 12 and 16 antenna ports with TM9 by extending the CSI-RS-Config-v13x0 with the option to additionally signal up to 2 NZP resource configurations as well as the CDM type.

=> Remaining aspect to be discussed offline together with contribution R2-161868

R2-161220 EBF/FD-MIMO changes related to remaining issues Samsung Telecommunications CR 36.331 13.0.0 2020 - F Rel-13 LTE_EBF_FDMIMO-Core
=> Will capture outcome of agreements made and offline discussion
=> Revised in R2-161870 CRrev 1

R2-161870 EBF/FD-MIMO changes related to remaining issues Samsung Telecommunications CR 36.331 13.0.0 2020 1 F Rel-13 LTE_EBF_FDMIMO-Core R2-161220

✉ **[93#15][LTE/MIMO] 36.331 corrections (Samsung)**
Email to check CR and update to reflect RAN1 agreements from this meeting (any LS received can be taken into account)
Intended outcome: Agreed CR to RAN
Deadline: Thursday 25/02/2016

R2-161595 Support of FD-MIMO in 36.331 Ericsson discussion
Revised in R2-161868

Samsung Exhibit 1025, Page 1442 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161868 Support of FD-MIMO in 36.331 Ericsson discussion
=> For CSI-RS-Info no change to the ASN.1 but the field description is clarified to explain that it refers to a different parameter name in RAN1 specs.
=> Remaining aspect to be discussed offline together with contribution R2-161219

R2-161596 Correction to FD-MIMO Ericsson draftCR 36.331 13.0.0 Rel-13 LTE_EBF_FDMIMO-Core
NOTE: Tdoc type should be "CR", not "draftCR"
Not treated

R2-161594 Interference measurement restriction for FD-MIMO Ericsson discussion
Moved from 7.15.1 to 7.12

Not treated

7.13 WI: Further Enhancements of Minimization of Drive Tests for E-UTRAN

(LTE_eMDT2-Core; leading WG: RAN2; started: Sep. 15; closed: Dec 15; WID: RP-151611)

Closed WI

R2-161196 Correction to RLF report HTC Corporation CR 37.320 13.0.00068 - F Rel-13 LTE_eMDT2-Core
- Intel understand that this was not part of the WI.
- Nokia think in previous releases we treated RLF and HOF in the same way but for this release the decision was explicit for RLF.

=> Not pursued

R2-161195 Correction to RLF report HTC Corporation CR 36.331 13.0.02015 - F Rel-13 LTE_eMDT2-Core
=> Not treated based on discussion of previous paper

R2-161239 Discusion of remaining issues for eMDT Intel Corporation discussion
Proposal 3
- Qualcomm think the feature shuld be optional without capability.

=> Define Logged MDT measurement suspension due to IDC interference as a conditionally mandatory feature in TS 36.306.
=> QCI1 presence in RLF reporting is an optional feature for the UE without capability. 36.331 needs to be updated to reflect this. Can be merged into R2-161918

R2-161398 Introduction of Rel-13 MDT enhancements Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.306 13.0.00333 - B Rel-13 eMDT_UMTSLTE-Core
NOTE: CR cat.B is not allowed for closed WI
=> Add both agreements from R2-161239
=> Revised in R2-161958 CR rev 1 Cat F
=> Capabilities also to be added to 36.331 in R2-161918

R2-161958 Introduction of Rel-13 MDT enhancements Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.306 13.0.00333 1 F Rel-13 eMDT_UMTSLTE-Core R2-161398
=> Agreed

R2-161516 Reporting of UL PDCP delay measurements Kyocera discussion
=> Noted

R2-161517 Reporting of UL PDCP delay measurements for FeMDT Kyocera CR 37.320 13.0.0 0069 - F Rel-13 LTE_eMDT2-Core
=> Agreed

R2-161518 Reporting of UL PDCP delay measurements for FeMDT Kyocera CR 36.314 13.0.0 0036 - F Rel-13 LTE_eMDT2-Core
=> Agreed

Samsung Exhibit 1025, Page 1443 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161534 Logging suspension due to IDC Kyocera discussion
=> Noted
R2-161535 Clarification of logging suspension due to IDC Kyocera CR 36.331 13.0.02060 - F Rel-13 LTE_eMDT2-Core
=> Change to be merged into the ASN.1 review CR.

R2-161855 Draft LS on Rel-13 MDT enhancements Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell LS out Rel-13 eMDT_UMTSLTE-Core
late
✓ => Approved in R2-161959

7.14 WI: Indoor Positioning Enhancements for UTRA and LTE

(UTRA_LTE_iPos_enh-Core; leading WG: RAN2; started: Sep. 15; closed: Dec 15; WID: RP-152251)

Closed WI

R2-161674 WLAN AP Identifier correction NextNav CR 36.355 13.0.00141 - F Rel-13 UTRA_LTE_iPos_enh-core
=> Agreed

R2-161329 LPP clean-up Qualcomm Incorporated draftCR 36.355 13.0.0 Rel-13 TEI13
late
NOTE: Tdoc type should be "CR", not "draftCR"
Moved from 7.18 to 7.14

Revised to R2-161867
R2-161867 LPP clean-up Qualcomm Incorporated CR 0142 36.355 13.0.0 Rel-13 TEI13 late
=> Remove field descxription box for Sensor-TargetDeviceErrorCauses-r13
=> Work item code to be changed to indoor positioning code
=> Revised in R2-161960 CR rev 1
R2-161960 LPP clean-up Qualcomm Incorporated CR 36.355 13.0.00142 1 F Rel-13 UTRA_LTE_iPos_enh-core R2-161867
=> Agreed

R2-161672 r13 Information Element correction NextNav CR 36.355 13.0.00140 - F Rel-13 UTRA_LTE_iPos_enh-core
=> Remove the reference to TR 25.921
=> Agreed in R2-161961 CR rev 1
=> With the changes from this meeting the LPP ASN.1 is ready to be frozen.
late

R2-161238 Corrections to RAT-independent positioning methodsIntel Corporation CR 36.355 13.0.00139 - F Rel-13 UTRA_LTE_iPos_enh-Core
late
=> Remove the change related to rtt
=> Agreed changes to be merged into R2-161960

7.15 WI: LTE-WLAN RAN Level Integration supporting legacy WLAN

(*LTE_WLAN_radio_legacy-Core*; leading WG: RAN2; started: Sep. 15; target: Mar 15; WID: RP-151615)

Time budget: 1 TU

Focus this meeting should be on finalising the stage 3 CRs. Proposals in discussion papers should accompanied by text proposals to show how they would impact stage 3.

Samsung Exhibit 1025, Page 1444 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Incoming LSs:

R2-161024 Reply LS to RP-151623 = R2-154015 on New WI on LTE-WLAN RAN Level Integration supporting legacy WLAN (S2-154407; contact: Alcatel-Lucent) SA2 LS in to: RAN2 Rel-13 LTE_WLAN_radio_legacy-Core
=> Noted

R2-161025 Reply LS to R2-154915 on IPsec tunnelling mechanism for LTE-WiFi aggregation (S2-154408; contact: Alcatel-Lucent) SA2 LS in to: RAN2 Rel-13 LTE_WLAN_radio_legacy-Core
=> Noted

R2-161047 Reply LS to R2-157126 on LWIP Solution and DRB distinction (S3-160274; contact: Nokia Networks) SA3 LS in to: RAN2 Rel-13 LTE_WLAN_radio_legacy-Core
Above 3 LSs moved from 3.2 to 7.15
=> Noted

7.15.1 Stage 2

Including correction CRs to the 36.300 R2-157185

Conclude on working assumption regarding LTE DRB when traffic is routed via IPSec tunnel; bearer identification within IPSec tunnel based on input from SA3; address any other aspects raised by SA2/SA3.

LWIP-SeGW introduction

R2-161487 Stage-2 text for LWIP Tunnel Clarifications Alcatel-Lucent Deutschland AG CR 36.300 13.2.00839 - B Rel-13 LTE_WLAN_radio_legacy-Core
Revised to R2-161924

R2-161924 Stage-2 text for LWIP Tunnel Clarifications Alcatel-Lucent Deutschland AG CR 36.300 13.2.00839 1 B Rel-13 LTE_WLAN_radio_legacy-Core
- CATT think the SA3 LS required RAN groups to define an interface between eNb and SeGW. Nokia think it is up to RAN3 to discuss defining such an interface.
- Broadcom explain that this has been discussed by RAN3 and they will send LS to SA3 explaining that they do not intend to define such an interface based on previous precedents.
- MediaTek think there is no details about the UE behaviour for using the IPSec tunnel. This needs to be specified. Nokia think this is to be addressed in SA3.
- CATT suggests showing the full protocol stack for the WLAN path.

=> Reference to the SA3 spec that defines the use of IPSec to be added (here or stage)
=> To be changed to be based on the latest version of the spec.
=> LWIPEP entity in the eNB should be shown.
=> Protocol stack on the WLAN link to be added.
=> Revision in R2-161927 CR rev 2

R2-161927 Stage-2 text for LWIP Tunnel Clarifications Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry, AT&T, Sony CR 36.300 13.2.00839 2 B Rel-13 LTE_WLAN_radio_legacy-Core R2-161924
=> Dashed to to be changed to solid line for SeGW
=> Revised in R2-161991 CR rev2

R2-161991 Stage-2 text for LWIP Tunnel Clarifications Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry, AT&T, Sony CR 36.300 13.2.00839 3 B Rel-13 LTE_WLAN_radio_legacy-Core R2-161927
=> Agreed in R2-162013 CR rev 4

R2-161593 Stage two for LWIP Ericsson discussion
=> Stage 2 text will refer to bearer and add a general sentence to explain how this relates to EPS bearer and DRB.

Bearer identification

R2-161592 LWIP UL bearer ID Ericsson discussion
=> Noted

Samsung Exhibit 1025, Page 1445 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161484 Discussion on bearer Identification within IPsec Tunnel Alcatel-Lucent Deutschland AG discussion
- Discussed jointly with previous document
- Broadcom support using the GRE header based on feedback from SA2 and SA3. This has been analysed as part of the SaMOG work and no issues were found.
- Ericsson explain that until this meeting there was no detail about how GRE might be used.

Proposal 3/4
- Intel suggest putting the DRB directly in the key field instead of some signalled value. It could be clarified to pad the MSBs with zeros.

=> GRE will be used for bearer identification on UL only and only when UL is routed via WLAN.
=> Encapsulate UL data sent over IPsec tunnel in GRE and use GRE header fields to identify DRB associated with the data.

R2-161485 Stage-2 text updates for bearer Identification within IPsec Tunnel Alcatel-Lucent Deutschland AG CR 36.300 13.2.00838 - B Rel-13 LTE_WLAN_radio_legacy-Core
- Withdrawn as content included in R2-161924

R2-161925 Introducing a Specification for Encapsulating Header for UL DRB Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom Discussion
- Huawei ask if the IP header is part of the LWIPEP PDU. Nokia explain that this is following the defintion of GRE. Intel understand that the IP header is not part of this protocol.
- Broadcom think this reflects the use of GRE over IP
- Ericsson think we can remove the IP header as it is not part of this protocol.
- MediaTek think that the DL also needs to be covered in this spec.
- Huawei explain that the IETF spec defines the encapsulated packet as including the IP header.
- CATT think this GRE tunnel is creating an IP tunnel between UE and eNB and this is against SA3 recommendation. Nokia explain that SA3 have clearly indicated to us that use of GRE is acceptable. CATT think SA3 were referring to GRE being used between UE and Se-GW. NEC understand the SA3 text as saying that data must be offloaded through the Se-GW and not directly.

=> Introduce a new spec to define the use of GRE for LWIP
=> The bearer id will be placed in he 5 LSBs of the key field
=> Progress the specification offline
=> Revision in R2-161926

R2-161926 Introducing a Specification for Encapsulating Header for UL DRB Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom discussion R2-161925
Revised in R2-161974

R2-161974 Introducing a Specification for Encapsulating Header for UL DRB Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom discussion R2-161925
=> Agreed and will be submitted to RAN

UE-AMBR enforcement

R2-161374 Discussion on UE-AMBR enforcement in uplink Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
Not treated

R2-161412 UE-AMBR enforcement when UL is over WLAN BlackBerry UK Limited discussion
- Papers above not presented by conclusion made in offline discussion.

=> UE-AMBR enforcement can be left to eNB implementation.

Moved from 7.6.3.1 to 7.15.1

Other stage 2

R2-161433 Discussion on feedback and conclusion on Working Assumption regarding LTE DRB when traffic is routed via IPsec tunnel Alcatel-Lucent Deutschland AG discussion
- TCL ask if it is normal behaviour to switch between the links. Nokia explain that it is eNB implementation but the eNB should not do anything that would cause out of order problems

=> Working assumption taken at RAN2#92 is confirmed as an agreement

Samsung Exhibit 1025, Page 1446 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Moved from 7.5.3 to 7.15.1

R2-161435 Stage-2 text updates based on conclusion on Working Assumption regarding LTE DRB Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry CR 36.300 13.2.00834 - C Rel-13 LTE_WLAN_radio_legacy-Core
NOTE: wrong CR number used in CR coversheet
Not treated

R2-161602 User preferred WLAN in LTE-WLAN Radio Level Integration TCL Communication Ltd. Discussion
=> revised in R2-161901

R2-161901 User preferred WLAN in LTE-WLAN Radio Level Integration TCL Communication Ltd. discussion
Not treated

7.15.2 Stage 3

Including output of email discussion [92#43][LTE/WLAN legacy AP] RRC CR (ALU)

R2-161492 Stage-3 text endorsed Running CR for LWIP Alcatel-Lucent Deutschland AG CR 36.331 13.0.02053 - B Rel-13 LTE_WLAN_radio_legacy-Core
NOTE: wrong Tdoc number & CR number used in CR coversheet
Not treated

R2-161493 Stage-3 text updates for bearer Identification within IPsec Tunnel and IPsec establishment parametersAlcatel-Lucent Deutschland AG CR 36.331 13.0.02054 - B Rel-13 LTE_WLAN_radio_legacy-Core
NOTE: wrong CR number used in CR coversheet
=> Revised to R2-161923

R2-161923 Stage-3 text updates for bearer Identification within IPsec Tunnel and IPsec establishment parametersAlcatel-Lucent Deutschland AG CR 36.331 13.0.02054 1 B Rel-13 LTE_WLAN_radio_legacy-Core
NOTE: wrong CR number used in CR coversheet
=> References to GRE to be removed
=> Field description of the IP address should refer to Se GW.
=> Coversheet errors to be fixed.
=> Will follow the outcome of the LWA discussion regarding the location of the LWIP bearer configuration (in the existing DRB configuration or in he LWA configuration).
=> WLAN status reporting as introduced in the LWA CR is applicable for LWIP. TO be added to he LWA running CR.
=> Revision in R2-161928 CR rev 2

R2-161928 Stage-3 text updates for bearer Identification within IPsec Tunnel and IPsec establishment parametersNokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom CR 36.331 13.0.02054 2 B Rel-13 LTE_WLAN_radio_legacy-Core R2-161923
=> Revised in R2-161982

R2-161982 Stage-3 text updates for bearer Identification within IPsec Tunnel and IPsec establishment parametersNokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom CR 36.331 13.0.02054 3 B Rel-13 LTE_WLAN_radio_legacy-Core
=> Revised in R2-161992

R2-161992 Stage-3 text updates for bearer Identification within IPsec Tunnel and IPsec establishment parametersNokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom CR 36.331 13.0.02054 4 B Rel-13 LTE_WLAN_radio_legacy-Core R2-161982

✉ **[93#16][LTE/LWIP] 36.331 CR (Nokia)**
Intended outcome: Agreed CR for RAN
Deadline: Thursday 25/02/2016

R2-161494 36.306 UE Capabilities for LWIP Alcatel-Lucent Deutschland AG CR 36.306 13.0.00335 - B Rel-13 LTE_WLAN_radio_legacy-Core
NOTE: CR number missed in CR coversheet
=> 4.3.24 is not needed
=> 4.3.24 => 4.3.XX
=> Coversheet to be corrected
=> Revision R2-161929 CR rev 1

Samsung Exhibit 1025, Page 1447 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161929 36.306 UE Capabilities for LWIP Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry CR 36.306 13.0.00335 1 B Rel-13 LTE_WLAN_radio_legacy-Core R2-161494
=> To be updated to relfect the capability names in agreed 331 CR.
=> Agreed in R2-162016 Cr rev 2

R2-161495 36.331 UE Capabilities for LWIP Alcatel-Lucent Deutschland AG CR 36.331 13.0.02055 - B Rel-13 LTE_WLAN_radio_legacy-Core
NOTE: CR number missed in CR coversheet
=> Remove the WLAN-Common-Parameters-r13 parts
=> Coverhseet to be corrected
=> Revision R2-161930CR rev 1

R2-161930 36.331 UE Capabilities for LWIP Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry CR 36.331 13.0.02055 1 B Rel-13 LTE_WLAN_radio_legacy-Core R2-161495
=> wlan-LWIP-support changed to LWIP
=> WLAN-LWIP-Parameters-r13 changed to LWIP-Parameters-r13
=> true changed to supported
=> Revised in R2-161993 CR rev 2

R2-161993 Introduction of LWIP UE capabilities Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry CR 36.331 13.0.02055 2 B Rel-13 LTE_WLAN_radio_legacy-Core R2-161930
=> Revised in R2-162007

R2-162007 Introduction of LWIP UE capabilities Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry CR 36.331 13.0.02055 3 B Rel-13 LTE_WLAN_radio_legacy-Core R2-161930
=> Agreed

R2-161761 Mobility set handling for LWIP Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry discussion
=> Rename lwa-AssociationTimer-r13 to wlan-AssociationTimer-r13. To be captured in the LWA CR.
=> Procedures related to wlan mobility set should be in a separate section as now applicable to LWA, LWIP and RCLWI. To be captured in the LWA CR.

Withdrawn:

R2-161496 Mobility set handling for LWIP Alcatel-Lucent Deutschland AG CR 36.331 13.0.02056 - B Rel-13 LTE_WLAN_radio_legacy-Core
NOTE: wrong Tdoc type used for discussion paper; it was replaced with R2-161761

7.16 WI: Narrowband IOT

(NB_IOT-Core; leading WG: RAN1; started: Sep. 15; target: Mar. 16; WID: RP-152284)

Time budget: N/A

The documents in this AI treated in the NB-IoT session. (See Annex I)

7.16.1 General

Organization, Requirements, Overall CP/UP aspects

Incoming LSs:

R2-161014 LS on questions on NB-IoT (R3-160135; contact: Vodafone) RAN3 LS in cc: RAN2 Rel-13 NB_IOT-Core

R2-161015 LS on Release of Control Plane for DONAS (R3-160140, contact: Alcatel-Lucent) RAN3 LS in cc: RAN2 Rel-13 NB_IOT-Core

R2-161016 LS on Multiple uplink NAS PDUs in CIoT optimization (R3-160142; contact: Huawei) RAN3 LS incc: RAN2Rel-13 NB_IOT-Core

R2-161017 LS on CIOT optimization (R3-160147; contact: Samsung) RAN3 LS in to: RAN2 Rel-13 NB_IOT-Core

Samsung Exhibit 1025, Page 1448 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161041 Reply LS to R3-160142 = R2-161016 on Multiple uplink NAS PDUs in CIoT optimization (S2-160828; contact: Qualcomm) SA2 LS in
cc: RAN2 Rel-13 NB_IOT-Core
R2-161042 Reply to R2-156971 LS on NB-IoT work progress in RAN2 (S2-160905; contact: Vodafone) SA2 LS in to: RAN2 Rel-13 NB_IOT-Core
Above 6 LSs moved from 3.2 to 7.16.1
R2-161045 LS on RRC parameters for NB-IoT (R1-160230; contact: Huawei) RAN1 LS in
to: RAN2 Rel-13 NB_IOT-Core
R2-161048 LS on Clarifications on RRC Resume Request (S3-160337; contact: Nokia Networks)SA3 LS into: RAN2 Rel-13 NB_IOT-Core
R2-161050 Response LS to C1-160784 on questions on CIoT (S2-160906; contact: Vodafone) SA2 LS in
to: RAN2 Rel-13 NB_IOT-Core
Above 6 9 LSs moved from 3.2 to 7.16.1
Results of email discussion:
R2-161745 Email discussion report on Message 3 size for NB-IoT Ericsson (Rapporteur) report result of email discussion [NBAH#03] Rel-13 NB_IOT-Core
late
R2-161746 Further considerations on Message 3 size Ericsson discussion related to email discussion [NBAH#03] Rel-13 NB_IOT-Core
Withdrawn
R2-161757 E-Mail discussion and companies view on NB-IOT Positioning Vodafone GmbH report

R2-161148 Consideration on Positioning in NB IoT CATT discussion
R2-161255 On Positioning support for NB-IoT in Rel-13 Intel Corporation discussion
R2-161261 Multiple NB-IoT carrier operations Intel Corporation discussion
R2-161313 Positioning support in NB-IoT Ericsson discussion
R2-161315 Specification impact 36.306 for NB-IoT Ericsson discussion
late
R2-161324 Introduction of NB-IoT UE capabilities Ericsson CR 36.306 13.0.00331 - B Rel-13 NB_IOT-Core
late
R2-161361 UE capabilities reporting Neul, Huawei, HiSilicon, discussion
R2-161375 36.302 Running CR Huawei draftCR 36.302 B Rel-13 NB_IOT-Core
R2-161376 Impacts Overview of RAN2 Agreements on Specifications Huawei, HiSilicon, Neul, China Telecom discussion
R2-161377 Discussion on Positioning in Release 13 Huawei, HiSilicon, Neul, China Telecom discussion
R2-161394 Multiple NB-IoT carriers operation ZTE Corporation discussion
R2-161460 L1 multi-carrier operation MediaTek Inc. discussion
R2-161604 Introduction of NB-IoT Huawei (Rapporteur) CR 36.300 13.2.00844 - B Rel-13 NB_IOT-Core
late
R2-161650 RAN2 aspects of multiple NB-IoT carrier operation NTT DOCOMO, INC. discussion
R2-161742 Security aspects of NB-IoT Ericsson discussion
Withdrawn:
R2-161316 Introduction of NB-IoT UE capabilities Ericsson draftCR 36.306 13.0.0 Rel-13 NB_IOT-Core
R2-161415 E-Mail discussion and companies view on NB-IOT Positioning Vodafone GmbH report Rel-13 NB_IOT-Core

7.16.2 Control Plane

7.16.2.1 Radio Resource Control - RRC

output of email discussions:
R2-161359 36.331 Running CR to capture agreements on NB-IoT Huawei draftCR 36.331 13.0.0 B result of email discussion [NBAH#02][NBIOT/36.331] Rel-13 NB_IOT-Core
=> revised to R2-161760
R2-161760 36.331 Running CR to capture agreements on NB-IoT Huawei draftCR 36.331 13.0.0 B result of email discussion [NBAH#02][NBIOT/36.331] Rel-13 NB_IOT-Core

Samsung Exhibit 1025, Page 1449 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161166 Summary of email discussion: [NBAH#04][NBIOT/Resume] RRC Functions for suspend - resume Huawei report result of email discussion [NBAH#04] Rel-13 NB_IOT-Core
late

R2-161138 NB-IOT Measurements for reselection and redirection Sony discussion
R2-161139 Implicit Connection Release for NB-IOT Sony discussion
R2-161149 Resume IDCATT discussion
R2-161175 RRC Suspend Procedure FUJITSU LIMITED discussion
R2-161184 Consideration on resume failure of UP solution ASUSTEK COMPUTER (SHANGHAI) discussion
R2-161234 Re-use of RRC connection re-establishment procedure for RRC Resume signalling BlackBerry UK Limited discussion
Withdrawn
R2-161256 RAN impacts to enable CIoT solutions Intel Corporation discussion
R2-161259 The need of recovery procedure for RLF Intel Corporation discussion
R2-161267 Bearer resumption issues for CIoT UP solution Intel Corporation discussion
R2-161269 Considerations on message 3 for NB-IoT Intel Corporation discussion
R2-161306 Access control for NB-IoT Ericsson discussion
R2-161309 Measurement reporting in NB-IoT Ericsson, NTT DOCOMO INC, China Mobile Com. Corporation discussion
R2-161314 Release Assistance Indicator Ericsson discussion
R2-161319 Discussion on exception handling for RRC connection resumption in data transfer via DRB mode ITRI discussion
R2-161323 Measurement reporting in NB-IoT Ericsson CR 36.331 13.0.0 2028 - B Rel-13 NB_IOT-Core
late
R2-161337 The details of UE contexts keeping China Unicom discussion
R2-161360 36.331 running CR implementation Neul, Huawei, HiSilicon, discussion
R2-161362 RRC procedures - stage 3 aspects Neul, Huawei, HiSilicon, discussion
R2-161363 Data transfer procedures for rge C-Plane solution Neul, Huawei, HiSilicon, discussion
R2-161378 Discussion on Msg3 Size Huawei, HiSilicon, Neul discussion
R2-161379 Access Control Enabled Indication Huawei, HiSilicon, Neul discussion
R2-161380 Radio Link Failure Huawei, HiSilicon, Neul discussion
R2-161390 Consideration for CPUP indicator in NB-IoT ZTE Corporation discussion
R2-161392 Consideration for Msg3 in NBIOT ZTE Corporation discussion
R2-161393 Further discussion on UP solution ZTE Corporation discussion
R2-161411 Specifying solution 2 in the AS specification Samsung Electronics discussion
R2-161449 RRC Connection Release for CP solution Sequans Communications discussion
R2-161458 Early RRC Connection Release for UP solution Sequans Communications discussion
R2-161459 Autonomous RRC Connection Release Sequans Communications discussion
R2-161522 NB-IoT – Further details on RRC suspend and resume Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
R2-161527 Discussion on RRC open issues Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
R2-161530 Establishment Cause for NB-IoT UE NTT DOCOMO INC., KDDI Corporation discussion
R2-161531 The necessity of NB-IoT UE Measurement Reporting NTT DOCOMO INC. discussion
late
R2-161607 Further discussion on NB-IoT resume failure HTC Corporation discussion
R2-161619 Re-use of RRC connection re-establishment procedure for RRC Resume signalling BlackBerry UK Limited discussion
R2-161627 Resumption procedure for data and signalling LG Electronics Inc. discussion
R2-161628 The detailed procedure of solution 18 LG Electronics France discussion
R2-161653 RRC Connection Resume at different eNB NTT DOCOMO, INC. discussion

R2-161664 Remaining issues related to CT1/SA2 questions NEC discussion
related to LS from SA2 in S2-160906 Rel-13 NB_IOT-Core
R2-161665 Differentiation of Solution 2 and 18 in RRC Connection Establishment NEC discussion
related to LS from SA2 in R2-161042 Rel-13 NB_IOT-Core

R2-161671 Data volume indicator for NB-IOT LG Electronics Inc. discussion
R2-161698 Leaving RRC_CONNECTED LG Electronics Inc. discussion

Samsung Exhibit 1025, Page 1450 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161731 Remaining issues of U-plane based solution with AS information stored in RAN NTT DOCOMO, INC. discussion
R2-161732 RRC protocol extension for NB-IoT UEs supporting U-plane based solution with AS information stored in RAN NTT DOCOMO, INC. CR 36.331 13.0.02092 - B Rel-13 NB_IOT-Core
R2-161733 LCID assignment for NB-IoT UEs to indicate support of S1-based architecture enhancements NTT DOCOMO, INC. CR 36.321 13.0.00850 - B Rel-13 NB_IOT-Core
R2-161735 NAS Recovery for NB-IoT UE NTT DOCOMO INC. discussion
R2-161741 RRC Resume fallback Ericsson discussion
R2-161743 Resume IDEricsson discussion
R2-161744 draft CR for RRC Connection Suspend and Resume Ericsson draftCR 36.331 13.0.0 Rel-13 NB_IOT-Core
late
R2-161751 RRC Resume signalling flow and RRC actions Ericsson discussion
R2-161754 Resumption procedure for data and signalling LG Electronics Francediscussion
R2-161755 The detailed procedure of solution 18 LG Electronics Francediscussion
R2-161756 Leaving RRC_CONNECTED LG Electronics Francediscussion
R2-161758 CR for NB-IoT UE measurement configuration and reporting NTT DOCOMO, INC. CR 36.331 13.0.02095 - B Rel-13 NB_IOT-Core
late

Withdrawn:

R2-161310 Measurement reporting in NB-IoT Ericsson draftCR 36.331 13.0.0 Rel-13 NB_IOT-Core

7.16.2.2 System Information

R2-161140 System Information Area Scope and Value Tag Sony discussion
R2-161155 Open issues of SI content CATT discussion
R2-161176 The mechanism for access control related system information update FUJITSU LIMITED discussion
R2-161253 Access control mechanism for NB-IoT Intel Corporation draftCR 36.331 13.0.0 B Rel-13 NB_IOT-Core
R2-161254 Report of email discussion [NBAH#05][NBIOT/SI] System Information Intel Corporation discussion
late
R2-161381 System Information Update Notification Huawei, HiSilicon, Neul discussion
R2-161382 Contents of MIB from RAN2 Huawei, HiSilicon, Neul discussion
R2-161407 System Information for In-band NB-IoT Samsung Electronics discussion
R2-161457 System Information Contents Huawei, HiSilicon, Neul Ltd. discussion
R2-161632 Allowing different frequency bands between eMTC/NB-IoT UEs and legacy UEs NTT DOCOMO, INC. discussion
R2-161637 System Information Update for NB-IOT Ericsson discussion
R2-161649 System Information Change and Paging Mechanisms INTERDIGITAL COMMUNICATIONS discussion
R2-161682 System Information Update Notification in NB-IoT LG Electronics Inc. discussion
R2-161684 System information change in NB-IoT LG Electronics Inc. discussion

7.16.2.3 Idle mode procedures

R2-161096 Mobility considerations for NB-IoT Gemalto N.V. discussion
R2-161097 Measurement considerations for NB-IoT Gemalto N.V. discussion
R2-161136 NB-IoT Load Distribution Discussion ZTE Corporation discussion
R2-161260 Idle mode mobility and load balancing Intel Corporation discussion
R2-161301 Power Consumption of Cell Reselection in NB-IoT III discussion
R2-161307 Idle mode mobility in NB-IoT Ericsson discussion
R2-161308 Load balancing in NB-IoT Ericsson discussion
R2-161383 Inter-frequency Load Balancing Huawei, HiSilicon, Neul discussion
R2-161384 Idle Mode Mobility Huawei, HiSilicon, Neul discussion
R2-161385 Cell Reserved for Future Use Flag and IFRI Huawei, HiSilicon, Neul discussion
R2-161409 Discussion on Cell Selection and Reselection for NB-IoT Samsung Electronics discussion
R2-161410 Inter-frequency Load Distribution for NB-IoT Samsung Electronics discussion

Samsung Exhibit 1025, Page 1451 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161413 E-Mail Discussion and companies view on Inter Frequency Load Balancing Vodafone GmbH report
R2-161481 Ranking-based Load Balancing for NB-IoT CATR discussion
R2-161491 NB-IoT cell load management QUALCOMM INCORPORATED discussion
R2-161528 NB-IoT implementation in 3GPP TS 36.304 Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
R2-161529 36.304 running CR to capture agreements on NB-IoT Nokia Networks draftCR 36.304 13.0.0 Rel-13 NB_IOT-Core
R2-161669 Measurement rules for cell reselection in NB-IoT LG Electronics France discussion
R2-161673 Inter-frequency Load Distribution in NB-IoT LG Electronics France discussion

7.16.2.4 Paging

R2-161137 Issues for Paging in NB-IOT ZTE Corporation discussion
R2-161142 Paging Capability Sony discussion
R2-161150 Discussion on paging enhancements for NB-IoT CATT discussion
R2-161151 Discussion on Paging Schemes CATT discussion
R2-161152 Discussion of false paging CATT discussion
R2-161258 Remaining open aspects on NB-IOT Paging Intel Corporation discussion
R2-161311 Paging and DRX in Idle mode in NB-IoT Ericsson discussion
R2-161312 Physical channels for paging in NB-IoT Ericsson discussion
R2-161386 Paging Stage 3 Analysis Huawei, HiSilicon, Neul discussion
R2-161461 Paging enhancements MediaTek Inc. discussion
R2-161523 Paging procedure for NB-IoT Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

7.16.3 User Plane

7.16.3.1 MAC/RLC

R2-161135 Remaining issues on Random Access in NB-IoT ZTE Corporation discussion
R2-161141 Considerations on PRACH resources for NB-IoT Sony discussion
R2-161153 Volume indication for NB-IoT data CATT discussion
R2-161257 Further discussion on RLC-AM for NB-IOT Intel Corporation discussion
R2-161332 UP modelling for U-plane solution NTT DOCOMO INC. discussion Update of R2-160526
R2-161333 Discussion on how to capture NB-IOT in RLC NTT DOCOMO INC. discussion
R2-161364 RLC AM Optimisations Neul, Huawei, HiSilicon, discussion
R2-161387 Random Access Procedure Huawei, HiSilicon, Neul discussion
R2-161388 HARQ in MAC Layer Huawei, HiSilicon, Neul discussion
R2-161391 Analysis on preamble transmission related issues in NB-IoT ZTE Corporation discussion
R2-161406 E-Mail Discussion and companies view on the need for MAC BI Vodafone GmbH report
R2-161408 Discussions on MAC functionalities for NB-IoT Samsung Electronics discussion
R2-161462 RLC-AM enhancements MediaTek Inc. discussion
R2-161526 Random Access procedure for NB-IoT Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
R2-161608 Restricting RLC Status Report transmission in NB-IOT LG Electronics Inc. discussion
R2-161638 NBAH#06 - NB-IoT- DRX dormancy - email report Ericsson discussion
R2-161639 Use of RA back-off indicator Ericsson discussion
R2-161640 Delay triggering SR in NB-IoT Ericsson discussion
R2-161641 Connected Mode DRX for NB-IoT Ericsson discussion
R2-161642 Scheduling and HARQ principles for NB-IoT Ericsson discussion
R2-161643 RLC AM considerations for NB-IoT Ericsson discussion
R2-161644 36.321 running CR to capture agreements on NB-IoT Ericsson draftCR 36.321 B Rel-13 NB_IOT-Core late
R2-161676 DRX enhancement for NB-IOT LG Electronics Inc. discussion

7.16.3.2 PDCP

R2-161262 PDCP transparent mode for NB-IoT with CIoT CP solution Intel Corporation discussion
R2-161489 Introduction of NB-IoT functionality to PDCP protocol QUALCOMM INCORPORATED draftCR 36.323 13.0.0 B Rel-13 NB_IOT-Core

Samsung Exhibit 1025, Page 1452 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161609 Need for PDCP TM in NB-IOT LG Electronics Inc. discussion

7.17 Other LTE Rel-13 WIs

No contributions received.

R2-161764 36.331 CR on TM10 CRS-IM UE capability report signalling introduction Intel Corporation
CR 36.331 13.0.02096 - B Rel-13 LTE_CRSIM-Perf
=> Agreed

R2-161765 36.306 CR on TM10 CRS-IM UE capability report signalling introduction Intel Corporation
CR 36.306 13.0.00348 - B Rel-13 LTE_CRSIM-Perf
- New CRs releated to LS in R2-161049
=> Agreed

7.18 LTE TEI13 enhancements

Small Technical Enhancements affecting LTE Rel-13 that do not belong to any Rel-13 WI.

Note: A TEI enhancement proposal should be treated for only one meeting cycle and involve only one WG. Otherwise, a WI should be proposed at RAN plenary!

CIoT optimisations for non-NB-IOT UEs

R2-161263 General LTE RRC impacts to enable CIoT solutions Intel Corporation discussion
Proposal 1
- Samsung mostly aligned with proposal 1 but think 1.5 is not clear. Thinks it does not have big impact to RAN2. Intel think it captures an SA2 agreement that if the UE is configured by NAS to use solution 2 then the UE does not establish a DRB. Huawei also has some concern with 1.5. Think that the UE should also be able to use the normal procedure. Ericsson agree with Intel that data over NAS is supported in limited scenarios. It also simplifies things.
- MediaTek thinks that 1.5 doesn't need to be discussed unless there is AS impact identified. In general, the CIoT optimisations shall apply to LTE and NB-IOT.

=> Discuss offline the SA2 agreements related to proposal 1.5 and identify the impact to RAN2 for the non NB-IoT UEs. 1.4, 1.6 may also be discussed (Intel, Tuesday morning this hotel)
=> Resulted in LS in R20-162010

Proposal 2
- MediaTek suggest we use these names for NB-IOT as well.
- Qualcomm think we need to consider the interactions between the 2 optimisations and normal LTE. Too early to agree. We should also keep this discussion out of NB-IOT session. Intel think SA2 have solved the switching between modes.
- Samsung think the proposal is ok
- Huawei think we know data over NAS is mandatory for NB-IoT. Proposes that if a UE support CIoT optimisation then it shall mandatorily support data over NAS. Ericsson think they should be independent. Vodafone things we are referring to smartphones so both can be optional.
- MediaTek thinks this is effectively already agreed in SA2.
- Intel think we need to be careful with SMS if we use this terminology

=> For non-NB-IoT UEs, "data over NAS" and "AS context caching" are both optional features. Exact terminology to be confirmed.
- Ericsson ask if some other aspects can be discussed in NB-IOT. MediaTek think cause values can be discussed but message size is more difficult to discuss. LG prefer to not discuss in NB-IOT session. Huawei agree. Vodafone agree.

R2-162010 [DRAFT] LS on CIoT optimization for non-NB-IoT UEs
=> Remove optins a and b
=> Revised in R2-162018

R2-162018 LS on CIoT optimization for non-NB-IoT UEs
=> Approved

Samsung Exhibit 1025, Page 1453 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161389 Consideration for cIoT optimization in non NB-IoT ZTE Corporation discussion
R2-161666 Extension of NB-IoT signalling optimizations to LTE UEs NEC discussion
related to LS from RANP in R2-160402
Above 2 Tdocs not treated

CIoT user plane optimisation

R2-161727 Non-NB-IoT UE specific aspects of U-plane based solution with AS information stored in RAN NTT DOCOMO, INC. discussion
R2-161750 S1 signalling optimization solution (Sol18) for non-NB-IoT UEs Ericsson discussion
R2-161266 LTE RAN impacts to enable CIoT UP solution Intel Corporation discussion
R2-161603 Bearer resumption issues for CIoT UP solution for LTE Intel Corporation discussion
R2-161719 RRC protocol extension for non-NB-IoT UEs supporting U-plane based solution with AS information stored in RAN NTT DOCOMO, INC. CR 36.331 13.0.02086 - B Rel-13 TEI13
R2-161723 LCID assignment for non-NB-IoT UEs to indicate support of S1-based architecture enhancements NTT DOCOMO, INC. CR 36.321 13.0.00849 - B Rel-13 TEI13
Above 6 Tdocs not treated

CIoT control plane optimisation

R2-161264 LTE RAN impacts to enable CIoT CP solution Intel Corporation discussion
R2-161265 PDCP transparent mode for LTE/eMTC with CIoT CP solution Intel Corporation
Above 2 Tdocs not treated

Other

R2-161268 LTE message 3 considerations for support of CIoT solutions Intel Corporation discussion
R2-161501 Early RRC Connection Release for CIoT traffic support Sequans Communications discussion
R2-161511 Introduction of RRC Connection Release Request Sequans Communications CR 36.331 13.0.02059 - B Related to R2-161501 Rel-13 TEI13
R2-161606 Introduction of Release Indication PDCP Control PDU Sequans Communications CR 36.323 13.0.00159 - B Related to R2-161501 Rel-13 TEI13
R2-161763 ID for non-NB-IoT UEs Ericsson discussion
late
Above 5 Tdocs not treated

Other

R2-161213 UE category and maximum data rate Samsung Electronics Co., Ltd discussion
=> RAN2 confirms the following understanding
"UE category is not determined by observable maximum data rate but by radio capability and baseband capability. The observable maximum data rate of a UE is depending on the give deployment scenarios and could be lower than the maximum data rate of the corresponding UE category."

R2-161214 Clarification on UE category for UEs with fragmented spectrum Samsung Electronics Co., Ltd CR 36.306 13.0.00325 - F Rel-13 TEI13
- Ericsson asks whether a UE must provide a band combination that reaches the maximum capability. There seems to be different views. Samsung understand that it can declare a category but actually only be able to support a lower rate due to the fact it only supports lower bandwidth than 20MHz in the band combinations.
- Samsung think it is a separate issue about what UE declares if it only supports a limited rf bandwidth capability. Samsung clarifies that the CR is written from the perspective of a UE that is capable to support 20 MHz in every carrier.

=> Postponed

R2-161237 Miscellaneous corrections to TS 36.306 Intel Corporation CR 36.306 13.0.00330 - F Rel-13 TEI13

Samsung Exhibit 1025, Page 1454 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Agreed

R2-161353 Access Restriction for Unattended Data Traffic Verizon, Alcatel-Lucent, Ericsson, Qualcomm Incorporated draftCR 36.331 13.0.0 C Rel-13 TEI13
NOTE: Tdoc type should be "CR", not "draftCR"
- Intel explain that an SA1 LS has been agreed. They indicate that the system included OS but can't comment in the solutions.

=> Comeback after LS from CT1 is received.
=> Postponed

R2-161857 Options for handling unattended data traffic Huawei, ZTE discussion
late
=> Noted

R2-161657 Introduction of sf60 DRX cycle Apple, MediaTek Inc, Broadcom, Qualcomm Inc, Intel Corporation draftCR 36.331 13.0.0 B Rel-13 TEI13
NOTE: Tdoc type should be "CR", not "draftCR"
=> Some ASN.1 details to be corrected
=> Coversheet to be improved
=> Revised in R2-161967 CR 2106 rev '-'

R2-161967 Introduction of sf60 DRX cycle Apple, MediaTek Inc, Broadcom, Qualcomm Inc, Intel Corporation CR 36.331 13.0.02106 - B Rel-13 TEI13 R2-161657
=> Agreed

R2-161720 ANR in case of MFBI Huawei, HiSilicon, China Telecom CR 36.306 13.0.00347 - F Rel-13 TEI13
- Intel suggest changing the name to multiBandInfoReport, and that the description refers to the configuration of reportCGI. Category should be C.

=> To be revised to take comments into account.
=> Revision in R2-161913 CR rev 1.

R2-161913 ANR in case of MFBI Huawei, HiSilicon, China Telecom CR 36.306 13.0.00347 1 C Rel-13 TEI13 R2-161720
=> Agreed

R2-161721 ANR in case of MFBI Huawei, HiSilicon, China Telecom CR 36.331 13.0.02087 - F Rel-13 TEI13
- Intel think we should avoid reusing the same name for the configuration and the capability and a field description should be added. Also proposes to group the new fields in the report. Huawei agree that they can be grouped.

=> To be revised to take comments into account.
=> Revision in R2-161914 CR rev 1 Cat C.

R2-161914 ANR in case of MFBI Huawei, HiSilicon, China Telecom CR 36.331 13.0.02087 1 C Rel-13 TEI13 R2-161721
=> Agreed

R2-161747 Discussion on uplink data compression CMCC discussion
- CMCC clarify the intent is not to make a specific proposal but to invite companies to do more study.
- Qualcomm is interested in this area. ZTE also think this is an interesting topic by wonder what impact it would have on eNB memory requirements.
- Nokia ask what we can do in RAN2. CMCC think it may depend on the solutions.
- DOCOMO think this implies that the transmitter can somehow identify static strings but don't know how this can be done.
- Qualcomm think it is similar to ROHC which is part of PDCP.
- Ericsson think this is mainly for the case without encrypted payload.
- Huawei are interested in uplink data compression.

=> Noted

R2-161791 Introduction of capability on PDSCH collision with PSS/SSS/PBCH Huawei, HiSilicon CR 36.331 13.0.02102 - F related with LS R1-161276 = R2-161058 Rel-13 TEI13
=> Agreed

Samsung Exhibit 1025, Page 1455 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161792 Introduction of capability on PDSCH collision with PSS/SSS/PBCH Huawei, HiSilicon CR 36.306 13.0.0 0349 - F related with LS R1-161276 = R2-161058 Rel-13 TEI13
=> Agreed

Withdrawn:
R2-161127 Considering on enhancing VoLTE technologies China Mobile Com. Corporation discussion
R2-161143 sf60 Long DRX Cycle Apple, Mediatek inc, Broadcom, Qualcomm inc draftCR
R2-161165 Discussion on uplink data compression China Mobile Com. Corporation discussion
R2-161660 Draft CR to 36.321 on correction to Pcmax and PH field in PHR MAC CE LG Electronics Inc. draftCR
R2-161661 draft CR to 36.331 on cross-carrier scheduling with 32CCs LG Electronics Inc. draftCR
R2-161722 ANR in case of MFBI Huawei, HiSilicon, China Telecom CR

7.19 LTE ASN.1 review

7.19.1 Organisational

Including rapporteur's issue list and CR to 36.331

R2-161082 Miscellaneous changes resulting from review for ASN.1 freeze Ericsson (Rapporteur) CR 36.331 13.0.0 2002 - F Rel-13 TEI13
=> Revised in R2-161201

R2-161201 Miscellaneous changes resulting from review for ASN.1 freeze Ericsson (Rapporteur) CR 36.331 13.0.0 2002 1 F Rel-13 TEI13
- Ericsson explain that 10 additional issues closed compared to R2-161082.
- Intel understand that cell reselection sub priority should only for be LTE and not for GERAN/UMTS.

=> Further comments can be discussed offline.
=> Revision in R2-161789 CR rev 2

R2-161789 Miscellaneous changes resulting from review for ASN.1 freeze Ericsson (Rapporteur) CR 36.331 13.0.0 2002 2 F Rel-13 TEI13 R2-161201

✉ **[93#17][LTE/ASN.1] 36.331 CR (Ericsson)**
Intended outcome: Agreed CR for RAN
Deadline: Thursday 25/02/2016

- Ericsson report that there are issues open that impact procedures but these should not impact decision to freeze.
- Samsung think that there is still some discussion on extension markers, etc to be addressed.
- After emails are concluded the ASN.1 rapporteur will do a merge an check before RAN.

=> RAN2 chair will recommend to RAN that ASN.1 can be frozen.

R2-161083 Review issue list for ASN.1 freeze Ericsson, Samsung discussion
=> Revised in R2-161202

R2-161202 Review issue list for ASN.1 freeze Ericsson, Samsung discussion
- Ericsson explain the issues impacting ASN.1 could be closed but there are still procedural impacting issues to be addressed.
- Samsung ask if it is really the case that the eCA grouping issues that impact ASN.1 are closed. Ericsson explain these are being progressed this.
- Ericsson think if we make any critical extension then that should be the basis for future evolution.

=> Revision in R2-161790

R2-161790 Review issue list for ASN.1 freeze Ericsson, Samsung discussion

R2-161081 eSL changes resulting from review for ASN.1 freeze Samsung Telecommunications CR 36.331 13.0.0 2001 - F Rel-13 LTE_eD2D_Prox-Core
=> Revised in R2-161177

R2-161177 eSL changes resulting from review for ASN.1 freeze Samsung Telecommunications CR 36.331 13.0.0 2001 1 F Rel-13 LTE_eD2D_Prox-Core
=> Discussed in D2D session

Samsung Exhibit 1025, Page 1456 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161601 SC-PTM corrections following ASN.1 review Huawei CR 36.331 13.0.02072 - F Rel-13 LTE_SC_PTM-Core
- Intel ask how to handle overlap with the general CR. Huawei understand there should not be overlap. Can be checked.

=> Comeback to approve
=> Revision in R2-161977 CR rev1

R2-161977 SC-PTM corrections following ASN.1 review Huawei CR 36.331 13.0.02072 1 F Rel-13 LTE_SC_PTM-Core R2-161601
=> Agreed

R2-161600 Review issue list for ASN.1 freeze (SC-PTM issues) Huawei discussion
=> Noted

7.19.2 Other

Including discussion documents on issues identified in the review. Note that issues that are specific to a single WI may be better placed within the agenda item of that WI.

R2-161321 ASN.1 review – BetaOffset handling Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell other

Agreements:
1: Change coding of betaOffset signalling so that legacy signalling is appended with release 13 signalling of betaOffset used in case more than 22 HARQ-ACK bits are transmitted in a subframe
2: In order to follow legacy way of signalling and making it easier to handle new parameters use release/setup structure for all betaOffset2s each of which is optional with Need OR
3: Add field descriptions for BetaOffset2's in order to clarify the usage of the parameter as indicated by RAN1 as proposed by E.192 and 193
4: update also release 10 parameter references to be correct as shown in the annex, from release 13 version.
=> Agreements to be captured in the review CR.

R2-161325 draft LS on codebooksizedetermination Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell other
=> Delegates to inform RAN1 colleagues of necessary updates (for this and other cases).

R2-161346 Clarifications on the use of spare values ZTE Corporation discussion
Proposal 1:
- The error should not happen for DCCH. Ericsson agree that the network should not create the error by sending the undefined code point.

=> To clarify that the legacy encoding error handling also applies to SC-MCCH. To be captured in the review CR.

Proposal 2
- Samsung think that we previously agreed that we review on a case by case basis whether it really make sense in each case. ZTE explain the intention is to avoid wasting bits that might be included in the future.
- Ericsson agree with Samsung. It should be based on analysis rather than a general rule.

Proposal 3
- DOCOMO agree with the understanding but think there is already a statement in the spec that the UE ignores spare fields..

R2-161414 [N.162] UL PDCP delay reporting Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
=> Noted

R2-161416 UL PDCP delay measurement configuration and reporting handling Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02040 - F Rel-13 LTE_eMDT2-Core
=> Add requirement that the UE ignores MeasObjectID for this case.
=> Offline discussion on whether to reuse the current periodical reporting as defined in RRC or have separate periodical reporting defined for this case.

Samsung Exhibit 1025, Page 1457 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Revision in R2-161918 rev 1

R2-161918 UL PDCP delay measurement configuration and reporting handling Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.0 2040 1 F Rel-13
LTE_eMDT2-Core R2-161416

✉ **[93#18][LTE/MDT] UL PDCP delay CR (Nokia)**
Intended outcome: Agreed CR for RAN
Deadline: Thursday 25/02/2016

R2-161474 Sidelink discovery gaps at the end of SFN period Ericsson discussion
R2-161475 Correction to SL-GapConfig Ericsson draftCR 36.331 13.0.0 Rel-13
LTE_eD2D_Prox-Core
NOTE: Tdoc type should be "CR", not "draftCR"
R2-161476 Correction related to E.289 Ericsson draftCR 36.331 13.0.0 Rel-13
LTE_eD2D_Prox-Core
NOTE: Tdoc type should be "CR", not "draftCR"
R2-161477 Correction related to E.102 Ericsson draftCR 36.331 13.0.0 Rel-13
LTE_eD2D_Prox-Core
NOTE: Tdoc type should be "CR", not "draftCR"
Above 4 Tdocs treated in LTE breakout session. (See Annex H)

R2-161478 MBMSInterestIndication signalling in Rel-13 (Issues #E.341, #H.052 and #N.028 in ASN.1 review) Ericsson discussion
Not treated
R2-161582 eMTC - Review issue list for ASN.1 freeze with chair notes Ericsson discussion
=> Revsied in R2-161919
R2-161919 eMTC - Review issue list for ASN.1 freeze with chair notes Ericsson discussion
Not treated

Withdrawn:

R2-161417 UL PDCP delay measurement configuration and reporting handling Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.0 2041 - F Rel-13
LTE_eMDT2-Core

8 UTRA Release 10 and earlier releases

Incoming LS:

R2-161037 LS on Applicability of FGI3/4 for UMTS test cases for Absolute Priority Reselection in CELL_FACH (R5-155780; contact: Qualcomm) RAN5 LS in to: RAN2 Rel-8
moved from 3.3 to 8
- Qualcomm thinks that interpretation 2 is the correct understanding. Nokia Net wonders if the RAN2 specs are clear

=> RAN2 confirms that the correct interpretation is Interpretation 2 “Including the EUTRA Feature group indicators FGI3 and FGI4 in the applicability statement would make these test cases only applicable for UEs supporting both UTRA and E-UTRA, i.e. UTRA only UE supporting absolute priority based cell re-selection would not be tested
=> FFS whether any clarification on the RAN2 specs is necessary
=> LS out to RAN5 – QC
=> Noted

R2-161825 Draft reply LS to R2-161037(R5-155780) - LS on Applicability of FGI3/4 for UMTS test cases for Absolute Priority Reselection in CELL_FACH (contact: Qualcomm) Qualcomm LS out to: RAN5 Rel-8
- Ericsson thinks that we should add the clarification that the rel-8 capability applies to idle.
- Huawei wants to support absolute priority reselection for UTRA only UEs. Qualcomm explains that the intention when it was brought to UMTS was to not apply it to UTRA only UEs.

=> The LS is revised in R2-161814

R2-161814 Draft reply LS to R2-161037(R5-155780) - LS on Applicability of FGI3/4 for UMTS test cases for Absolute Priority Reselection in CELL_FACH (contact: Qualcomm) Qualcomm LS out to: RAN5 Rel-8

Samsung Exhibit 1025, Page 1458 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> add "(introduced from Rel-8)" in the first sentence
=> The LS is approved in R2-161818 with the change above

R2-161709 Clarification for the presence of Period of BMC scheduling Huawei, HiSilicon CR 25.331 8.25.05841 - F Rel-8 TEI8
- Nokia Net reads the spec as if it intentionally excludes the SIB5bis
- Qualcomm agrees that the SIB5bis should be added.
- Chair wonders if there is a problem if we include it since Rel-8. Qualcomm thinks that there is no inter-operability issue, and assumes that the UE should follow this behaviour already. Huawei thinks that the UE behaviour will be unexpected, as the UE will be monitoring continuously. Qualcomm thinks that from a UE that is bad from a network point of view it doesn't matter as at the end the UE will receive the expected message. Ericsson agree with Qualcomm.
- Ericsson points out that in the existing spec the IE can already be included in 5bis, it is only the absence of the IE that is not specified.

=> Agree with the behaviour in the CR
=> Introduce it from Rel-13 with the magic sentence and update the impact analysis to state no inter-operability issues exist. Consequences if not approved and reason for change need to be updated.
=> The CR is not pursued

R2-161711 Clarification for the presence of Period of BMC scheduling Huawei, HiSilicon CR 25.331 9.19.05842 - A Rel-9 TEI8
=> Not treated

R2-161712 Clarification for the presence of Period of BMC scheduling Huawei, HiSilicon CR 25.331 10.19.0 5843 - A Rel-10 TEI8
=> Not treated

R2-161714 Clarification for the presence of Period of BMC scheduling Huawei, HiSilicon CR 25.331 11.15.0 5844 - A Rel-11 TEI8
=> Not treated

R2-161715 Clarification for the presence of Period of BMC scheduling Huawei, HiSilicon CR 25.331 12.8.05845 - A Rel-12 TEI8
=> Not treated

R2-161716 Clarification for the presence of Period of BMC scheduling Huawei, HiSilicon CR 25.331 13.1.05846 - A Rel-13 TEI8
=> The CR is revised in R2-161826

R2-161826 Clarification for the presence of Period of BMC scheduling Huawei, HiSilicon CR 25.331 13.1.05846 1 F R2-161716
- Nokia Net thinks that we should use the WI code for the feature and TEI13. Qualcomm confirms it exists from R99 so no WI code. Nokia Net sees that the tabular was added from Rel-6.
- Change cover page to fix editorial "according"
- Huawei confirms there is no WI code

=> The CR is agreed in R2-161817 r2 with the cover page changes

9 UTRA Release 11

(Cell_FACH_enh-Core, leading WG: RAN2, REL-11, started: March 11, closed: Dec. 12, WID: RP-111321)

(HSDPA_MFTX-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Dec.12, WID: RP-111375)

(4Tx_HSDPA-Core, leading WG: RAN1, REL-11, started: Sep.11, closed: Dec.12, WID: RP-111393)

(MIMO_64QAM_HSUPA-Core, leading WG: RAN1, REL-11, started: Dec. 11, closed: Dec. 12, WID: RP-121794)

(rSRVCC-RAN_UTRA-Core, leading WG: RAN3, REL-11, started: Sep.11, closed: Dec.12, WID: *RP-111334*)

(HSPA_UL_TxDiv-CL-Core, leading WG: RAN1, REL-11, started: Dec.10, target: Dec.12, WID: RP-120367)

(HSPA_UL_TxDiv-OL-Core, leading WG: RAN4, REL-11, started: Dec.10, closed: Dec. 12, WID: RP-120367)

Samsung Exhibit 1025, Page 1459 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

(8C_HSDPA-Core, leading WG: RAN1, REL-11, started: Dec.10, closed: Sep. 12, WID: RP-101419)

Including corrections for UTRA functionality introduced as TEI11.

R2-161845 CR to 25.331 on adding Extended E-UTRA Frequency Band in RRC connection release for CCCH in ASN.1 Huawei, HiSilicon CR 25.331 11.15.0 5850
- Nokia Net is concerned that this CR gives the impression that all UEs implement this CR, but if there are UEs already in the field they will not understand this.
- Qualcomm then wonders if there is a need to go back to Rel-11.

=> moved to email discussion

R2-161846 CR to 25.331 on adding Extended E-UTRA Frequency Band in RRC connection release for CCCH in ASN.1 Huawei, HiSilicon CR 25.331 12.8.0 5851
=> Not treated

R2-161847 CR to 25.331 on adding Extended E-UTRA Frequency Band in RRC connection release for CCCH in ASN.1 Huawei, HiSilicon CR 25.331 13.1.0 5852
=> Not treated

✉ **[93#27][UMTS/Extended E-UTRA freq band] –**
- Discuss how to handle the Rel-11 case and the backward compatibility issue and confirm whether a note to the 25.331 spec in the 3GPP server needs to be added
- Outcome: agree to the CRs if an agreement is reached
- Deadline: end of next week

10 UTRA Release 12

10.1 WI: Further EUL Enhancements

(EDCH_enh-Core, leading WG: RAN2, REL-12, started: Dec. 13, **closed**: Dec. 14, WID: RP-140127)

R2-161278 Correction on signalling transmission control due to access group blocking of DTCH Huawei, HiSilicon, Nokia Networks, Ericsson CR 25.300 12.4.00036 - C Rel-12 EDCH_enh-Core
NOTE: cat.C CR is not allowed for closed WI
=> Revise terminology to “CCCH/DCCH due to uplink DTCH transmission”
=> Delete “(transition to CELL_FACH)” from 4th paragraph
- Nokia Net indicates for the CELL_FACH we are repeating for RACH and E-DCH.

=> Find a good way to include RACH and E-DCH for all states.
=> Change title of section to include URA_PCH
=> The CR is revised in R2-161827

R2-161827 Correction on signalling transmission control due to access group blocking of DTCH Huawei, HiSilicon, Nokia Networks, Alcatel Lucent, Alcatel Lucent Shanghai Bell, Ericsson CR 25.300 12.4.00036 1 C
=> Moved to email discussions

R2-161279 Correction on signalling transmission control due to access group blocking of DTCH Huawei, HiSilicon, Nokia Networks, Ericsson CR 25.306 12.6.00502 - C Rel-12 EDCH_enh-Core
NOTE: cat.C CR is not allowed for closed WI
=> Revise terminology to “DCCH due to uplink DTCH transmission”
=> delete “or not”
=> The CR is revised in R2-161828

R2-161828 Correction on signalling transmission control due to access group blocking of DTCH Huawei, HiSilicon, Nokia Networks, Ericsson CR 25.306 12.6.00502 - C Rel-12 EDCH_enh-Core
=> Moved to email discussions

R2-161280 Correction on signalling transmission control due to access group blocking of DTCH Huawei, HiSilicon, Nokia Networks, Ericsson CR 25.331 12.8.05832 1 C Rel-12 EDCH_enh-Core
NOTE: cat.C CR is not allowed for closed WI

Samsung Exhibit 1025, Page 1460 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Revise terminology to “DCCH due to uplink DTCH transmission”
- Qualcomm indicates that with the existing text we are also blocking RLC control PDUs
=> Update text to exclude the RLC control PDU case
=> The CR is revised in R2-161829

R2-161829 Correction on signalling transmission control due to access group blocking of DTCH Huawei, HiSilicon, Nokia Networks, Ericsson CR 25.331 12.8.05832 1 C
=> Moved to email discussions

Moved from TEI13 AI

R2-161169 Correction on signalling transmission control due to access group blocking of DTCH Ericsson, Huawei, HiSilicon, Nokia Networks CR 25.300 13.0.00035 - C Rel-13 TEI13, EDCH_enh-Core
=> The CR is revised in R2-161830

R2-161830 Correction on signalling transmission control due to access group blocking of DTCH Ericsson, Huawei, HiSilicon, Nokia Networks CR 25.300 13.0.00035 1 C
=> Moved to email discussions

R2-161170 Correction on signalling transmission control due to access group blocking of DTCH Ericsson, Huawei, HiSilicon, Nokia Networks CR 25.306 13.0.00499 - C Rel-13 TEI13, EDCH_enh-Core
=> The CR is revised in R2-161831

R2-161831 Correction on signalling transmission control due to access group blocking of DTCH Ericsson, Huawei, HiSilicon, Nokia Networks CR 25.306 13.0.00499 1 C
=> Moved to email discussions

R2-161171 Correction on signalling transmission control due to access group blocking of DTCH Ericsson, Huawei, HiSilicon, Nokia Networks CR 25.331 13.1.05828 - C Rel-13 TEI13, EDCH_enh-Core
=> The CR is revised in R2-161832

R2-161832 Correction on signalling transmission control due to access group blocking of DTCH Ericsson, Huawei, HiSilicon, Nokia Networks CR 25.331 13.1.05828 1 C
=> Moved to email discussions

✉ **[93#26][UMTS/Access group blocking] – CRs – Huawei**
- Agree to CR package for Rel-12 and Rel-13
- Deadline- end of next week

10.2 WI: Enhancements to SIB

(UTRA_SIBenh-Core, leading WG: RAN2, started: Dec. 13, **closed**: Sep 14, WID: RP-140131)

No contributions received.

10.3 WI: UMTS Heterogeneous Networks enhancements

(UTRA_hetnet_enh-Core, leading WG: RAN1, started: Dec.13, **closed**: Sep. 14, RP-140463)

No contributions received.

10.4 WI: DCH Enhancements for UMTS

(UTRA_DCHenh-Core, leading WG: RAN1, started: Sept.13, **closed**: Sep. 14, RP-131357)

R2-161281 Discussion on DCH enhancements configuration Huawei, HiSilicon discussion
Proposal 1: It is proposed that the feature uplink DPDCH dynamic 10ms transmission can be only applied to SRB over DCH and CS over DCH.
- Nokia Net thinks that the original intention of the feature was for DCH and therefore anything that goes over it should be applicable and would like to understand the reason for limiting
- Qualcomm thinks that for PS RAB there are a few technical reasons why DCH doesn’t work
- Qualcomm agrees but not sure if we need to add anything

Proposal 2: It is proposed to capture the following text into stage-2 specification: for uplink DPDCH dynamic 10ms transmission, the minimum DCH TTI value in uplink is 20ms.

Samsung Exhibit 1025, Page 1461 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Qualcomm thinks that the 20ms should apply to both UL and DL. Nokia Net thinks that we can add it to the general sentence that already exists in stage 2 for the DL.

=> RAN2 agrees that the correct understanding is that the feature uplink DPDCH dynamic 10ms transmission can be only applied to SRB over DCH and CS over DCH. FFS how to properly word to capture exceptions.
=> We will capture that minimum DCH TTI value in uplink is 20ms in the general statement
=> Noted

R2-161282 Correction on DCH enhancements Huawei, HiSilicon CR 25.300 12.4.00037 - F Rel-12 UTRA_DCHenh-Core
=> The CR is revised in R2-161833

R2-161833 Correction on DCH enhancements Huawei, HiSilicon CR 25.300 12.4.00037 1 F
=> The CR is postponed

R2-161283 Correction on DCH enhancements Huawei, HiSilicon CR 25.300 13.0.00038 - A Rel-13 UTRA_DCHenh-Core
=> The CR is revised in R2-161834

R2-161834 Correction on DCH enhancements Huawei, HiSilicon CR 25.300 13.0.00038 1 A
=> The CR is postponed

10.5 WI: WLAN/3GPP Radio Interworking – UTRA aspects

(UTRA_LTE_WLAN_interw-Core, leading WG: RAN2, REL-12, started: Dec.13, **closed**: Sep. 14, WID: RP-132101)

No contributions received.

10.6 WI: Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA

(LTE_UTRA_IncMon-Core, leading: RAN4, REL-12, started: Dec.13, **closed**: Dec. 14, WID: RP-132061)

No contributions received.

10.7 Other UMTS Rel-12 WI/SIs

Input to any other Rel-12 WI/SI not explicitly listed above.

(UTRA_hetnet_mob-Core, leading WG: RAN2, Started: Dec.13, closed: June 14, WID: RP-140463)

(LCS_BDS-UTRA-Core, leading WG: RAN2, started: March 13, closed: Dec.13, WID: RP-130416)

(EHNB_enh3-Core, leading WG: RAN3, REL-12, started: Sep.12, closed: Dec 13, WID: RP-130741)

(LCR_TDD_HSPA_sign_enh-Core, leading WG: RAN1, started: Dec 12, closed: Dec 13, WID: RP-121984)

(LTE_UTRA_SDL_BandL-Core, leading WG: RAN4, started: June 13, closed: June 14, WID: RP-140092)

Including corrections for UTRA functionality introduced as TEI12.

R2-161230 Missing parameter values for access stratum release indication Ericsson CR 25.306 12.6.00500 - F Rel-12 TEI12
=> Unclick ME and RAN boxes
=> The CR is agreed in R2-161837 r1 with the cover page updates as above

R2-161231 Missing parameter values for access stratum release indication Ericsson CR 25.306 13.0.00501 - A Rel-13 TEI12, TEI13
=> Change category to F and unclick boxes
=> The CR is revised in R2-161838 r1 with the cover page updates as above

R2-161838 Missing parameter values for access stratum release indication Ericsson CR 25.306 13.0.00501 1 F
=> Remove TEI12 from cover page
=> The CR is agreed in R2-161816 r2 with the change above

Samsung Exhibit 1025, Page 1462 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11 UTRA Release 13

11.1 WI: L2/L3 Downlink enhancements for UMTS

(UTRA_EDL_L23-Core, leading WG: RAN2, started: June 15, closed: Dec. 15, WID: RP-152184)

Closed WI

11.1.1 Retrievable configurations

R2-161226 Retrievable configurations in RRC signaling Ericsson discussion
Introduce the possibility to delete transport channels and the corresponding MAC-d flows and MAC-ehs reordering queues from retrievable configurations
- Nokia Net thinks that the network has other means to delete something by reconfiguring. Ericsson indicates that now if we want to delete something we may have to delete the full pre-configuration and then re-configure it.
- Nokia Net would like to keep signalling simple.
- Huawei thinks that this also depends on the scenario and use cases.
- Huawei thinks that if you move from multi-RAB to single-RAB there would be other information that need to be removed anyways. Qualcomm agrees with this assessment.

=> No support for the proposal
=> Noted

R2-161227 Correction of Retrievable configurations Ericsson CR 25.331 13.1.05830 - F Rel-13 UTRA_EDL_L23-Core
=> The editorial changes will be captured in another CR
=> The CR is not pursued

R2-161228 Physical channel features and retrievable configurations Ericsson discussion
- Nokia Net thinks proposal 1 makes sense and should be allowed but that there is a way to do this by signalling a top level container with some absent information elements, which would result in the UE deleting them based on legacy procedures. Ericsson thinks this is possible but you have to add extra signalling to do this.

=> Noted

R2-161229 Physical channel features in retrievable configurations Ericsson CR 25.331 13.1.05831 - F Rel-13 UTRA_EDL_L23-Core
=> Not treated

R2-161400 Adding the retrievable configuration info in RRC Connection Setup Ericsson CR 25.331 13.1.05835 - F Rel-13 UTRA_EDL_L23-Core
=> Not treated

R2-161438 Adding the retrievable configuration info in RRC Connection Setup Ericsson discussion
RAN2 to agree to add the Retrievable configuration to RRC Connection setup
- Nokia Net would like to know how the network can pre-configure the UE since it only gets the UE capability in the Setup Complete. The network doesn't even know if the UE supports retrievable configuration.

=> Noted

R2-161848 Corrections to retrievable configuration Ericsson CR 25.331 13.1.05849 F
- Nokia thinks that this statement is strange "if included, has been acted upon above:"
- Nokia asks what received IEs are. Ericsson can change it to use the same wording "values received in the reconfiguration message"

=> update sentence according to "store the values received in the reconfiguration message with the stored id in the variable RETRIEVABLE_CONFIGURATION"
=> Remove impact analysis from cover page
=> The CR is agreed in R2-161819 r1 with changes above

Samsung Exhibit 1025, Page 1463 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.1.2 Seamless URA_PCH to CELL_FACH transitions

R2-161181 Corrections and clarifications to URA_PCH with seamless transition to CELL_FACH state functionality. Ericsson CR 25.331 13.1.05829 - F Rel-13 UTRA_EDL_L23-Core
- Nokia Net would like to avoid changing the legacy text.
- Nokia Net thinks that the changes made to section 8.2.2.3 would make the UE monitor the HS-SCCH for paging, but in URA_PCH we agreed to use PICH.
- Nokia Net thinks that there is something weird with the legacy text

=> Revisit section 8.2.2.3

- Nokia Net wonders why the CELL_PCH was deleted in 8.5.56. Ericsson explains that in the first sentence we are checking if it is in CELL_PCH
- Nokia Net wonders why this sentence was added "set CFN in relation to SFN of current cell according to subclause 8.5.15". This was taken from CELL_UPDATE procedure.

=> Check the need for this statement

=> The CR is revised R2-161849

R2-161849 Corrections and clarifications to URA_PCH with seamless transition to CELL_FACH state functionality. Ericsson CR 25.331 13.1.05829 1 F
- Ericsson indicates that we have to check the legacy section as well

=> The CR is postponed

11.1.3 Improved HARQ retransmission

No contributions received.

11.1.4 Autonomous state transitions

Agree on one of the 4 identified message exchange options

No contributions received.

11.1.5 Improved synchronized RRC procedures

Including output of email discussion [91bis#51][UMTS/Improved synchronized RRC procedures] Running CRs – Huawei

No contributions received.

11.1.6 Other

R2-161285 Introduction of the UE capabilities for L2 and L3 Downlink enhancements subfeatures
Huawei, HiSilicon CR 25.306 13.0.00503 - B Rel-13 UTRA_EDL_L23-Core
NOTE: CR cat.B is not allowed for closed WI

=> The new UE capabilities for the following sub-features are introduced:
- Retrievable configurations
- URA_PCH with seamless transition
- Blind HARQ retransmissions for HSDPA
- Improved synchronized RRC procedures
- Enhanced state transition

=> "or not" is removed from the UE capabilities

- Qualcomm is wondering why in some cases we have yes and in some others yes/no. Ericsson will check.

=> The CR is agreed in R2-161850 r1 with the "or not"s removed

R2-161286 Introduction of the UE capabilities for L2 and L3 Downlink enhancements subfeatures
Huawei, HiSilicon CR 25.331 13.1.05834 - B Rel-13 UTRA_EDL_L23-Core
NOTE: CR cat.B is not allowed for closed WI
- Qualcomm indicates that now that we have capabilities we may have to go back to the specs and add "if UE supports xxx" in the procedural text

=> Huawei will review the 25.331 spec and update if necessary

=> The rapporteur will fix the editorials in the a rapporteur CR associated to "*CV-not_iRAT_HoInfo"* – CV should not be in italic

Samsung Exhibit 1025, Page 1464 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> The CR is agreed

11.2 WI: Power saving enhancements for UMTS

(UTRA_SDATA_POWSAV-Core, leading WG: RAN2, started: June 15, closed: Dec 15, WID: RP-151998)

Closed WI

R2-161532 Clarification for extended DRX in Idle mode Ericsson CR 25.331 13.1.0 5839 - F Rel-13 UTRA_SDATA_POWSAV-Core
QC, Nokia:HW: All fine with the CR.
=> The CR is agreed.

11.3 WI: Support of EVS over UTRAN CS

(EVSoCS_UTRAN-Core; leading WG: RAN2, started: Dec. 14, closed: Dec 15, WID: RP-142282)

Closed WI

Incoming LSs:

R2-161006 LS reply to S4-151565 = R2-156043 on EVS over UTRAN (R1-157584; contact: Ericsson) RAN1 LS in cc: RAN2 Rel-13 EVSoCS_UTRAN-Core
=> Noted.

R2-161011 Reply LS to S4-151565 = R2-156043 on EVS over UTRAN (C4-152164; contact: Qualcomm) CT4 LS in cc: RAN2 Rel-13 EVSoCS-S4
=> Noted.

R2-161044 LS on EVS over CS (S4-160310; contact: Qualcomm) SA4 LS in to: RAN2 Rel-13 EVSoCS
Above 3 LSs moved from 3.3 to 11.3
=> Noted.

11.4 WI: Network-Assisted Interference Cancellation and Suppression for UMTS

(UTRA_NAICS-Core, Leading WG: RAN1, started: Sep. 15, closed: Dec. 2015, SID: RP-151879)

Closed WI

No contributions received.

11.5 WI: Multiflow Enhancements for UTRA

(HSDPA_MFTX_enh-Core, leading WG: RAN2, started March 15, closed:Sep. 15 , WID: RP-150288)

Closed WI

No contributions received.

11.6 WI: HSPA Dual-Band UL carrier aggregation

(HSUPA_DB_MC-Core; leading WG: RAN4; REL-13; started: Dec. 14; closed: Dec. 15; WID: RP-151852)

Closed WI

R2-161132 Introduction of DB-DC-HSUPA and DB/DC-HSUPA+CS features into earlier releases Nokia Networks, Qualcomm Inc., Huawei, HiSilicon, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

- Nokia clarifies that the intention of the proposal is not go back to Rel-9.
- Ericsson has some concerns on the proposal. It may give the impression that there is something wrong with what we already have for DC HSUPA. There is also impacts to RAN1 specs that are not mentioned.

Samsung Exhibit 1025, Page 1465 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Qualcomm clarifies that the way to do it is to port back the capability bit with no description changes, like we did with the FACH reselection feature. Ericsson wonders if port back these capabilities do we have to port back all Rel-13 capabilities and dumify them. Nokia Net explains that another way of doing it is to use different capability containers in Rel-13. Need to check what the best way of doing the porting is.
- Qualcomm is also open to consider later releases, like for DB Rel-11 and DC-HSUPA+CS in Rel-12.

=> Dual Band HSUPA capability will be ported into Rel-11. DC-HSUPA+CS will not be ported for now.=> With the porting to early releases the impact to specifications will be limited to the 25.331 and 25.306 to add the capability bit.

How to port the capability*There are two options:*

1 – port Rel-13 capability container to Rel-11 and dummify all other IEs

2 - split capability container in Rel-13 for DB-DC-HSUPA and other capabilities and only port the DB-DC-HSUPA container

- Ericsson indicates that once we dummify the other IEs we cannot un-dummify.

=> Add to the ASN.1 open issue – discuss how to capture the Rel-13 capability for DB-DC-HSUPA. Ericsson will check if option 2 is easily done.

=> Noted

11.7 WI: Application specific Congestion control

(ACDC-RAN-Core; leading WG: RAN2; REL-13; started: Mar. 15; closed: Dec. 15; WID: RP-150512)

Closed WI

UMTS specific aspects of ACDC

R2-161437 Correction of Application specific Congestion control for Data Communication (ACDC) in UTRAN Ericsson CR 25.331 13.1.05836 - F Rel-13 ACDC-RAN-Core

Nokia: We think no clarification is needed as it is already clear from the Tabular that when the UE is not barred it will apply the ACDC barring bitmap.

The proposed changes to the following procedure text are not needed:

> 3> if the IE "ACDC-ACB-barringBitmap" is present, and it indicates that the ACDC category is no longer barred. Act on the IE "ACDC-ACB-barringBitmap" when initiating an RRC Connection establishment to the PS domain.

All other changes are agreed.

=> The CR is revised in R2-161842

R2-161842 Correction of Application specific Congestion control for Data Communication (ACDC) in UTRAN Ericsson CR 25.331 13.1.05836 1 F Rel-13 ACDC-RAN-Core

=> Change consequences if not approved to “IEs are misplaced”

=> The CR is agreed in R2-161815 r2 with the change to the cover page.

11.8 WI: Indoor Positioning enhancements for UTRA and LTE

(UTRA_LTE_iPos_enh-Core; leading WG: RAN2; REL-13; started: Sept. 15; closed: Dec. 15; WID: RP-152251)

Closed WI

UMTS specific aspects of indoor positioning

R2-161668 Indoor Positioning RRC corrections NextNav CR 25.331 13.1.05840 - F Rel-13 UTRA_LTE_iPos_enh-core

The companies are ok with the proposed change to the Semantic description.

The ASN.1 changes can be covered in the ASN.1 Review CR.

Samsung Exhibit 1025, Page 1466 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> The CR is agreed in R2-161841

11.9 WI: Downlink TPC enhancements for UMTS

(UTRA_EDL_TPC-Core; leading WG: RAN1; REL-13; started: Sept. 15; closed: Dec. 15; WID: RP-151880)

Closed WI

R2-161574 Remaining open issues for the TPC enhancements Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
late

Nokia: This is a limitation of the existing framework in UMTS rather than in TPC feature.
Ericsson: We think Option2 could be complex as to the Use Cases and would need analysis.

=> Noted.

R2-161724 Discussion on remaining possible open issues for Downlink TPC enhancements for UMTS Huawei, HiSilicon discussion
Nokia: We don't challenge the presented Use Cases, as pointed out some of them can be done with the 2 step approach.
Huawei: The paper points out that the the one step approach is not possible in currect specification.

=> Noted.

R2-161725 Clarification of downlink TPC enhancements Huawei, HiSilicon CR 25.331 13.1.05847 - F Rel-13 UTRA_EDL_TPC-Core

Ericsson: Our understanding is that the same algorithm has to be applied for all the RL's in the Active Set.

The wording on the note in 8.3.4.3 can be worked on by companies offline.

Nokia: Did the agreed CR capture the case where a new RL is added which used Algorithm 3 and DTX is already active?
Huawei: If DTX is active then NW should not configure with Algorithm 3.
Nokia: One possibility is to add a new check in the section which describes the actions for DTX_DRX_STATUS variable.
Huawei: We should separate the discussion.

=> The CR is revised in R2-161843

R2-161843 Clarification of downlink TPC enhancements Huawei, HiSilicon CR 25.331 13.1.05847 1 F Rel-13 UTRA_EDL_TPC-Core
=> The CR is agreed

R2-161844 CR to 25.306 on updating the capability name for supporting power control algorithm 3d for UTRA sessionHuawei, HiSilicon CR 25.306 13.0.0 0504 F
=> Update to category D – it is only editorial
=> delete "or not"
=> The CR is agreed in R2-161820 r1 with the changes above

11.10 WI: Dual Carrier HSUPA Enhancements for UTRAN CS

(DC_HSUPA_CS-Core; leading WG: RAN2; REL-13; started: Sept. 15; target: Dec. 15; WID: RP-151780)

Closed WI

No contributions received.

Samsung Exhibit 1025, Page 1467 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.11 UMTS TEI13 enhancements

Small Technical Enhancements affecting UMTS Rel-13 that do not belong to any Rel-13 WI.

Note: A TEI enhancement proposal should be treated for only one meeting cycle and involve only one WG. Otherwise, a WI should be proposed at RAN plenary!

Rel-13 UE capabilities

R2-161160 On Rel-13 sub-features and UE capabilities Qualcomm Incorporated discussion
- Qualcomm indicates that there are a few TEI13 capabilities, like band group, extended E-UTRA frequency priorities, etc.

=> Add the missing capabilities such that we have the full list of capabilities/features for the plenary and draft an LS

R2-161835 Draft LS to RAN On Rel-13 sub-features and UE capabilities Qualcomm Incorporated LS out

=> change NAICs note to "based on Rel-11 Multi Flow capability"

=> The LS is approved in R2-161813 with the change above

R2-161128 Introduction of capability for extended E-UTRA frequency priorities Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 25.306 13.0.00498 - F Rel-13 LTE_MC_load-Core
- Qualcomm wonders what the status of LTE is? Nokia Net thinks it might be similar but it is still ongoing.

=> Change capability to B

=> name of capability will be aligned with LTE

=> The CR revised in R2-161840

R2-161840 Introduction of capability for extended E-UTRA frequency priorities Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 25.306 13.0.00498 1 F

=> The CR is agreed in R2-161965 CR Rev 2 cat.F

R2-161129 Introduction of capability for extended E-UTRA frequency priorities Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 25.331 13.1.05827 - F Rel-13 LTE_MC_load-Core
- Qualcomm thinks we should make sure we use the same name for the capability

=> Include CR numbers for impacted specs in the cover page

=> The CR is revised in R2-161836

R2-161836 Introduction of capability for extended E-UTRA frequency priorities Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 25.331 13.1.05827 1 B Rel-13 LTE_MC_load-Core

=> Change the capability name in the ASN.1 "supportOfExtendedEUTRAFrequencyPriority"

=> The CR is revised in R2-161854 r2 with the change above

R2-161854 Introduction of capability for extended E-UTRA frequency priorities Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 25.331 13.1.05827 2 B Rel-13 LTE_MC_load-Core

=> The CR is agreed in R2-161966 CR Rev 3 cat.F

R2-161130 Editorial cleanups in the table header with multi-carrier physical channel combinations Rapporteur CR 25.302 13.1.00243 - D Rel-13 TEI13

=> The CR is agreed

R2-161131 Editorial cleanups in structure of the UL MAC control information formats Rapporteur CR 25.321 13.1.00816 - D Rel-13 TEI13

=> The CR is agreed

R2-161284 Correction on UE behaviours on handling E-RGCH configuration Huawei, HiSilicon CR 25.331 13.1.05833 - F Rel-13 EDCH-L23, TEI13
- Nokia Net thinks this is more of an editorial
- Nokia Net indicates that this was discussed in HetNet and the existing spec is correct
- Nokia Net after come back still thinks that this is actually not a mistake. It was a means to ensure that one IE can be signalled without the other.

=> The CR is postponed

Samsung Exhibit 1025, Page 1468 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161525 Reduction of codebook subset restriction signalling overhead in 4Tx_HSDPA Ericsson CR 25.331 13.1.05838 - C Rel-13 4Tx_HSDPA-Core
NOTE: 4Tx_HSDPA-Core was a REL-11 WI code so TEI13 needed
- Huawei is hesitant to introduce additional optimization to MIMO.
- Nokia Net thinks that first we have first understand what the spec does and states that we are trying to optimize 64 bits.

=> The CR is postponed

Rel-14 Items

R2-161232 Simultaneous RAB Setup and Release Ericsson discussion
- Huawei: use case for RAB setup and release?
- E///: in case when the existing RABs reaches the maximum number, and network wants to setup a new RB.
- Huawei confirms maximum number of 16 RABs and 32 RBs.
- QC: implementation wise could be much lower.
- E///; the idea is to save signalling.
- Huawei: to release a PS RAB and setup a PS RAB or CS RAB?
- E///: could be either.
- Huawei: for one RAB with two RBs, you want to release one RB but keep another one?
- E///: this is the current spec today, not the case we would like to discuss.
- Nokia: we have another paper looking this in another angle, for example, to setup/release/reconfigure RAB/RB in one step.
- Huawei: proposal from E/// allows to setup and reconfigure at the same time.

⇨ Noted.

R2-161575 RRC level optimizations Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
late

⇨ Moved from 11.12.2.
- E///: we are open to do this for new features, but for existing ones, we need analysis.
- NN: we don't intend to touch existing features.
- E///: for point 1, we can't remove if we want to reconfigure existing features.
- Huawei: for point 2, what's the purpose, the two messages serve different purpose.
- Nokia: to echo the discussion about TPC enhancements.
- E///: for point 2, we don't support, it is complicated, they are different purpose.
- Huawei: for point 3, what about RB setup message to combine reconfigure and release?
- Nokia: our proposal is more generic.
- Chair: it seems most companies are fine with extending RBR message to include the purpose of setup/release, anyway, further analysis are needed.

⇨ Noted

R2-161233 Generic UPH measurement Ericsson discussion
- QC: all the R12 parameters are listed?
- E///: no, part of them.
- Nokia: in current spec, there is MAC level UPH report to NodeB and NodeB reports to RNC, what are the benefits to introduce a RRC level event?
- E///: it is part of the WI scope.
- Nokia: another option is to extend the MAC level UPH report.
- QC; the proposal is event based, i.e. above or below threshold, not UPH report. And use case is different from MAC level UPH report, and no impact to NodeB.

⇨ Noted.

R2-161289 General considerations on RRC optimization for UMTS Huawei, HiSilicon discussion
- E///: we have a little bit difficult in understanding the delay, maybe just one or two TTI, not that much gain foreseen.
- Huawei: we are still checking the calculation of delays, may come with detailed info next meeting.

⇨ Noted.

R2-161287 Work plan for the WI of DTX and DRX enhancements in CELL_FACH Huawei (Rapporteur) discussion
Companies have no concerns with the proposed Work Plan.
=> Noted.

Samsung Exhibit 1025, Page 1469 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161288 Work plan for the SI of Multi-Carrier enhancements for UMTS Huawei (Rapporteur) discussion
Companies have no concerns with the proposed Work Plan.

=> Noted.

Additional items for Rel-14

R2-161434 On optimized handling of dedicated RNTIs Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
- E///: we don't see any need, especially for the release; not so many RNTIs for the moment, so no need to optimize.

⇨ Noted.

R2-161736 Latency reduction for uplink signalling traffic Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
moved from 5.3 to 11.11
- QC: any specific value? We need to see some system analysis.
- Huawei: whether the cell is overloaded or not? If overloaded, is it possible to get such gain?
- Chair: more offline needed to see the system gain/impact.

⇨ Noted.

11.12 UMTS ASN.1 review

11.12.1 Organisational

Including rapporteur's issue list and CR to 25.331

R2-161197 UMTS REL-13 ASN.1 Review Issue list Ericsson discussion
=> Revised in R2-161851

R2-161851 UMTS REL-13 ASN.1 Review Issue list Ericsson discussion
=> Revised in R2-161852

R2-161852 UMTS REL-13 ASN.1 Review Issue list Ericsson discussion
=> Noted

R2-161839 UMTS ASN.1 correction for Rel-13 Ericsson CR 25.331 13.1.0 5848 - F
=> The CR is revised in R2-161853 and moved to email discussion

✉ **[93#25][UMTS/ASN.1] – Corrections to ASN.1 - Ericsson**
- Agree to CR capturing ASN.1 corrections (R2-161853)
- Conclude on how to capture the Rel-13 capability for DB-DC-HSUPA.
- Deadline: one week after meeting

R2-161198 Hyperlinked Tabular description Ericsson discussion
=> Not treated

R2-161199 Hyperlinked ASN1 Ericsson discussion
=> Not treated

11.12.2 Other

Including discussion documents on issues identified in the review. Note that issues that are specific to a single WI may be better placed within the agenda item of that WI.

R2-161180 Optimizations for the ASN.1 structure of the RRC reconfiguration messagesNokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion
=> Not treated

Samsung Exhibit 1025, Page 1470 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

12 Outgoing LSs and email discussions from UTRA session

12.1 Agreed outgoing LSs from UTRA session

R2-161813 LS to RAN On Rel-13 sub-features and UE capabilities RAN2 LS out to: RAN from: RAN2

R2-161818 LS to R2-161037(R5-155780) - LS on Applicability of FGI3/4 for UMTS test cases for Absolute Priority Reselection in CELL_FACH (contact: Qualcomm) RAN2 LS out

12.2 Email discussions from UTRA

✉ **[93#25][UMTS/ASN.1] – Corrections to ASN.1 - Ericsson**
- Agree to CR capturing ASN.1 corrections (R2-161853)
- Deadline: one week after meeting

✉ **[93#26][UMTS/Access group blocking] – CRs – Huawei**
- Agree to CR package for Rel-12 and Rel-13
- Deadline- end of next week

✉ **[93#27][UMTS/Extended E-UTRA freq band] – Nokia Net**
- Discuss how to handle the Rel-11 case and the backward compatibility issue and confirm whether a note to the 25.331 spec in the 3GPP server needs to be added
- Outcome: agree to the CRs if an agreement is reached
- Deadline: end of next week

13 Comebacks

This agenda item will be used during the meeting. No documents are supposed to be submitted by delegates.

13.1 LTE breakout sessions

13.1.1 Report from the Legacy LTE User Plane session

R2-161771 Report from Legacy LTE UP Session, Session Chair (LGE)
CBF: Report from UP Session, Session Chair
- Ericsson indicate that RAN1 signalling for PDCCH order also provides the CE level to be used.

=> Can be discussed offline whether there should be any different behaviour from legacy when CFRA following PDCCH order fails
=> Discuss offline the CE level selection by the UE for the handover case.
=> HARQ RTT timer length for TDD is FFS

- Ericsson reported from offline that CFRA at HO will provide the UE with a starting CE level

Agreements
- Working assumption is confirmed, for CFRA with PDCCH order, only one dedicated preamble is provided.
- Working assumption is confirmed, for CFRA at handover, only one dedicated preamble is provided.
- For CFRA at handover, the network provides PRACH time/frequency resource associated with all CE levels of the target eNB. Network will provide the UE with a starting CE level. If not provided then UE uses RSRP based selection

Samsung Exhibit 1025, Page 1471 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Starting CE level will be captured in MAC for PDCCH order and handover case.

=> Approved with above further agreements

Legacy

R2-161775 Clarification on MBMS ZTE Corporation, ZTE Trunking Technology Corporation CR 36.300 13.0.00847 - ? Rel-13 TEI13 R2-161117
=> Ageed

MTCe

R2-161776 RA-RNTI for eMTC Ericsson discussion
=> Agreed to include TP in running CR

R2-161777 Introduction of low complexity UE and enhanced coverage features Ericsson CR 36.321 13.0.00845 1 B Rel-13 LTE_MTCe2_L1-Core R2-161695
=> Revision in R2-161975 CR rev 2
=> To include TP from document above.

R2-161975 Introduction of low complexity UE and enhanced coverage features Ericsson CR 36.321 13.0.00845 2 B Rel-13 LTE_MTCe2_L1-Core R2-161777
=> Agreed

13.1.2 Report from LTE Break-Out session

R2-161772 Report from LTE Break-Out Session, Vice-Chair (InterDigital)
CBF: Report from LTE Break-Out Session, Vice-Chair (InterDigital)
=> Revised in R2-161810

R2-161810 Report from LTE Break-Out Session, Vice-Chair (InterDigital)
CBF: Report from LTE Break-Out Session, Vice-Chair (InterDigital)
=> Approved

R2-161806 eD2D Capability Qualcomm Incorporated CR 36.331 13.0.02070 1 C Rel-13 LTE_eD2D_Prox-Core

[CB] to confirm agreement on inter-frequency transmission capability bit in main session

=> Separate capabilities (two) will be introduced
- one capability bit for inter-frequency transmission discovery support – indicates support of discovery transmission in non-serving PCell frequency
- one capability bit for SLSS support

=> Multiple transmission operation is optional and a capability bit is used. If supported, UEs support 8 (fixed) TX HARQ processes.

=> Relay operation is optional and no separate UE capability signalling is introduced. Support of relay operation is implicitly determined based on the SidelinkUEInformation message.

=> Remote UE operation is optional and no separate UE capability signalling is introduced. Support of remote UE operation is implicitly determined based on the SidelinkUEInformation message.

=> Gap support is an optional feature without any capability bit.

=> Rel-13 UEs that support communication support priority handling (PPPP)

=> Out-of-coverage discovery is mandatory for all Rel-13 UEs that support PS communication and no capability bit is introduced (as the UE is out-of-coverage)

- Qualcomm provide outcome of offline that companies agree to add the inter-frequency transmission capability bit. CR is provided in R2-161806

ProSe Rel-13

R2-161806 eD2D Capability Qualcomm Incorporated CR 36.331 13.0.02070 1 C Rel-13 LTE_eD2D_Prox-Core R2-161587

Samsung Exhibit 1025, Page 1472 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Wil be included in the email discussion with the 36.306 CR.

R2-161809 Corrections of TS 36.331 for Relay eMBMS service Huawei CR 36.331 13.0.0
=> Revised in R2-161983
R2-161983 Corrections of TS 36.331 for Relay eMBMS service Huawei CR 36.331 13.0.02107 1 F Rel-13 LTE_eD2D_Prox-Core R2-161809
=> To be merged into the ProSe RRC CR in R2-161798

V2X

R2-161678 Proposed TP update for V2X LG Electronics discussion late
=> Agreed
=> Can be provided to RAN1 together with the outcome of the observations email discussion.

13.1.3 Void

13.1.4 Report from NB-IOT session

R2-161774 Report from LTE Break-Out Session, Session Chair (MediaTek)
CBF: Report from LTE Break-Out Session, Session Chair (MediaTek)
- Intel would like to know the scope of any teleconferences.
=> CR rapporteurs will create a list of open issues to complete the CRs. Teleconferences may be organised to focus on issues that need to be closed. NB_IOT chair will conclude on which open issues to be addressed in a teleconference.

- Ericsson has concern over the message 3 decision and RAN1 have indicated they can support larger TB sizes and there is no technical reason not to use them. They maintain their stroing objection.
- MediaTek acknowledges that the decision was pushed and was based on a show of hands.
- DT would like to continue with the agreed decision.
- ATT support Ericsson. Ericsson think the solution being designed here will rely on trial an error and cause more signalling.
- DT think he system works with the agreement taken.
- Vodafone think the decision will need to be revisited in a future release.
- Chair proposed to agree the following "We agree to 64-bit MSG3 / 25-bit Resume ID"
- Ericsson, SW object to taking this agreement
=> Chair will report to RAN the situation and ask for a decision to be made.
- DT has strong concern that this delays the completion of NB-IOT

=> 2 week email discussion on all CRs to capture agreements from this meeting and proivde an endorsed CR to RAN for information. Rappoertuer may continue email discussion on resolving open aspects.
=> ASN.1 process will be discussed is a separate email discussion and then be treated in the joint session at RAN2#93bis.

✉ **[93#40][NB-IOT/ASN.1] NB-IOT ANS.1 structure (Huawei)**
Intended outcome: Emaril discussion report to next meeting
Deadline: Thursday 24/03/2016

=> With above discussion, the report is approved.

R2-161944 DRAFT Reply LS on Clarifications on RRC Resume Request Nokia to SA3LSout Rel-13 NB_IOT-Core

R2-161995 DRAFT Reply LS on Clarifications on RRC Resume Request Nokia to SA3LSout Rel-13 NB_IOT-Core

Samsung Exhibit 1025, Page 1473 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Approved in R2-162019

R2-161942 Draft Response to LS on NB-IoT work progress in RAN2 NTT Docomo to: CT1 LSout
=> Remove final bullet
=> Approved in R2-162020

R2-161886 Draft LS on Resume Ericsson to: SA2, CT1 LSout

=> Clarify that the RRCCOnnectionResumeRequest is an example name and no decision is yet taken

✉ **[93#28][NB-IOT] LS to CT1 on Resume (Ericsson)**
Intended outcome: Agreed LS to CT1
Deadline: Thursday 02/03/2016

R2-161889 Changes to include paging in RRC for NB-IoT Huawei, HiSilicon, Neul
=> To be covered in email discussion on RRC CR
R2-161890 Changes to include paging in 36.304 for NB-IoT Huawei, HiSilicon, Neul
=> To be covered in email discussion on R36.304 CR

✉ **[93#41][LTE/NB-IOT] Resume operation (Ericsson)**
Clarify resume operation and focus on actions and signalling required.
Intended outcome: Email report to next meeting
Deadline: Thursday 24/03/2016

✉ **[93#42][LTE/NB-IOT] Access Control (LG)**
Progess remaining open issues
✉ Intended outcome: Email report to next meetng
Deadline: Thursday 24/03/2016

✉ **[93#43][LTE/NB-IOT] CP solution (Huawei)**
Progress open issues in CP solution (e.g. PDCP, cause value)
Intended outcome: Emal report to next meeting
Deadline: Thursday 25/03/2016

13.2 UMTS breakout session

13.3 Main session

This section contains a temporary list of comebacks (press F9 to update while the cursor is inside the list).

- => Comeback Friday to approve
- Comeback to approve rapporteur changes
- => Intel to provide a CR for 36.331 in R2-161764 and 36.306 in R2-161769
- => Draft LS to be provided in R2-161766 (Vodafone)
- - New LS
- - New LS in

Samsung Exhibit 1025, Page 1474 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- => Add impact analysis to coversheet. Revision in R2-161767 CR 0138r1
- => Add impact analysis. Revision in R2-161768 CR5826r1
- => Can be discussed offline.
- => CR to be provided in R2-161903 36.331 CR 2098
- => Continue discussion offline (DOCOMO). Update to the CRs may be provided as a result of the offline discussion.
- => Agreed in R2-161891 CR rev 1.
- => Discuss offline whether this is further restricted to just the PTAG in the SCG.
- => Revision in R2-161892
- => Revision in R2-161893
- => Revision in R2-161894 CR rev 1. Cat A CR in R2-161895 CR 0852 rev '-'
- => Revised (based on discussion of previous paper) in R2-161909 CR rev 1
- => Revised (based on discussion of previous paper) in R2-161910 CR rev 1
- => Comeback later in the week if we receive feedback from RAN4
- => Revisit the issue on Friday
- => Revised in R2-161911 CR rev 1. Change WI to LTE_eDL_MIMO_enh-Core
- => Revised in R2-161912 CR rev 1.
- => Offline discussion on whether to add 60ms DRX. If agreeable to add 60ms then can also discuss periodicity for CQI, SR, UE capability, etc (Qualcomm)
- => Offline discussion on mapping of non standardized QCIs
- => Revised in R2-161921 CR rev 1
- => Revised in R2-161922 CR rev 2
- => Revision in R2-161916 CR rev 1
- => Discuss offline whether anything should be merged into the ASN.1 review CR.
- => Offline discussion (Intel)
- => Revision in R2-161859 CR rev 1
- - Discussed jointly with R2-161856
- => Offline discussion to conclude
- => This revision will be used to capture all agreements related to band combination signalling and the conclusion of the offline discussions on band combination signalling.
- => Can be discussed offline. Scope of offline: a/ whether UE reports the with both old format and new format if the eNB requests the new format b/ whether the eNB forwards the old format and the new format to he target eNB / MME c/ whether to report at least 4DL and 2 UL for the legacy format. (Huawei) d/ details related to E.208
- => Revision in R2-161936 CR rev 1
- => Revised in R2-161937 CR rev 1
- => Revised in R2-161938 CR rev 1
- => Offline discussion can conclude whether to merge into ASN.1 review CR

Samsung Exhibit 1025, Page 1475 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- => Offline checking of the document.
- => Revision in R2-161933 CR rev 1
- => Revised in R2-161865 CR 0853 rev '-' CAT F
- => Revision in R2-161866 CR rev 1
- => CR to 36.306 to be provided in R2-161873 CR 0350 (Huawei)
- => Revised in R2-161872 CR rev 1
- => Discussion to continue offline
- => Revision in R2-161778 CR rev 1
- - New document
- => Response to CT1 to be provided in R2-151781 (Intel)
- => Revised in R2-161932
- => Comeback after discussion of Samsung paper
- => Offline discussion on whether we change the previous agreement to have 2 capabilities for split and switched bearer. (Qualcomm)
- => Revised in R2-161786 CR rev 1 to capture all stage 2 agreements from the meeting.
- => Revised on R2-161955
- => Revision in R2-161787 for this change and others from the discussion.
- => Stage 2 CR for all RCLWI agreement in R2-161782 CR 0849.
- => Revision in R2-161783 CR rev 1
- => Revision in R2-161954 CR rev 1
- => Revision in R2-161862 CR rev 1
- => CR and tdoc number to be requested when spec is concluded
- => Revised in R2-161896 CR rev 1
- => Revision in R2-161898 CR 2097 rev'-'
- => Revised in R2-161870 CRrev 1
- => Revised in R2-161958 CR rev 1 Cat F
- => Revised in R2-161960 CR rev 1
- => Revision in R2-161927 CR rev 2
- => Progress the specification offline
- => Revision in R2-161928 CR rev 2
- => Revision R2-161929 CR rev 1
- => Revision R2-161930CR rev 1
- => Discuss offline the SA2 agreements related to proposal 1.5 and identify the impact to RAN2 for the non NB-IoT UEs. 1.4, 1.6 may also be discussed (Intel, Tuesday morning this hotel)
- => Comeback after LS from CT1 is received.
- - New tdoc

Samsung Exhibit 1025, Page 1476 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- => Revised in R2-161967 CR 2106 rev '-'
- => Revision in R2-161789 CR rev 2
- => Comeback to approve
- => Revision in R2-161918 rev 1
- => Revsied in R2-161919
- CBF: Report from UP Session, Session Chair
- CBF: Report from LTE Break-Out Session, Vice-Chair (InterDigital)
- CBF: Report from LTE Break-Out Session, Vice-Chair (CMCC)
- CBF: Report from LTE Break-Out Session, Session Chair (MediaTek)

13.4 Email Discussions from main session

This section contains a preliminary list of email discussions (press F9 to update while the cursor is inside the list). A complete list will be provided on the RAN2 email reflector after the meeting. Also, please see Annex F.

- [93#xx][LTE/NB-IOT] Response LS to SA2 (Vodafone) Intended outcome: Agreed LS to SA2 Deadline: Thursday 25/02/2016
- [93#xx][LTE/ Intra band contiguous CA] (DOCOMO) Disucss legacy UE behaviour and CR to 331 and 306. After agreement of the CRs LS to RAN4 to be agreed. Intended outcome: Agreed CRs to RAN, Agreed LS to RAN4 Deadline: Thursday 25/02/2016
- [93#xx][LTE/NAICS] Discuss RAN4 LS () Intended outcome: Agreed CR for RAN reflecting RAN4 agreements Deadline: Thursday 25/02/2016
- [93#xx][LTE/LAA] IDC for LAA (Intel) Intended outcome: Agreed CR for RAN (conclusion could be no CR to be sent to RAN) Deadline: Thursday 25/02/2016
- [93#xx][LTE/LAA] 331 and 306 CRs (Ericsson) Intended outcome: Agreed CRs to RAN (if RAN1 provide input from their meeting) Deadline: Thursday 25/02/2016
- [93#xx][LTE/eCA] Capabilty CR (Huawei) Intended outcome: Agreed CR to RAN Deadline: Thursday 25/02/2016
- [93#xx][LTE/eCA] Capability backward compatibility (Huawei) Intended outcome: Email discussion report and agreeable CR for next meeting. Deadline: Thursday 24/03/2016
- [93#xx][LTE/SC-PTM] PCell restriction (Nokia) Need to support SC-PTM from PCell, SCell and non serving cell and associated UE capabilites.
- Intended outcome: 36.300, 36.306, 36.331 CRs for RAN if agreement can be reached Deadline: Thursday 25/02/2016
- [93#xx][LTE/MTC] 36.331 CR (Ericsson) Intended outcome: Agreed CR for RAN Deadline: Thursday 25/02/2016
- [93#xx][LTE/MTC] 36.302 CR (Huawei) Intended outcome: Ageed CR for RAN Deadline: Thursday 25/02/2016
- [93#xx][LTE/MTC] 36.304 CR (Huawei) Intended outcome: Agreed CR for RAN Deadline: Thursday 25/02/2016
- [93#xx][LTE/MTC] R8-13 Mandatory features (DOCOMO) Review the Rel-8/9/10/11/12/13 mandatory features (with a FGI or capability indicator) and conclude which are mandatory / optionally for MTC UEs Intended outcome: Email discussion report to next meeting Deadline: Thursday 24/04/2016

Samsung Exhibit 1025, Page 1477 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- ✉ [93#xx][LTE/WLAN] 36.331 CR (Qualcomm) Intended outcome: Agreed CR for RAN Deadline: Thursday 25/02/2016
- ✉ [93#xx][LTE/WLAN] PDCP CR (Intel) Intended outcome: Agreed CR to RAN Deadline: Thursday 25/02/2016
- ✉ [93#xx][LTE/WLAN] Stage 2 CR (Intel) Intended outcome: Agreed CR to RAN Deadline: Thursday 25/02/2016
- ✉ [93#xx][LTE/WLAN] 36.331 CR (Huawei) Intended outcome: Agreed CR for RAN Deadline: Thursday 25/02/2016
- ✉ [93#xx][LTE/MIMO] 36.331 corrections (Samsung) Email to check CR and update to reflect RAN1 agreements from this meeting (any LS received can be taken into account) Intended outcome: Agreed CR to RAN Deadline: Thursday 25/02/2016
- ✉ [93#xx][LTE/LWIP] 36.331 CR (Nokia) Intended outcome: Agreed CR for RAN Deadline: Thursday 25/02/2016
- ✉ [93#xx][LTE/ASN.1] 36.331 CR (Ericsson) Intended outcome: Agreed CR for RAN Deadline: Thursday 25/02/2016
- ✉ [93#xx][LTE/MDT] UL PDCP delay CR (Nokia) Intended outcome: Agreed CR for RAN Deadline: Thursday 25/02/2016
- ✉ [93#xx][NB-IOT/ASN.1] NB-IOT ANS.1 structure (Huawei) Intended outcome: Emaril discussion report to next meeting Deadline: Thursday 24/03/2016
- ✉ [93#xx][NB-IOT] LS to CT1 on Resume (Ericsson) Intended outcome: Agreed LS to CT1 Deadline: Thursday 02/03/2016
- ✉ [93#xx][LTE/NB-IOT] Resume operation (Ericsson) Clarify resume operation and focus on actions and signalling required. Intended outcome: Email report to next meeting Deadline: Thursday 24/03/2016
- ✉ [93#xx][LTE/NB-IOT] Access Control (LG) Progess remaining open issues
- ✉ Intended outcome: Email report to next meetng Deadline: Thursday 24/03/2016
- ✉ [93#xx][LTE/NB-IOT] CP solution (Huawei) Progress open issues in CP solution (e.g. PDCP, cause value) Intended outcome: Emal report to next meeting Deadline: Thursday 25/03/2016

14 Outgoing LS from LTE and Joint

Draft LSs should be submitted to their corresponding agenda item if there is one. If there is no appropriate agenda item, draft LSs may be submitted to this agenda item.

Draft outgoing LSs (not related to any Agenda Item above)

Approved LSs

This section contains a list of approved outgoing LSs (press F9 to update while the cursor is inside the list).

- ✓ => Approved in R2-161779
- ✓ => Approved in R2-161959

15 Any other business

Future meeting dates

Click here for the overview of all RAN2 and RAN meeting dates.

MEETING	DATES	LOCATION	HOST	CO-LOCATION

Samsung Exhibit 1025, Page 1478 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

MEETING	DATES	LOCATION	HOST	CO-LOCATION
RAN2 #93	15 Feb. - 19 Feb. 2016	Malta	EF3	RAN1/2/3/4/5
RAN #71	07 Mar. - 10. Mar. 2016	Gotebory, Sweden	EF3	
RAN2 #93bis	11 Apr. - 15. Apr. 2016	Dubrovnik, Croatia	EF3	
RAN2 #94	23 May - 27 May. 2016	tbd, China	CMCC	RAN1/2/3/4/5
RAN #72	13 Jun. -16 Jun. 2016.	tbd, South Korea	TTA	
RAN2 #95	22 Aug. - 26 Aug. 2016	Gotebory, Sweden	EF3	
RAN #73	19 Sep. - 22 Sep. 2016	tbd, USA	NAF3	

EF3: European Friends of 3GPP
NAF3: North American Friends of 3GPP
JF3: Japanese Friends of 3GPP

16 Closing of the meeting (17:50)

The TSG RAN WG2 chairman Richard Burbidge (Intel Corporation) thanked the delegates for participating and session chairs for contributing to RAN WG2 meeting #93. He also thanked the European Friends of 3GPP (EF3) for hosting this meeting.

TSG RAN WG2 chairman Richard Burbidge (Intel Corporation) closed the meeting on Friday 19.02.2016 around 17:50.

Samsung Exhibit 1025, Page 1479 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex A:
List of participants

The list of participants of this RAN WG2 meeting #93 is be attached to this report.

Total number of participants: 186 (registered before the meeting: 260)

Annex B:
List of Tdocs

The list of Tdocs of this RAN WG2 meeting #93 is attached to this report.

Total number of Tdocs: xxxx of which xx Tdocs are not available, i.e. xxxx Tdocs are available.

Annex C:
Incoming liaison statements for TSG RAN WG2 #93

RAN2 Tdoc	title (original Tdoc; contact)	source	original Tdoc	status	final LS answer	additional comments
R2-161006	LS reply to S4-151565 = R2-156043 on EVS over UTRAN (R1-157584; contact: Ericsson)	RAN1	R1-157584	noted		
R2-161007	LS on Support of EBF/FD-MIMO Features for TM9 (R1-157829; contact: Samsung)	RAN1	R1-157829	noted		
R2-161008	Reply LS to R2-154998 on ProSe UE-to-Network relay (S2-154369; contact: LGE)	SA2	S2-154369	noted		
R2-161009	Reply LS to R3-152366 = R2-156022 on ProSe UE Relaying Support (S2-154426; contact: Ericsson)	SA2	S2-154426	noted		

Samsung Exhibit 1025, Page 1480 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN2 Tdoc	title (original Tdoc; contact)	source	original Tdoc	status	final LS answer	additional comments
R2-161010	Reply LS to R2-154999 on ProSe Direct Discovery out of coverage (C1-154853; contact: LGE)	CT1	C1-154853	noted		
R2-161011	Reply LS to S4-151565 = R2-156043 on EVS over UTRAN (C4-152164; contact: Qualcomm)	CT4	C4-152164	noted		
R2-161012	LS on clarification of RSU types (R1-157821; contact: CATT)	RAN1	R1-157821	noted	R2-161801	
R2-161013	LS on WLAN mobility set configuration for LWA (R3-152905; contact: Intel)	RAN3	R3-152905	noted		
R2-161014	LS on questions on NB-IoT (R3-160135; contact: Vodafone)	RAN3	R3-160135	noted		
R2-161015	LS on Release of Control Plane for DONAS (R3-160140, contact: Alcatel-Lucent)	RAN3	R3-160140	noted		
R2-161016	LS on Multiple uplink NAS PDUs in CIoT optimization (R3-160142; contact: Huawei)	RAN3	R3-160142	noted		
R2-161017	LS on CIOT optimization (R3-160147; contact: Samsung)	RAN3	R3-160147	noted		
R2-161018	LS on distinction of intra-band non-contiguous CA types (R4-158226; contact: NTT DOCOMO)	RAN4	R4-158226	noted		
R2-161019	Further LS to R4-156637 = R2-156034 on RS-SINR measurement report mapping (R4-158389; contact: Ericsson)	RAN4	R4-158389	noted		
R2-161020	LS on maximum UL Transmission timing difference in dual connectivity (R4-158409; contact: Huawei)	RAN4	R4-158409	noted	R2-161998	
R2-161021	LS on introduction of new establishment cause for mobile-originating calls (RP-152295; contact: Noka Networks)	RAN	RP-152295	noted		
R2-161022	Reply LS to R2-153876 on ACDC mechanism (S1-154287; contact: Intel)	SA1	S1-154287	noted		

Samsung Exhibit 1025, Page 1481 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN2 Tdoc	title (original Tdoc; contact)	source	original Tdoc	status	final LS answer	additional comments
R2-161023	Reply LS R2-155003 on V2X message characteristics (S1-154509; contact: Qualcomm)	SA1	S1-154509	noted		
R2-161024	Reply LS to RP-151623 = R2-154015 on New WI on LTE-WLAN RAN Level Integration supporting legacy WLAN (S2-154407; contact: Alcatel-Lucent)	SA2	S2-154407	noted		
R2-161025	Reply LS to R2-154915 on IPsec tunnelling mechanism for LTE-WiFi aggregation (S2-154408; contact: Alcatel-Lucent)	SA2	S2-154408	noted		
R2-161026	Reply LS to R2-153008 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols (SP-150829; contact: Samsung)	SA	SP-150829	noted		
R2-161027	Response LS to R4-156699 = R2-156036 on measurement gap based intra-frequency cell detection for narrow band operation of LC UE (R1-157861; contact: Ericsson)	RAN1	R1-157861	noted		
R2-161028	Reply LS to R2-155509 = R1-156492 and R2-157082 = R1-157808 on direct indication of system information update and other fields (R1-157925; contact: Qualcomm)	RAN1	R1-157925	noted		
R2-161029	Reply LS to R2-154998 on ProSe UE-to-Network relay (C1-154880; contact: LGE)	CT1	C1-154880	noted		
R2-161030	Reply LS to RP-152295 = R2-161021 on introduction of new establishment cause for mobile-originating calls (C1-160792; contact: Nokia Networks)	CT1	C1-160792	noted		
R2-161031	LS on request for information related to IoT (ISO/IEC JTC1/WG10 LS)	ISO/IEC JTC1/WG 10		noted		
R2-161032	LS on CR to 36.201 for Introduction of LAA (R1-157744; contact: Alcatel-Lucent)	RAN1	R1-157744	noted		
R2-161033	LS on RRC parameters for LTE eMTC (R1-157891; contact: Ericsson)	RAN1	R1-157891	noted		

Samsung Exhibit 1025, Page 1482 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN2 Tdoc	title (original Tdoc; contact)	source	original Tdoc	status	final LS answer	additional comments
R2-161034	LS on CR to 36.201 for Introduction of LAA (R1-157900; contact: Alcatel-Lucent)	RAN1	R1-157900	noted		
R2-161035	LS on RAN1 agreements on LAA (R1-157905; contact: Ericsson)	RAN1	R1-157905	noted		
R2-161036	Reply LS to S5-154454 on RAN Sharing Enhancements for LTE (R3-152873; contact: Ericsson)	RAN3	R3-152873	noted		
R2-161037	LS on Applicability of FGI3/4 for UMTS test cases for Absolute Priority Reselection in CELL_FACH (R5-155780; contact: Qualcomm)	RAN5	R5-155780	noted	R2-161818	
R2-161038	LS on LAA (RP-152280; contact: Qualcomm)	RAN	RP-152280	noted		
R2-161039	Reply LS to R2-154935 on System Aspects for LTE-WLAN Radio Level Integration and Interworking Enhancement (S2-154456; contact: Huawei)	SA2	S2-154456	noted		
R2-161040	Reply LS to S4-151160 = R2-154019 on QoS for EVS-VBR Codec Operation (S2-160618; contact: Ericsson)	SA2	S2-160618	noted		
R2-161041	Reply LS to R3-160142 = R2-161016 on Multiple uplink NAS PDUs in CIoT optimization (S2-160828; contact: Qualcomm)	SA2	S2-160828	noted		
R2-161042	Reply to R2-156971 LS on NB-IoT work progress in RAN2 (S2-160905; contact: Vodafone)	SA2	S2-160905	noted		
R2-161043	LS on Co-existence between LTE-WLAN Radio Level Integration and other WLAN offloading solutions (e.g. ANDSF) (S2-160894; contact: Nokia Networks)	SA2	S2-160894	noted		
R2-161044	LS on EVS over CS (S4-160310; contact: Qualcomm)	SA4	S4-160310	noted		
R2-161045	LS on RRC parameters for NB-IoT (R1-160230; contact: Huawei)	RAN1	R1-160230	noted		
R2-161046	Reply LS to R2-157123 on LTE-WLAN Aggregation (S3-160272; contact: Nokia Networks)	SA3	S3-160272	noted		

Samsung Exhibit 1025, Page 1483 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN2 Tdoc	title (original Tdoc; contact)	source	original Tdoc	status	final LS answer	additional comments
R2-161047	Reply LS to R2-157126 on LWIP Solution and DRB distinction (S3-160274; contact: Nokia Networks)	SA3	S3-160274	noted		
R2-161048	LS on Clarifications on RRC Resume Request (S3-160337; contact: Nokia Networks)	SA3	S3-160337	noted	R2-162019	
R2-161049	LS on TM10 CRS-IM UE capability report signalling introduction (R4-158196; contact: Intel)	RAN4	R4-158196	noted		
R2-161050	Response LS to C1-160784 on questions on CIoT (S2-160906; contact: Vodafone)	SA2	S2-160906	noted		
R2-161051	Reply LS to R2-157131 on Control of Unattended/Background Traffic (S1-160326; contact: Verizon)	SA1	S1-160326	noted		
R2-161052	LS on Transmission Power Offset Values for PUCCH Format 4/5 (R1-161212; contact: Samsung)	RAN1	R1-161212	noted		
R2-161053	LS on multiple NB-IoT carriers operation for NB-IoT (R1-161219; contact: NTT DOCOMO)	RAN1	R1-161219	noted		
R2-161054	LS on EB/FD-MIMO Terminologies (R1-161220; contact: Nokia Networks)	RAN1	R1-161220	noted		
R2-161055	Reply LS to R2-157131 on Control of Unattended/Background Traffic (C1-161279; contact: Huawei)	CT1	C1-161279	noted		
R2-161056	LS on maximum DL TBS support for NB-IoT (R1-161246; contact: Huawei)	RAN1	R1-161246	noted		
R2-161057	Reply LS to R4-161140 on channel raster for NB-IoT (R1-161269; contact: ZTE)	RAN1	R1-161269	noted		
R2-161058	LS on PDSCH collision with PSS/SSS/PBCH (R1-161276; contact: Huawei)	RAN1	R1-161276	noted		

Samsung Exhibit 1025, Page 1484 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN2 Tdoc	title (original Tdoc; contact)	source	original Tdoc	status	final LS answer	additional comments
R2-161059	Reply LS to R3-152873 from RAN3 to SA5 on RAN Sharing Enhancements for LTE (S5-161341; contact: Ericsson)	SA5	S5-161341	noted		
R2-161060	Response to R2-156971 LS on NB-IoT work progress in RAN2 (C1-161187; contact: NTT DOCOMO)	CT1	C1-161187	noted	R2-162020	
R2-161061	LS on RAN1 multi-carrier enhancements for UMTS agreements (R1-161185; contact: Huawei)	RAN1	R1-161185	available		not treated due to lack of time
R2-161062	LS on RAN1 Cell Fach DTx/DRx Enhancements (R1-161187; contact: Qualcomm)	RAN1	R1-161187	available		not treated due to lack of time
R2-161063	LS on TR update for latency reduction (R1-161421; contact: Ericsson)	RAN1	R1-161421	noted		
R2-161064	Reply LS on Paging Enhancements (R3-160516; contact: Huawei)	RAN3	R3-160516	available		not treated due to lack of time
R2-161065	Reply LS to R2-157115 on SD-RSRP range (R4-161162; contact: Qualcomm)	RAN4	R4-161162	noted		
R2-161066	LS on IEEE802.11 RSSI Measurement Report Mapping (R4-161185; contact: Ericsson)	RAN4	R4-161185	noted		
R2-161989	LS reply to R2-156978 on capability to distinguish UE between with or without HTF (R4-161343; contact: NTT DOCOMO)	RAN4	R4-161343	noted		
R2-162017	LS on RRC parameters for LTE eMTC (R1-161545; contact: Ericsson)	RAN1	R1-161545	available		not treated due to lack of time

postponed: LS answer was postponed to next RAN2 meeting (note: incoming LS will not be presented again at the next meeting and involved parties are requested to submit proposal for draft outgoing LS answer to next meeting).

Summary:

- In total: 63 LSs (5 on UTRA, 57 on LTE, 1 on joint aspects)
- 5 resubmissions from RAN2 #92
- 59 incoming LSs were noted and 4 were not treated as late incoming LSs.
- 25 of the 63 incoming LSs were received during the RAN2 #93 meeting:
- For 0 incoming LS an LS answer was postponed.

Samsung Exhibit 1025, Page 1485 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex D:
Outgoing liaison statements of TSG RAN WG2 #93

Only final outgoing LSs are listed here.

final LS Tdoc	title	to	cc	contact	reply to	release	WI	comments
R2-161779	LS on TBS ranges for SIB1-BR and paging for Rel-13 eMTC (to: RAN1; cc: -; contact: Ericsson)	RAN1	-	Ericsson		Rel-13	LTE_MTCe2_L1-Core	
R2-161788	Response LS on Paging for MTC (to: RAN3; cc: CT1, SA2, RAN1; contact: Ericsson)	RAN3	CT1, SA2	Ericsson	reply to R3-151311 = R2-153015	Rel-13	LTE_MTCe2_L1-Core	LS sent out on 17.02.2016 during the meeting
R2-161801	Reply LS on RSU Scenarios (to: RAN1; cc: SA1, RAN3; contact: CATT)	RAN1	SA1, RAN3	CATT	reply to R1-157821 = R2-161012	Rel-14	FS_LTE_V2X	LS was sent out on 17.02.2016 during the meeting
R2-161813	LS on Rel-13 sub-features and UE capabilities (to: RAN; cc: -; contact: Qualcomm)	RAN	-	Qualcomm		Rel-13	TEI13	
R2-161818	LS on Applicability of FGI3/4 for UMTS test cases for Absolute Priority Reselection in CELL_FACH (to: RAN5; cc: -; contact: Qualcomm)	RAN5	-	Qualcomm	reply to R5-155780 = R2-161037	Rel-8		
R2-161885	LS on updates for TS 36.300 (to: RAN1, RAN3; cc: -; contact: Huawei)	RAN1, RAN3	-	Huawei		Rel-13	NB-IoT-Core	LS sent out on 17.02.2016 during the meeting
R2-161943	LS on available subframes for paging (to: RAN1; cc: -; contact: Huawei)	RAN1	-	Huawei		Rel-13	NB_IOT-Core	

Samsung Exhibit 1025, Page 1486 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

final LS Tdoc	title	to	cc	contact	reply to	release	WI	comments
R2-161945	LS on extension of search for higher priority PLMN cycle beyond 8 hours (to: SA1, CT1; cc: -; contact: Deutsche Telecom)	SA1, CT1	-	Deutsche Telecom		Rel-13	NB_IOT-Core	
R2-161948	LS on Paging in NB-IoT (to: RAN3, SA2, CT1; cc: -; contact: Ericsson)	RAN3, SA2, CT1	-	Nokia Networks		Rel-13	NB_IOT-Core	
R2-161959	LS on Rel-13 MDT enhancements (to: SA5; cc: RAN3; contact: Nokia Networks)	SA5	RAN3	Nokia Networks		Rel-13	LTE_eMDT2-Core	
R2-161968	LS on Paging Narrowband for eMTC (to: RAN3; cc: -; contact: Qualcomm)	RAN3	-	Qualcomm		Rel-13	LTE_MTCe2_L1-Core	LS was sent out on 19.02.2016 during the meeting
R2-161998	Response LS on maximum UL Transmission timing difference in dual connectivity (to: RAN4; cc: RAN1; contact: Huawei)	RAN4	RAN1	Huawei	reply to R4-158409 = R2-161020	Rel-12	LTE_SC_enh_dualC-Core	
R2-162008	Response LS to C1-160739 = R2-160404 to CT1 on Extended coverage impact on NAS timers (to: CT1; cc: SA2; contact: Intel)	CT1	SA2	Intel	reply to C1-160739 = R2-160404	Rel-13	LTE_MTCe2_L1-Core	
R2-162018	LS on CIoT optimization for non-NB-IoT UEs (to: SA2; cc: CT1, SA3; contact: Intel)	SA2	CT1, SA3	Intel		Rel-13	TEI13, CIoT	
R2-162019	Reply LS on Clarifications on RRC Resume Request (to: SA3; cc: SA2, RAN3; contact: Nokia Networks)	SA3	SA2, RAN3	Nokia Networks	reply to R2-161048 = S3-160337	Rel-13	NB_IOT-Core	
R2-162020	Response to LS on NB-IoT work progress in RAN2 (to: CT1; cc: SA2, RAN3; contact: NTT DOCOMO)	CT1	SA2, RAN3	NTT DOCOMO	reply to R2-161060 = C1-161187	Rel-13	NB_IOT-Core	

Samsung Exhibit 1025, Page 1487 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

final LS Tdoc	title	to	cc	contact	reply to	release	WI	comments
R2-162021	LS on RRC connection resume procedure (to: CT1; cc: SA2, RAN3; contact: Ericsson)	CT1	SA2, RAN3	Ericsson		Rel-13	NB-IoT-Core	The LS out will be provided after email discussion [93#28][NB-IOT]
R2-162022	Reply LS to S2-160906 = R2-161050 on questions on CIoT (to: SA2; cc: -, contact: Vodafone)	SA2	-	Vodafone		Rel-13	NB_IOT-Core	The LS out will be provided after email discussion [93#24][LTE/NB-IOT]
R2-162025	Reply LS on distinction of intra-band non-contiguous CA types (to: RAN4; cc: -; contact: NTT DOCOMO)	RAN4	-	NTT DOCOMO	Reply to R2-161018 = R4-158226	Rel-13	LTE_CA-Core, TEI13	The LS out will be provided after email discussion [93#01][LTE/ Intra band contiguous CA]

Summary:

In total 19 outgoing LSs of RAN2 #93:
1 on UTRA, 18 on LTE/E-UTRA and 0 on joint aspects.

Samsung Exhibit 1025, Page 1488 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex E:
List of agreed CRs for RAN #71

- Overview of xxx agreed and xx technically endorsed RAN2 CRs submitted to RAN #71 (Goteborg, Sweden): see also RP-16xxxx:

*: xx company CRs

Samsung Exhibit 1025, Page 1489 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Figure E-1: RAN2 CRs submitted to the previous and the following RAN plenary #71 (tbc)

Samsung Exhibit 1025, Page 1490 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

The following table includes the RAN2 CRs submitted to RAN #71 in Goteborg, Sweden:

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN2 status	RAN Tdoc	RAN status	Remarks

Samsung Exhibit 1025, Page 1491 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR #	rev	cat	REL	RAN2 Tdoc	Title	SI/WI	RAN2 Source	RAN2 status	RAN Tdoc	RAN status	Remarks

- Rows highlighted in yellow indicate company contributions treated at RAN #71 for which no Tdoc was submitted to RAN2 #93.
- The table above has xxx entries (rows excl. header row) of which xxx CRs were approved at RAN #71:
  - xxx CRs agreed by RAN2 of which then xxx CRs were approved by RAN #71, x were postponed and x CR was revised in company contributions.
  - xx CRs were technically endorsed by RAN2 and xx CRs were postponed at RAN #71.
  - xx company contributions (highlighted in yellow) of which then xx CRs were approved and xx CRs were postponed at RAN #71.

Samsung Exhibit 1025, Page 1492 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

So finally: Approved RAN2 CRs after RAN #71: xxx.

Samsung Exhibit 1025, Page 1493 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex F:
RAN WG2 meeting #93 post processing

Email discussions/approvals

Rapporteur companies are requested to kick-off email discussions as soon as possible via the RAN2 email reflector. Important: In the beginning of the subject of each email the corresponding identifier [...] of the email discussion has to be used in order to allow sorting of the different email discussions.

Email discussions with finalisation by Thu 25.02.2016 midnight Pacific time, i.e. Fri 26.02.2016 9am CET:

[93#01][LTE/ Intra band contiguous CA] (DOCOMO)
- Discuss legacy UE behaviour and CRs to 36.331 and 36.306. After agreement of the CRs, LS to RAN4 to be agreed
- Intended outcome: Agreed CRs to RAN, Agreed LS to RAN4
- Deadline: Thursday 25/02/2016

[93#02][LTE/NAICS] Discuss RAN4 LS (Qualcomm)
- Intended outcome: Agreed CR to RAN reflecting RAN4 agreements
- Deadline: Thursday 25/02/2016

[93#03][LTE/LAA] IDC for LAA (Intel)
- Intended outcome: Agreed CR for RAN (conclusion could be no CR to be sent to RAN)
- Deadline: Thursday 25/02/2016

[93#04][LTE/LAA] 36.331 and 36.306 capability CRs (Ericsson)
- Intended outcome: Agreed CRs to RAN (if RAN1 provide input from their meeting)
- Deadline: Thursday 25/02/2016

[93#05][LTE/eCA] 36.331 capability CR (Huawei)
- Intended outcome: Agreed CR to RAN
- Deadline: Thursday 25/02/2016

[93#45][LTE/eCA] Layer 1 capabilities - 36.306 and 36.331 CRs (DOCOMO)
- Prepare CRs to reflect the new RAN1 agreements on UE capabilities for eCA as communicated in agreed RAN1 LS R1-161547.
- Intended outcome: Agreed CRs to RAN
- Deadline: Thursday 25/02/2016

[93#06][LTE/SC-PTM] PCell restriction (Nokia)
- Need to support SC-PTM from PCell, SCell and non-serving cells and associated UE capabilities.
- Intended outcome: 36.300, 36.306, 36.331 CRs for RAN if agreement can be reached
- Deadline: Thursday 25/02/2016

[93#07][LTE/MTC] 36.331 CR (Ericsson)
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#08][LTE/MTC] 36.302 CR (Huawei)
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#09][LTE/MTC] 36.304 CR (Huawei)
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

Samsung Exhibit 1025, Page 1494 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

[93#11][LTE/WLAN] 36.331 LWA CR (Qualcomm)
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#12][LTE/WLAN] 36.323 PDCP status report CR (Intel)
- Intended outcome: Agreed CR to RAN
- Deadline: Thursday 25/02/2016

[93#13][LTE/WLAN] 36.300 CR (Intel)
- Intended outcome: Agreed CR to RAN
- Deadline: Thursday 25/02/2016

[93#14][LTE/WLAN] 36.331 RCLWI CR (Huawei)
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#15][LTE/MIMO] 36.331 corrections (Samsung)
- Email to check CR and update to reflect RAN1 agreements from this meeting (any LS received from RAN1 can be taken into account)
- Intended outcome: Agreed CR to RAN
- Deadline: Thursday 25/02/2016

[93#16][LTE/LWIP] 36.331 CR (Nokia)
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#17][LTE/ASN.1] 36.331 CR (Ericsson)
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#18][LTE/MDT] UL PDCP delay CR (Nokia)
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#19][LTE/eD2D] – 36.306 Capabilities CR - Qualcomm
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#20][LTE/eD2D] – MAC corrections - Ericsson
- Agree to the merged 36.321 CR R2-161804
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#21][LTE/eD2D] – 36.300 correction CR - Interdigital
- Agree to the CR capturing all agreed corrections to 36.300 (R2-161805)
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#22][LTE/eD2D] – 36.331 correction CR - Samsung
- Agreed to the CR capturing all agreed corrections to 36.331
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#23][LTE/V2X SI] –TP to be sent to RAN1 and LS – LG
- Scope: capture agreed observations into a TP and agree to a LS
- Intended outcome: Agreed LS for RAN1
- Deadline: Thursday 25/02/2016

[93#24][LTE/NB-IOT] Response LS to SA2 (Vodafone)
- Intended outcome: Agreed LS to SA2
- Deadline: Thursday 25/02/2016

Samsung Exhibit 1025, Page 1495 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

[93#25][UMTS/ASN.1] – Corrections to ASN.1 - Ericsson
- Agree to CR capturing ASN.1 corrections (R2-161853)
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#26][UMTS/Access group blocking] – CRs – Huawei
- Agree to CR package for Rel-12 and Rel-13
- Intended outcome: Agreed CR for RAN
- Deadline: Thursday 25/02/2016

[93#27] [UMTS/Extended E-UTRA freq band] – Nokia Net
- Discuss how to handle the Rel-11 case and the backward compatibility issue and confirm whether a note to the 25.331 spec in the 3GPP server needs to be added
- Intended outcome: Agreed CR for RAN if an agreement is reached
- Deadline: Thursday 25/02/2016

Email discussions with finalisation by Thu 02.03.2016 midnight Pacific time, i.e. Fri 03.03.2016 9am CET:

[93#28][NB-IOT] LS to CT1 on Resume (Ericsson)
- Intended outcome: Agreed LS to CT1
- Deadline: Thursday 02/03/2016

[93#29][LTE/NB-IOT] CR for 36.300 (Huawei)
- Intended outcome: Endorsed running CR
- Deadline: Thursday 02/03/2016

[93#30][LTE/NB-IOT] CR for 36.331 (Huawei)
- Intended outcome: Endorsed running CR
- Deadline: Thursday 02/03/2016

[93#31][LTE/NB-IOT] CR for 36.304 (Nokia)
- Intended outcome: Endorsed running CR
- Deadline: Thursday 02/03/2016

[93#32][LTE/NB-IOT] CR for 36.321 (Ericsson)
- Intended outcome: Endorsed running CR
- Deadline: Thursday 02/03/2016

[93#33][LTE/NB-IOT] CR for 36.322 (DOCOMO)
- Intended outcome: Endorsed running CR
- Deadline: Thursday 02/03/2016

[93#34][LTE/NB-IOT] CR for 36.323 (Qualcomm)
- Intended outcome: Endorsed running CR
- Deadline: Thursday 02/03/2016

[93#35][LTE/NB-IOT] CR for 36.302 (Huawei)
- Intended outcome: Endorsed running CR
- Deadline: Thursday 02/03/2016

[93#36][LTE/NB-IOT] CR for 36.306 (Ericsson)
- Intended outcome: Endorsed running CR
- Deadline: Thursday 02/03/2016

Samsung Exhibit 1025, Page 1496 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Email discussions with finalisation by Thu 24.03.2016 midnight Pacific time, i.e. Fri 25.03.2016 9am CET:

[93#37][LTE/eCA] Capability backward compatibility (Huawei)
- Intended outcome: Email discussion report and agreeable CR for next meeting.
- Deadline: Thursday 24/03/2016

[93#38][LTE/MTC] R8-13 Mandatory features (DOCOMO)
- Review the Rel-8/9/10/11/12/13 mandatory features (with a FGI or capability indicator) and conclude which are mandatory / optionally for MTC UEs
- Intended outcome: Email discussion report to next meeting
- Deadline: Thursday 24/03/2016

[93#39][LTE/V2X SI] – Additional observations - LG
- Intended outcome: Email discussion report to next meeting
- Deadline: Thursday 24/03/2016

[93#40][NB-IOT] NB-IOT ASN.1 structure (Huawei)
- Intended outcome: Email discussion report to next meeting
- Deadline: Thursday 24/03/2016

[93#41][NB-IOT] Resume operation (Ericsson)
- Clarify resume operation and focus on actions and signalling required.
- Intended outcome: Email discussion report to next meeting
- Deadline: Thursday 24/03/2016

[93#42][NB-IOT] Access Control (LG)
- Progress remaining open issues
- Intended outcome: Email discussion report to next meeting
- Deadline: Thursday 24/03/2016

[93#43][NB-IOT] CP solution (Huawei)
- Progress open issues in CP solution (e.g. PDCP, cause value)
- Intended outcome: Email discussion report to next meeting
- Deadline: Thursday 24/03/2016

[93#44][NB-IOT] Cell reselection and load distribution (Ericsson)
- Cell Reselection and Load Distribution (the topics listed)
- Intended outcome: Email discussion report to next meeting
- Deadline: Thursday 24/03/2016

Samsung Exhibit 1025, Page 1497 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Email discussions with finalisation by Thu 29.01.2015 midnight Pacific time, i.e. Fri 30.01.2015 9am CET:

[92#40][LTE/MTC] Remaining paging issues (Huawei)
Intended outcome: Email discussion report. Deadline 29th Jan

[92#41][LTE/WLAN] 36.323 CR for UE feedback (Intel)
Intended outcome: Agreeable CR for next meeting.

[92#42][LTE/WLAN] New specification (LG)
Intended outcome: Agreeable TS for next meeting.

[92#43][LTE/WLAN legacy AP] RRC CR (ALU)
Intended outcome: Endorsed running CR for next meeting.

[92#44][LTE/MTC] MAC open items (Ericsson)
To address Uplink async HARQ and RA-RNTI formula
Intended outcome: Email discussion report. Deadline 29th Jan

[92#45][LTE/V2X] Capacity Analysis - LG
Capacity analysis unicast, SC-PTM, and MBMSFN for Scenario 2 and 3.
Agree on a set of assumption (RAN1 assumptions are taken as a baseline and discuss the need to change any of the assumption)
Perform the analysis and simulations for each of the agreed scenarios
Draw conclusions/observations based on the results

[92#46][NB-IOT] Access Control (LG)
Discuss and clarify the FFSs above, and issues proposed in the offline email discussion in R2-156972.
Intended outcome: Email discussion report

Samsung Exhibit 1025, Page 1498 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

CRs from other WGs to be agreed/reviewed by RAN2 before RAN #71:

TBD:

Samsung Exhibit 1025, Page 1499 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex G:
LTE Breakout (UP) session

On Monday and on Tursday of RAN2 #93, in parallel to the main LTE session, an LTE User Plane session was held in room Cettina de Cesare III (Level 2) chaired by session chairman SeungJune Yi (LG) addressing:

On Monday:
6.1.2 LTE: Rel-12 and earlier releases: User Plane
6.2.9.2 LTE Other Closed Rel-12 WIs: UP
7.4.3 LTE: Rel-13: WI: WI: Further LTE Physical Layer Enhancements for MTC: Random Access
7.4.6 LTE: Rel-13: WI: WI: Further LTE Physical Layer Enhancements for MTC: User Plane aspects

The corresponding report of this session R2-161771 was presented and approved on Friday and the contents is provided in this Annex G for convenience reasons.

6 LTE: Rel-12 and earlier releases

6.1 LTE: Rel-11 and earlier

6.1.2 User Plane

The documents in this AI treated in the Legacy LTE UP session.

R2-161117 Clarification on MBMS ZTE Corporation, ZTE Trunking Technology Corporation discussion
=> RAN2 confirms following:
-While a MTCH is not scheduled and not suspended, the LCID of the MTCH is listed in the MSI and the MCCH and the value of “Stop MTCH” is set to 2047.
-While a MTCH is suspended, the LCID is not listed in the MCCH and the MSI.
-While a MTCH is to be suspended and the Extended MSI is configured, the LCID of the MTCH is listed in the Extended MSI with “S” field set to “000”. Otherwise, the Extended MSI without S field is used.

Zero value of the “L” field in MAC subheader is invalid for MCH MAC PDU.”
- Intel think we already agreed to allow L=0. ZTE think for unicast L=0 is allowed, but for multicast L=0 should not be allowed. Ericsson wants to have a restriction that the synchronization should be allowed within MBSFN area. CATT agrees.

=> [CBF] Offline discussion to have a text in 36.300 to ensure synchronized transmission. (ZTE Rel-13 CR to 36.300, R2-161775)

6.2 LTE: Rel-12

6.2.9 LTE Other Closed Rel-12 WIs

6.2.9.2 LTE Other Closed Rel-12 WIs – UP

The documents in this AI treated in the Legacy LT UP session.

R2-161611 MCH MAC PDU for unscheduled or suspended MTCH LG Electronics Inc. discussion
=> Noted

R2-161614 Proposed CR to 36.321 on MCH MAC PDU for unscheduled or suspended MTCH LG Electronics Inc. CR 36.321 12.8.00842 - F Rel-12 TEI12

Samsung Exhibit 1025, Page 1500 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161613 Proposed CR to 36.321 on MCH MAC PDU for unscheduled or suspended MTCH LG Electronics Inc. CR 36.321 13.0.0 0841 - A Rel-13 TEI12
=> The CRs are not pursed.

R2-161710 TA timer behaviour QUALCOMM discussion
late
=> The document is postponed to the next meeting due to late submission.
R2-161713 TA timer behaviour QUALCOMM CR 36.321 12.8.0 0848 - F Rel-12 TEI12
late
NOTE: cat.A CR for REL-13 missed?
=> The CR is postponed.

7 LTE Rel-13

7.4 WI: Further LTE Physical Layer Enhancements for MTC

7.4.3 Random Access

R2-161134 Remaining issues on eMTC random access ZTE Corporation discussion
Proposal 7: If the Contention Resolution is considered not successful because of mac-ContentionResolutionTimer expiry, the UE should move to the higher PRACH CE level to proceed to the transmission of preamble; otherwise, the UE should continue in the same PRACH CE level to proceed to the transmission of preamble.
- Intel think RAN1 already made decision that if contention resolution fails the UE stays in current CE level. Huawei agrees.
- MediaTek wonders why do we need different handling for contention resolution failure cases.

=> The UE selects RAP in current CE level when contention resolution fails.

R2-161271 RA-RNTI calculation in Rel-13 low complexity MTC Samsung discussion
=> The document is not presented as already covered by discussion in R2-161734.

R2-161693 Remaining random access issues for BL UEs and UEs in EC Ericsson discussion
=> The document is not presented as already covered by discussion in R2-161734.

R2-161245 On the PREAMBLE_TRANSMISSION_COUNTER in Rel-13 eMTC Samsung discussion
=> The document is not presented as already covered by discussion in R2-161734.

R2-161340 Discussion on the start time of a RAR window HTC Corporation discussion
Proposal1
- LG wonders whether the UE can monitor RAR before the last repetition of RAP.

Proposal2
- LG think if we consider M-PDCCH starting subframe, it will impact all timers. Samsung agrees with LG, and want to follow legacy timer handling.

=> The RAR window starts from 3 subframes after the last repetition of RAP.

R2-161675 Consideration on RA-RNTI for eMTC LG Electronics Inc. discussion
[moved from 7.4.6 to 7.4.3]

=> The document is not presented as already covered by discussion in R2-161734.

R2-161652 PRACH power ramping and power calculation INTERDIGITAL COMMUNICATIONS discussion
[moved from 7.4.6 to 7.4.3]

Samsung Exhibit 1025, Page 1501 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Proposal 2 Introduce an offset to the initial PRACH transmission power formula which compensates for the repetitions of PRACH preamble
- Samsung think it's RAN1 scope.

=> Noted.

R2-161697 RAR 12 bit UL grant size for mode B Ericsson CR 36.321 13.0.00846 - B Rel-13 LTE_MTCe2_L1-Core
[Moved from 7.4.1 to 7.4.3]

=> The change is merged into MAC CR.

7.4.6 User Plane aspects

The documents in this AI treated in the LTE UP session.

Including output of email discussion [92#44][LTE/MTC] MAC open items (Ericsson)

R2-161734 Email discussion report on 92#44 LTE - MTC MAC Open Items Ericsson France S.A.S discussion
late

Proposal 1 Frequency, time, and repetition factor indices (t_id, f_id, and r_id) are used to calculate RA-RNTI as follows: "RA-RNTI = 1 + t_id + 10 * f_id + 60 * r_id"
- Samsung think the eNB cannot differentiate between t_id.
- Samsung think the eNB cannot distinguish between UEs with different radio frames. LG agrees. LG think the original intention of introducing new RA-RNTI is to distinguish between UEs with different radio frames. ZTE also think radio frame should be considered in RA-RNTI. NTT DCM agrees. Huawei agrees.
- Intel think the network side can differentiate UEs with different radio frames. Ericsson has a concern on considering radio frame because the UE has to obtain SFN e.g. in handover. IDT think radio frame is not essential. QC think just considering radio frame does not solve the problem in handover.
- Intel want to clarify first whether two RAR windows with same CE level can overlap or note? If it is not overlapped, e.g. by eNB implementation, then we don't need to consider radio frames.
- Samsung think we need to consider radio frame, but it does not necessarily mean that SFN should be considered in RA-RNTI.
- Ericsson think multiple CE levels can be associated with the same PRACH time/frequency resource.

=> [CBF] Offline discussion for RA-RNTI formula (Ericsson, R2-161776).

Proposal 2 PRACH transmission power is always set to the maximum transmission power only on the 4th PRACH CE level. The UE shall use power ramping on all lower PRACH CE levels, i.e. if less than 4 PRACH CE levels are configured in the serving cell, power ramping is used on all configured PRACH CE levels.
- ZTE wonders why do we need special handling for the 4th CE level. Intel clarifies that it is compromise in RAN1. ZTE think it would be good to have same modeling in MAC perspective, but have upper limit in RAN1 specification.

=> PRACH transmission power is always set to the maximum transmission power only on the 4th PRACH CE level. The UE shall use power ramping on all lower PRACH CE levels, i.e. if less than 4 PRACH CE levels are configured in the serving cell, power ramping is used on all configured PRACH CE levels.

Proposal 3 The UE shall set PREAMBLE_RECEIVED_TARGET_POWER using the PREAMBLE_TRANSMISSION_COUNTER.
Proposal 4 The UE shall set PREAMBLE_RECEIVED_TARGET_POWER to preambleInitialReceivedTargetPower + DELTA_PREAMBLE + (PREAMBLE_TRANSMISSION_COUNTER – 1) * powerRampingStep.
- Intel wants to use PREAMBLE_TRANSMISSION_COUNTER_CE. Samsung think if we use PREAMBLE_TRANSMISSION_COUNTER_CE, the transmission power will be decreased at CE level change.

Samsung Exhibit 1025, Page 1502 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- IDT think when the CE level changes, the number of repetition changes, so it should be taken into account. Intel agrees. Huawei think RAN1 agree not to consider CE level change. Samsung think more repetition with lower power will cause more failure. LG think the issue needs to discussed in RAN1.
- MediaTek think we anyway can't obtain optimal power ramping, so want to go for simple approach.

Show of hands
- Opt1. Use PREAMBLE_TRANSMISSION_COUNTER [7]
- Opt2. Use PREAMBLE_TRANSMISSION_COUNTER_CE [6]
- Opt3. Use PREAMBLE_TRANSMISSION_COUNTER with normalized power ramping step [1]

- Huawei think the legacy behavior is Opt1.

=> Use PREAMBLE_TRANSMISSION_COUNTER, and legacy formula.

Proposal 5 The UE shall set PREAMBLE_RECEIVED_TARGET_POWER to Pcmax – PL (pathloss) for the 4th PRACH CE level if RAN2 agrees that UE transmission power cap, which is specified in 36.213 is not enough.
- Samsung want to use Pmax rather than Pcamx - PL. Huawei think Pmax is RRC signaling, but Pcmax is UE capability.
- Samsung wonders why do we need PL. Why not just using Pcmax? Huawei think it is receiver power, so PL should be considered. Samsung think the power cap is provided in PHY.

=> The maximum power is specified in RAN1 specification.

Proposal 6 Discuss how Rel-13 LC/CE UEs shall acquire all relevant SI parameters, e.g. SIB1 and SIB2 parameters, at handover, i.e. via handover command from the source cell or broadcast information in the target cell.
- Chairman think the issue is whether dedicated preamble is provided per CE level or per UE.
- Intel think in PDCCH order, only one preamble can be provided.
- CATT think CFRA may not be needed.
- Samsung think Option 3 is simple. Intel think in legacy the UE does not do anything if CFRA fails. Panasonic think Option 3 is very new thing. MediaTek think the CFRA failure does not happen often, so want to rely on higher layer.
- Samsung think it is not clear which resource is indicated in PDCCH order.

1st option
- CFRA is not supported in Rel-13.

2nd option
- For CFRA with PDCCH order, only one dedicated preamble is provided.
- For handover, CFRA is not supported in Rel-13.

3rd option
- For CFRA with PDCCH order, only one dedicated preamble is provided.
- At handover, only one dedicated preamble is provided.
- The network provides only one PRACH time/frequency resource together with dedicated preamble.

- Ericsson think there is no problem to support CFRA with PDCCH order, and also handover case. ZTE wonders how the UE acquires the CE level in PDCCH order. Samsung think a new DCI format introduced in RAN1 provides CE level.

=> As a working assumption, for CFRA with PDCCH order, only one dedicated preamble is provided.

=> As a working assumption, for CFRA at handover, only one dedicated preamble is provided.

=> As a working assumption, for CFRA at handover, the network provides PRACH time/frequency resource associated with only one CE level of the target eNB.

Samsung Exhibit 1025, Page 1503 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Proposal 7 There is no explicit feedback for asynchronous UL HARQ; retransmissions are indicated using uplink grants.
- LG ask for the last data transmission, if the UE needs to receive UL grant for the acknowledgement. Panasonic think the eNB does not have to send UL grant. LG think UL grant for initial tx is ACK and UL grant for retx is NACK. Panasonic think it is all eNB scheduling. ZTE agrees. MediaTek think we don't need any explicit ACK/NACK for asynch UL HARQ.

=> There is no explicit feedback for asynchronous UL HARQ; retransmissions are indicated using uplink grants.

Proposal 8 For asynchronous uplink HARQ, the buffer is not flushed.
- QC think we may need some mechanism to flush the HARQ buffer. MediaTek does not see any problem to keep the data in the buffer. QC concerns that keeping the data in the buffer would drain the UE's battery. Ericsson think there is no significant battery consumption problem. Huawei is also not convinced that there is significant battery consumption.
- Samsung point out the buffer is flushed when TAT expires.

=> For asynchronous uplink HARQ, the counter for maximum number of retransmission is not used.

Proposal 9 Rel-13 LC/CE UEs shall use the legacy mechanism to trigger (re)transmissions.

=> Rel-13 LC/CE UEs shall use the legacy mechanism, i.e. based on NDI, to trigger (re)transmissions.

Proposal 10 For asynchronous uplink HARQ, processes are linked to TTIs differently.

=> For asynchronous uplink HARQ, processes are linked to TTIs differently.

Proposal 11 Discuss whether a new section is needed in TS 36.321 to capture the asynchronous UL HARQ mechanism.
- Ericsson shows in the running CR that the asynch HARQ can be captured without a new section.

Proposal 12 DL concept of using retransmission and RTT timers are adopted for UL asynchronous HARQ.

=> Introduce UL HARQ RTT Timer and UL DRX retransmission timer per HARQ process.

DRX

R2-161691 Remaining DRX issues for BL UEs and UEs in EC Ericsson discussion

Proposal1
- Intel think the proposal applies to MPDCCH in general, not only for DRX.

=> For the DRX related timers, the UE waits until the last subframe of the configured MPDCCH search space has been transmitted before executing the next specified action.

Proposal 2 Downlink HARQ RTT Timer is started after the last indicated subframe of the PDSCH transmission.
- Samsung think the HARQ RTT Timer is started after the last subframe of MPDCCH. Huawei agrees. Ericsson think it is kind of a modeling issue, and it is easier to define based on PDSCH. Samsung think we already agreed that drxInactivityTimer is based on MPDCCH. ZTE think if we introduce based on end of PDSCH, it requires change in current specification. Ericsson think we anyway have to change the current specification. LG think current text has to be changed.
- Intel has a slight preference for based on end of PDSCH.

=> Downlink HARQ RTT Timer is started after the last indicated subframe of the PDSCH transmission.

Proposal 3 Downlink HARQ RTT Timer is extended by the value of the used PUCCH repetition factor, where only valid (configured) UL subframes are counted for the extension.
- Huawei clarifies that the proposal applies to both FDD and TDD.

Samsung Exhibit 1025, Page 1504 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- LG think in legacy the UL subframe is also counted.
- ZTE wonders how the PUCCH repetition factor is configured. Ericsson think the PUCCH repetition factor is configured by RRC signaling, having two values, CE mode A and CE mode B.

=> Downlink HARQ RTT Timer is extended by the value of the used PUCCH repetition factor, where only valid (configured) UL subframes are counted for the extension.

Proposal 4 drx-RetransmissionTimer is started on the next MPDCCH starting opportunity after HARQ RTT Timer has expired.

- Samsung wonders whether the UE in Active Time during HARQ Timer expiry and Retx Timer start. Ericsson think it is Inactive Time because Retx Timer is not running.
- LG think in RAR we decide not to consider MPDCCH starting subframe. Thus, we don't need to consider MPDCCH starting subframe in DRX as well. Samsung think for RAR the starting point is important, but for DRX it is not. LG think the benefit of considering MPDCCH starting subframe is same for RAR and DRX. Huawei agree with LG.
- Ericsson clarified that in one cell there is fixed starting point of MPDCCH.
- Ericsson clarified that the gain of the proposal is make the UE not to monitor MPDCCH during HARQ RTT Timer expiry and the next MPDCCH starting subframe.

=> drx-RetransmissionTimer is started on the subframe HARQ RTT Timer has expired.

R2-161270 Open UP Issues in Rel-13 eMTC Samsungdiscussion

Proposal 3: The value range of mac-ContentionResolutionTimer is extended beyond sf240.

- Ericsson think we can add two more values considering the code points. NTT DCM think if we extend contention resolution timer, we have to extend RAR window as well. Ericsson think there is no issue in RAR window.

=> The value range of mac-ContentionResolutionTimer is extended for sf480, sf960.

R2-161456 User Plane Remaining Issues for eMTC Huawei, HiSilicon discussion

=> The document is not presented as already covered by discussion in R2-161734.

R2-161689 MAC impacts of asynchronous HARQ for BL UEs and UEs in EC Ericsson discussion

Proposal 3 State variable HARQ_FEEDBACK is not used or maintained for asynchronous UL HARQ.

=> State variable HARQ_FEEDBACK is not used or maintained for asynchronous UL HARQ.

Proposal 6 The value range of drx-ULRetransmissionTimer is the same as for extended drx-RetransmissionTimer.

=> The value range of drx-ULRetransmissionTimer is the same as for extended drx-RetransmissionTimer.

Proposal 7 Uplink HARQ RTT Timer length is set for 4 subframes.

=> Uplink HARQ RTT Timer length is set for 4 subframes.

Proposal 8 Uplink HARQ RTT Timer is started after the subframe containing the last PUSCH repetition of a transmission.

=> Uplink HARQ RTT Timer is started after the subframe containing the last PUSCH repetition of a transmission.

Proposal 9 drx-ULRetransmissionTimer is started on the next MPDCCH opportunity after HARQ RTT Timer has expired.

=> drx-ULRetransmissionTimer is started on the subframe UL HARQ RTT Timer has expired.

MPDCCH

R2-161273 Text proposal on PCH reception Samsungdiscussion

- Ericsson think PDCCH already covers M-PDCCH.

=> Noted.

MAC running CR

Samsung Exhibit 1025, Page 1505 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161695 Introduction of low complexity UE and enhanced coverage features Ericsson CR 36.321 13.0.00845 - B Rel-13 LTE_MTCe2_L1-Core late

[Moved from 7.4.1 to 7.4.6]

- LG think in 5.4.2.2, asynch UL HARQ does not need to be specified for non-adaptive retx. Ericsson think we have non-adaptive retransmission even in eMTC, within a bundle. LG think MAC just indicates a transmission, and PHY performs repetition. Thus, we don't need to think about non-adaptive retransmission within a bundle. Ericsson think we already agreed that within a bundle the UE performs non-adaptive retransmission. LG think for random access we only consider attempt, and it is strange that we consider repetition in HARQ.
- AsusTek think having just NOTE for SR is not sufficient. LG think RAN2 already agreed to have only one transmission of SR, and repetition is performed in PHY.

=> [CBF] Update of MAC CR (Ericsson Rel-13 CR0845r1 to 36.321, R2-161777).

Samsung Exhibit 1025, Page 1506 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Summary of the LTE UP session

Agreed CRs
None

Agreed outgoing LS
None

Comeback on Friday
R2-161775 Offline discussion to have a text in 36.300 to ensure synchronized transmission (ZTE)
R2-161776 Offline discussion for RA-RNTI formula (Ericsson)
R2-161777 Update of MAC running CR (Ericsson)

E-mail discussion for the next meeting
None

Comeback at the next meeting
None

Agreements on Rel-13 items

eMTC

Random Access
=> The UE selects RAP in current CE level when contention resolution fails.
=> The RAR window starts from 3 subframes after the last repetition of RAP.
=> PRACH transmission power is always set to the maximum transmission power only on the 4th PRACH CE level. The UE shall use power ramping on all lower PRACH CE levels, i.e. if less than 4 PRACH CE levels are configured in the serving cell, power ramping is used on all configured PRACH CE levels.
=> Use PREAMBLE_TRANSMISSION_COUNTER, and legacy formula.
=> The maximum power is specified in RAN1 specification.
=> As a working assumption, for CFRA with PDCCH order, only one dedicated preamble is provided.
=> As a working assumption, for CFRA at handover, only one dedicated preamble is provided.
=> As a working assumption, for CFRA at handover, the network provides PRACH time/frequency resource associated with only one CE level of the target eNB.

HARQ
=> There is no explicit feedback for asynchronous UL HARQ; retransmissions are indicated using uplink grants.
=> For asynchronous uplink HARQ, the counter for maximum number of retransmission is not used.
=> State variable HARQ_FEEDBACK is not used or maintained for asynchronous UL HARQ.
=> Rel-13 LC/CE UEs shall use the legacy mechanism, i.e. based on NDI, to trigger (re)transmissions.
=> For asynchronous uplink HARQ, processes are linked to TTIs differently.

DRX

Samsung Exhibit 1025, Page 1507 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Introduce UL HARQ RTT Timer and UL DRX retransmission timer per HARQ process.
=> For the DRX related timers, the UE waits until the last subframe of the configured MPDCCH search space has been transmitted before executing the next specified action.
=> Downlink HARQ RTT Timer is started after the last indicated subframe of the PDSCH transmission.
=> Downlink HARQ RTT Timer is extended by the value of the used PUCCH repetition factor, where only valid (configured) UL subframes are counted for the extension.
=> drx-RetransmissionTimer is started on the subframe HARQ RTT Timer has expired.
=> The value range of mac-ContentionResolutionTimer is extended for sf480, sf960.
=> The value range of drx-ULRetransmissionTimer is the same as for extended drx-RetransmissionTimer.
=> Uplink HARQ RTT Timer length is set for 4 subframes.
=> Uplink HARQ RTT Timer is started after the subframe containing the last PUSCH repetition of a transmission.
=> drx-ULRetransmissionTimer is started on the subframe UL HARQ RTT Timer has expired.

Samsung Exhibit 1025, Page 1508 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex H:
LTE Breakout (ProSe and V2X) session

On Tuesday and Thursday of RAN2 #93, in parallel to the main LTE session, an LTE ProSe and V2X session was held in room Cettina de Cesare III (Level 2) chaired by RAN2 vice-chairman Diana Pani (Interdigital) addressing.

On Tuesday:
7.5 LTE: Rel-13: WI: ProSe enhancements

On Wednesday:
7.9 LTE: Rel-13: SI: Feasibility Study on LTE-based V2X Services

On Thursday:
7.5 LTE: Rel-13: WI: ProSe enhancements comebacks

The corresponding report of this session R2-161810 was presented and approved on Friday and the contents is provided in this Annex H for convenience reasons.

7.5 WI: ProSe enhancements

(LTE_eD2D_Prox-Core, leading WG: RAN2, REL-13; started: Dec. 14, target: Mar. 16, WID: RP-150441)

WI complete from RAN2 perspective

Documents in this agenda item handled in the LTE Break Out session

Incoming LSs:

R2-161008 Reply LS to R2-154998 on ProSe UE-to-Network relay (S2-154369; contact: LGE)SA2 LS in to: RAN2 Rel-13 eProSe-Ext-SA2, LTE_eD2D_Prox-Core
=> Noted

R2-161009 Reply LS to R3-152366 = R2-156022 on ProSe UE Relaying Support (S2-154426; contact: Ericsson) SA2 LS in to: RAN2 Rel-13 LTE_eD2D_Prox-Core
=> Noted

R2-161010 Reply LS to R2-154999 on ProSe Direct Discovery out of coverage (C1-154853; contact: LGE) CT1 LS in to: RAN2 Rel-13 eProSe-Ext-CT
=> Noted

R2-161029 Reply LS to R2-154998 on ProSe UE-to-Network relay (C1-154880; contact: LGE) CT1 LS in
to: RAN2 Rel-13 eProSe-Ext-CT
Above all LSs are moved from 3.2 to 7.5
=> Noted

UE capabilities:

R2-161587 eD2D Capability Qualcomm Incorporated CR 36.331 13.0.02070 - C Rel-13 LTE_eD2D_Prox-Core
=> The CR is revised in R2-161806

R2-161806 eD2D Capability Qualcomm Incorporated CR 36.331 13.0.02070 1 C Rel-13 LTE_eD2D_Prox-Core
[CB]

R2-161588 Introdusction of eD2D Capability Qualcomm Incorporated CR 36.306 13.0.00343 - C Rel-13 LTE_eD2D_Prox-Core
=> The CR is revised in R2-161807

R2-161807 eD2D Capability Qualcomm Incorporated CR 36.331 13.0.02070 1 C Rel-13 LTE_eD2D_Prox-Core

Samsung Exhibit 1025, Page 1509 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Email discussion

✉ **[93#19][LTE/eD2D] – Capabilities - Qualcomm**

- Agree to 36.306 CR introducing D2D capabilities for Rel-13
- Deadline: end of next week

R2-161597 eD2D Capability aspects Qualcomm Incorporated discussion

Proposal 1: All rel-13 sidelink communication capable UEs support 8 (fixed) TX HARQ processes for multiple destination transmission in a SC period.

Proposal 2: With respect to sidelink discovery, following capability bits are required:

1. *Inter-frequency discovery transmission with SLSS transmission*
2. *Inter-frequency discovery transmission without SLSS transmission*
3. *Sidelink system information reporting.*

Proposal 3: Based on proposal 1 and 2, eD2D capability related CRs are provided in [1] and [2] for TS 36.331 and TS 36.306 respectively.

- Ericsson supports the proposals.

One inter-frequency discovery

- Intel thinks that for the inter-frequency discovery w/wo SLSS capability can be split into SLSS capability and inter-frequency. Samsung wonders why can't use the Rel-12 capability and introduce inter-frequency. Qualcomm explains that there is a difference between the Rel-13 SLSS and Rel-12.
- Huawei thinks that the SLSS capability should be mandatory for inter-frequency especially for unsynchronized networks. Qualcomm explains that this a Rel-12 capability
- Huawei wonders why the inter-frequency with/without SLSS is needed. Qualcomm explains that this to inform the eNB, so if the UE doesn't support SLSS the eNB won't configure the UE in frequencies that require.

HARQ numbers

- LG would like the confirm the final number

Multiple transmissions

- Huawei is not sure that multiple transmissions should be mandatory. Ericsson doesn't see why we would build a UE with multiple HARQ processes but not support multiple transmission. Huawei thinks that multiple HARQ processes don't have to be mandatory.
- Intel's interpretation is that if the UE supports multiple transmissions then the number HARQ of processes will be fixed to 8.
- Qualcomm and Panasonic had the understanding that we already agreed. If the MAC states that the max number is 8, it means it is mandatory.

After comeback

- Intel wonders what other things rel-13 UEs support.
- Samsung thinks that inter-freqeuency should only be for non-serving cell. QC and Intel think that this is for any frequency other than PCell.
- LG doesn't know how the network knows in which band combinations the UE can transmit. QC explains that we have discovery supported frequency signalled and all report supported frequency support inter-frequency transmission. Ericsson agrees.

on inter-frequency capability and how frequency combination support for this feature is signalled (if needed)

- Samsung thinks we have no issue as we can handle it by gap request. LG is still not convinced.
- Qualcomm thinks that the UE shouldn't include the frequencies it can't do inter-frequency. LG thinks this would change Rel-12 interpretation of the signalled frequencies.
- Panasonic wonders if the legacy band combination can be used. Qualcomm explains that the band combinations cannot be used as the existing RF combinations are for rx/rx and for discovery it is rx/tx.

2 ways

- Band combination signalling similar to Rel-12 communication.
- Single UE capability for inter-frequency support

Samsung Exhibit 1025, Page 1510 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

-Capability of supported bands
- Sidelink information discovery tx request in frequency – if you set the inter-frequency capability bit this information means that the UE can do inter-frequency tx on these frequency without a HO (either with gaps or with a second chain).

On the need to mandatorily support for relay UE
- Intel and Ericsson thinks that even relay UE should support the out-of-coverage as it needs to communicate with out-of-coverage UEs and have to do all the procedures. Panasonic doesn't understand why the relay UE has to support out-of-coverage discovery as it doesn't know whether it is communicating with a UE out-of-coverage. Ericsson explains that it has different synchronization behaviour.
- Qualcomm wonders if we also have to mention the SD-RSRP measurement support.

=> Noted

[CB] to confirm agreement on inter-frequency transmission capability bit in main session

=> Separate capabilities (two) will be introduced
- one capability bit for inter-frequency transmission discovery support – indicates support of discovery transmission in non-serving PCell frequency
- one capability bit for SLSS support

=> Multiple transmission operation is optional and a capability bit is used. If supported, UEs support 8 (fixed) TX HARQ processes.

=> Relay operation is optional and no separate UE capability signalling is introduced. Support of relay operation is implicitly determined based on the SidelinkUEInformation message.

=> Remote UE operation is optional and no separate UE capability signalling is introduced. Support of remote UE operation is implicitly determined based on the SidelinkUEInformation message.

=> Gap support is an optional feature without any capability bit.

=> Rel-13 UEs that support communication support priority handling (PPPP)

=> Out-of-coverage discovery is mandatory for all Rel-13 UEs that support PS communication and no capability bit is introduced (as the UE is out-of-coverage)

7.5.1 UE-to-Network Relays

R2-161221 Remaining issues on eSL Samsung Telecommunications discussion late

Proposal 1:

- LG, Huawei, Ericsson, and Nokia thinks that even for one-to-many the eNB needs to know whether it is for relay or non-relay services.
- Nokia Net didn't see an option in the relay request for one-to-many case. Huawei thinks the relay UE needs to send the broadcast request in the UE sidelink.
- Qualcomm is not sure that there is any gains if we distinguish, it is in any case one-to-many. ZTE also doesn't think we should distinguish.
- Ericsson thinks that we agreed to the terminology and it should be reflected in the procedures.
- Huawei thinks that anyways we need to send an indication as it is not clear what the UE should send.
- LG clarifies behaviour that if the UE is a relay, it will follow the Rel-13 behaviour, so there isn't much changes. Qualcomm explains that the in both cases the UE will use the same pool and all it has to do is include the IDs and it doesn't need to distinguish whether the ID is one-to-one or one-to-many.

=> Confirm that no changes are needed regarding the procedures for requesting discovery resources for inter-frequency transmission specifically related to the resource choice value (a.o. acquireSI-FromCarrier)

=> Remove the spares currently defined for discPeriod-v13x0 and gapPeriod can be removed

Samsung Exhibit 1025, Page 1511 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> Noted

R2-161699 Conditions for establishing RRC connection for sidelink operation Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.0 2081 - F Rel-13 LTE_eD2D_Prox-Core
=> Moved from 7.5.5
=> the CR is not pursued

R2-161343 Clarification on the conditions for SidelinkUEInformation transmission and RRC connection establishment Intel Corporation discussion
- Intel clarifies that the real question is whether we should capture the case when the threshold is not onfigured. Nokia Net thinks that it is already clear in the text.
- Qualcomm, InterDigital agrees that we should include that case.

=> RAN2 confirms the intention is that the resource is requested when the threshold is not configured. The rapporteur will find a proper wording.
=> Noted

R2-161222 eD2D relay: inter layer interaction regarding threshold checking Samsung Telecommunications discussion
- Ericsson sees the benefit of doing a clean-up but not sure if it is necessary for this week. Samsung thinks that there are something that are necessary and some that are optional. InterDigital thinks that we can start the necessary changes and the rest of the clean-up can be done after next meeting. Samsung doesn't see a big effort to do the clean-up – it is just a removal from one section. Panasonic agrees with the clean-up.
- Huawei is concerned that this might result in some upper layer impacts. Samsung is still waiting for confirmation on whether there are upper layer impacts. LG and Panasonic don't think that there is any functionality changes and shouldn't be any impact.

=> The hysteresis changes will be added to the specs
=> The inter-layer clean-up can be done by the rapporteur if time permits (otherwise next meeting)
=> Noted

R2-161291 Clarification on informing upper layer of tx resources avaiability LG Electronics France CR 36.331 13.0.0 2024 - F Rel-13 LTE_eD2D_Prox-Core
=> Moved from 7.5.5
- Panasonic thinks this is needed. Samsung, Huawei, Qualcomm and Ericsson assumed the current sentence already covers it. Maybe a minor change like "that" can be changed to "whether".

=> Minor wording update can be done to cover both cases
=> The CR is not pursued

R2-161076 Discussion on conditions to be Remote Ues Huawei, HiSilicon discussion
- Samsung asks if this is different from Rel-12. Huawei confirms.
- Qualcomm explains that we already agreed that we will support only single carrier combination. LG agrees with QC.
- Nokia Net thinks that this would change the definition of what is considered out-of-coverage.
- ZTE also thinks that this is not needed

=> Noted

R2-161077 Corrections of conditions to be remote Ues Huawei, HiSilicon CR 36.331 13.0.0 2000 - F Rel-13 LTE_eD2D_Prox-Core
=> Not treated

R2-161072 Discussion on Multiple Relay UE IDs for a Relay UE Huawei, HiSilicon discussion
In a sidelink period, for each SCI, the relay UE is allowed to transmit MAC PDUs for different source ID-destination ID pairs if they are associated with one destination.
- Qualcomm and Ericsson think that this is only for a scenario that is not very realistic. Nokia Net also thinks this may not even be a valid use case, and should confirm with SA2. Huawei confirms that it has been captured in SA2 specification. Asustek also thinks that this is an observed problem. Between the two options they prefer option 2.

Samsung Exhibit 1025, Page 1512 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Huawei and Asustek thinks that we should maybe send an LS to SA2. Ericsson thinks that we can tell SA2 that we don't support it. Panasonic indicates that it is somehow supported but not in an optimal way. InterDigital agrees and if it is not something that happens often there is no need to optimize.
- LG think this is a real scenario but we don't need to have a strong solution.

=> RAN2 assumes that the scenario can be supported today but in a non-optimal way.
=> Noted

R2-161182 Discussion on Relay UE serving multiple sidelinks for one Remote UE ASUSTEK COMPUTER (SHANGHAI) discussion
- LG and Qualcomm support this proposal as it resolves the issues.
- Intel doesn't see why we would have a solution for something that is not a very practical scenario. Qualcomm thinks that to handle a theoretical scenario we can have a simple solution. ZTE also doesn't see a need for a solution. Ericsson doesn't think that adding a Note is a good way to do this.

=> Noted

R2-161073 Corrections for sidelink operation in TS 36.321 Huawei, HiSilicon CR 36.321 13.0.00822 - F Rel-13 LTE_eD2D_Prox-Core
=> Not treated
R2-161183 Discussion on Relay UE serving multiple sidelinks for one Remote UE ASUSTEK COMPUTER (SHANGHAI) CR 36.331 13.0.02012 - F Rel-13 LTE_eD2D_Prox-Core
Not treated
R2-161752 Index to combined destinationInfoList and destinationInfoListUC Nokia Networks discussion
- Qualcomm agrees that it can happen and we can put a note saying that the maximum total number of the list has to be 16.

=> A note will be added in the RRC spec to limit the max total number of the entries in the list to 16
=> Noted

R2-161079 Discussion and TP on sidelink relay communication Huawei, HiSilicon discussion
Not treated
R2-161080 Discussion and TP on Relay eMBMS service Huawei, HiSilicon discussion
- LG doesn't think this is needed as we can just use the relay request for both cases and with the new IE name that doesn't distinguish between unicast and broadcast this is already possible.
- Huawei thinks that the IDs can be the same so this is a problem.
- Ericsson thinks it can be beneficial for the eNB to know.
- Qualcomm thinks that this brings to many changes to the procedural text

=> If agreeable a complete proposal based on the latest CR should be provided
=> Revised in R2-161803
R2-161803 TP on Relay eMBMS service Huawei, HiSilicon discussion
- LG thinks that the support for this would depend on the amount of change.
- Panasonic still wonders the eNB does with this information.

=> In principle the companies are ok but we should discuss when the CR is complete.
- Samsung thinks that we need to discuss what signalling needs to be added.

=> Noted
[CB]

✉ **[LTE/eD2D] – [CB] - Huawei**
- Determine what signalling needs to be added
- If agreed to introduce it, agree to the CR.

Not treated
R2-161322 Correction on the conditions for establishing RRC Connection for sidelink communication ITRI CR 36.331 13.0.02027 - F Rel-13 LTE_eD2D_Prox-Core
R2-161326 Correction on the conditions for establishing RRC Connection for sidelink discovery ITRI CR 36.331 13.0.02029 - F Rel-13 LTE_eD2D_Prox-Core
R2-161327 Correction on relay related sidelink discovery announcement ITRI CR 36.331 13.0.0 2030 - F Rel-13 LTE_eD2D_Prox-Core

Samsung Exhibit 1025, Page 1513 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161328 Correction on AS-conditions discovery transmission for remote UE ITRI CR 36.331 13.0.02031 - F Rel-13 LTE_eD2D_Prox-Core

R2-161330 Clarifications to Resource Allocation for ProSe UE-to-Network Relay discovery ITRI discussion

R2-161331 Separations of Resource Allocation for relay related/non-relay related Sidelink Discovery ITRI CR 36.300 13.2.00831 - F CR related to R2-161330 Rel-13 LTE_eD2D_Prox-Core

R2-161357 Correction for PC5 to Uu Mobility PANASONIC R&D Center Germany CR 36.331 13.0.02036 - F Rel-13 LTE_eD2D_Prox-Core

R2-161443 Corrections on description of commTxAllowRelayCommon CATT CR 36.331 13.0.02045 - F Rel-13 LTE_eD2D_Prox-Core

R2-161444 Correction on the conditions for sidelink operation CATT CR 36.331 13.0.02046 - F Rel-13 LTE_eD2D_Prox-Core
=> Moved from 7.5.5

R2-161700 Updates to sidelink introduction section Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02082 - F Rel-13 LTE_eD2D_Prox-Core
=> Moved from 7.5.5

R2-161802 Corrections for sidelink remote UEs Huawei, HiSilicon CR 36.300 13.1.0
- Nokia Net is concerned that this wording is changing the definition.
- Intel is fine with the intention.
- Qualcomm clarifies that it is already agreed that for UE-to-NW relay we only support single carrier operation for both remote and relay UE.

=> The common understanding is that for both remote and relay UE only single carrier operation is support (e.g. Uu and Pc5 should be same carrier for relay/remote UEs).
=> The CR is postponed

7.5.2 ProSe discovery in partial- and outside network coverage

Not treated

R2-161703 Sidelink synchronisation Information transmission procedure Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02084 - F Rel-13 LTE_eD2D_Prox-Core
=> Moved from 7.5.5

R2-161706 General clarifications to 36.300 for sidelink operation Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.300 13.2.00846 - F Rel-13 LTE_eD2D_Prox-Core
=> Moved from 7.5.5

R2-161078 Discussion and TP on the carrier for PS discovery Huawei, HiSilicon discussion

R2-161441 Corrections on sidelink related description in TS36.302 CATT CR 36.302 13.0.00067 - F Rel-13 LTE_eD2D_Prox-Core

R2-161341 Clarification on Public Safety Sidelink discovery China Unicom, Huawei, HiSilicon discussion

7.5.3 ProSe discovery for inter-carrier and inter-PLMN

R2-161474 Sidelink discovery gaps at the end of SFN period Ericsson discussion
=> Moved from 7.19.2
- Nokia Net, Qualcomm support the proposal and thinks that Figure 3 can be beneficial. Qualcomm indicates that this only happens in some scenarios and maybe we can add a sentence.
- Huawei is not sure about the problem and if this is a problem why isn't a problem in Rel-12. Qualcomm explains that in Rel-12 the periods were an integer multiple of SFN, but in

Samsung Exhibit 1025, Page 1514 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Rel-13 we did. For communication we were truncating once we cross. Panasonic indicates that in Rle-12 it has been specified in 36.213, but it is different.
- Intel supports the intention.
- Intel would like to take a little time to check whether the offset will impact this. Panasonic thinks that we only need to take care of the period.

=> The period from SFN 0 to the first gapPeriod is not part of the Sidelink Discovery Gap, when the SFN period is not an integer multiple of the gap period.
=> Noted

R2-161475 Correction to SL-GapConfig Ericsson draftCR 36.331 13.0.0 Rel-13 LTE_eD2D_Prox-Core
NOTE: Tdoc type should be "CR", not "draftCR"
=> Moved from 7.19.2
=> Add the following to the *gapOffset* definition: “Indicates the offset from the start of SFN 0 to the start of the first *gapPeriod*. If the SNF period is not an integer multiple of the gap period, during this time period no subframes are considered part of the gap.”
=> the CR is agreed and merged in R2-161798

R2-161292 Reporting of system information with T370 LG Electronics FranceCR 36.331 13.0.02025 - F Rel-13 LTE_eD2D_Prox
- Ericsson wonders why the UE can’t report the information if it has it available already. LG thinks that the intention is to report it at the end and follow legacy behaviour for one shot reporting.
- Intel doesn’t see the need to have different behaviours for connected mode mobility case. For both cases the timer should be stopped.
- InterDigital thinks that with this change the significance of the timer is different.
- Qualcomm clarifies that the intention was for the UE to acquire in a best effort manner and then go back to idle. The new behaviour would cause the UE to stay in connected to report.
- LG thinks that the behaviour is ambiguous – when does the UE report.
- Huawei doesn’t see this proposal as essential.
- Ericsson thinks that we need to add the value of the timer in 9.2.5.
- Qualcomm thinks the behaviour where T370 stops is not correct. The UE can be acquiring SIB19 for its own discovery procedure.

=> The current reporting behaviour as in the existing CR is maintained. Align with T321 for the mobility case, T370 is stopped.
=> The CR is revised in R2-161799

R2-161799 Reporting of system information with T370 LG Electronics FranceCR 36.331 13.0.02025 - F
=> The release of configuration in RRC connection re-establishment is not needed
=> The CR is agreed with the change above and merged into R2-161798

R2-161655 Reporting of system information with T370 LG Electronics Francediscussion
=> Noted

R2-161421 Clarification on the sidelink discovery gap ZTE Corporation discussion
Proposal 1: The MAC entity shall perform the RACH procedure regardless of not only sidelink discovery gap for transmission but also sidelink discovery gap for reception.
- Ericsson is fine with the proposal, however, we haven’t discussed whether we should prioritize Uu transmissions over reception gaps.

Discussion on whether we should prioritize Uu transmissions over reception gaps
- Qualcomm thinks that the agreed behaviour is agreed. If there is rx gap no DL monitoring and if there is an UL already the UE prioritizes Uu transmissions.

=> Noted

R2-161439 MAC Impacts of Sidelink Discovery GapCATT discussion
Proposal: Suggest to clarify in MAC specification that for UE supporting TDD only, the Uu UL transmission will be impacted by the Sidelink Discovery Gap for Reception; and the Uu DL reception will be impacted by the Sidelink Discovery Gap for Transmission.
- Ericsson points out that D2D can only be done in UL subframes, so the second case cannot happen. CATT explains that because of the overhead the gap may overlap with a DL subframe. Ericsson thinks that the eNB can configure this properly, by configuring a rx gap and it doesn’t need to be specified.

Samsung Exhibit 1025, Page 1515 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Qualcomm thinks that the UE can also take this into account and request both tx and rx gaps, since the UE is aware that it won't be able to perform reception. LG thinks that if more gaps than needed are given SL communication will be impacted.

=> Noted

Agreements on gaps:
- The MAC entity shall perform the RACH procedure regardless of not only sidelink discovery gap for transmission but also sidelink discovery gap for reception.
- When there is Rx gaps the UE is not expected to monitor any DL channels. If there are UL Uu transmissions the UE prioritizes them over the reception gaps.
- If, during one subframe in a sidelink discovery gap for transmission, there is a scheduled sidelink communication and sidelink discovery transmission then the sidelink discovery transmission is performed

R2-161303 Clarification on UL HARQ operation due to sidelink gap Innovative Technology Lab Co. CR 36.321 13.0.00826 - F Rel-13 LTE_eD2D_Prox-Core
late
- Ericsson thinks that according to the previous agreements we should transmit SPS during a reception gap. Some changes for the transmissions gaps are necessary.
- Panasonic thinks that we should discuss UE behaviour during gaps. Ericsson thinks that we should have a more detailed analysis and not decide on the fly.

=> The second change will be adapted in the merged CR R2-161804
=> The CR is not pursued

R2-161418 Corrections for sidelink discovery gap in 36.321 ZTE Corporation CR 36.321 13.0.0 0834 - F Rel-13 LTE_eD2D_Prox-Core
=> The rapporteur will consider these changes in a merged CR
=> The CR is not pursued

R2-161519 Corrections to gaps for discovery for inter-carrier and inter-PLMN Interdigital Asia LLC CR 36.321 13.0.00839 - F Rel-13 LTE_eD2D_Prox-Core

- Ericsson thinks that the first change is not needed, because the gaps is quite long and the UE should wait. InterDigital thinks that the "may" would allow the UE to be smarter. Panasonic agrees with Ericsson
- Ericsson thinks we haven't discussed the SR. Panasonic thinks the second agreement is correct as the agreement was any UL.

=> The last change is correct and will be in the merged CR from the rapporteur
=> The CR is not pursued

R2-161442 MAC impacts of Sidelink Discovery Gap CATT CR 36.321 13.0.00836 - F Rel-13 LTE_eD2D_Prox-Core
=> Not treated

R2-161469 Prioritization of Discovery and Communication in the presence of gaps Ericsson discussion
=> Not treated

R2-161470 Correction of prioritization during sidelink discovery gaps Ericsson CR 36.300 13.2.0 0837 - F Rel-13 LTE_eD2D_Prox-Core
=> The CR is agreed and merged into R2-161797

R2-161471 Correction of prioritization during sidelink discovery gaps Ericsson CR 36.321 13.0.0 0837 - F Rel-13 LTE_eD2D_Prox-Core
- Panasonic wonders why we have "or no transmission on PSDCH"

=> revisit "or no transmission on PSDCH"
- ZTE doesn't thinks that "an uplink transmission" should be deleted. Qualcomm is ok to remove it as the last part of the sentence makes it clear that it is a transmission. Ericsson and Huawei thinks that it should be removed as the second condition doesn't depend on UL transmission.

=> The CR is revised in R2-161804 and retitled to "corrections to sidelink"

R2-161804 Correction of sidelink Ericsson CR 36.321 13.0.00837 1 F

Samsung Exhibit 1025, Page 1516 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

=> The CR is moved to email discussion

Email discussion

✉ **[93#20][LTE/eD2D] – MAC corrections - Ericsson**
- Agree to the merged 36.321 CR R2-161804
- Deadline: one week after the meeting

R2-161447 Clarification of discovery announcement and monitoring CATT CR 36.331 13.0.02049 - F Rel-13 LTE_eD2D_Prox-Core
=> The CR is not pursued

7.5.4 Group priorities for ProSe communication

R2-161074 Constraint for Multi-transmission in a SC period Huawei, HiSilicon discussion
- QC agrees that transmission to the same destination shouldn't happen but it is already captured in 36.331. Huawei thinks that we already agreed that we can have same destination and different source IDs.
- ZTE thinks that RLC supports this.
- Intel sees that the new sentence is a subset of the first sentence. Huawei explains that without this change we need to clarify the procedure in the LCP

=> The discussion is postponed for next meeting and addressed together with the source-destination pair issues
=> Noted

R2-161419 Miscellaneous corrections for sidelink in 36.321 ZTE Corporation CR 36.321 13.0.0 0835 - F Rel-13 LTE_eD2D_Prox-Core
=> First change is not needed
=> Second change is acceptable
=> The third change is not needed
- Ericsson wonders why the section on V field is deleted. ZTE explains that it is because the V is only for DST. Qualcomm also doesn't see why this is used for SRC

=> The last two change are acceptable
=> The CR is agreed with the first and third change deleted and merged into R2-161804

R2-161472 Correction on Sidelink LCP Ericsson CR 36.321 13.0.00838 - F Rel-13 LTE_eD2D_Prox-Core
=> Not treated

R2-161524 Corrections to group priorities Interdigital Asia LLC CR 36.321 13.0.00840 - F Rel-13 LTE_eD2D_Prox-Core
First change:
- LG and Panasonic don't thinks the Note is needed as there is a note at the end of the section.

=> Not needed
Second change
- LG thinks this is not needed and Asustek thinks this is clear at the beginning

=> Not needed
Third change
- ZTE thinks change is needed
- Asustek is fine with the change but indicates that at the beginning there is a statement "LCG is defined per ProSe Destination". InterDigital clarifies that if you read it, it seems like we are reporting one LCG.
- Huawei thinks that a change is needed but we need to clarify further.

=> The CR is not pursued

Withdrawn:

R2-161075 Corrections on Multi-transmission in a SC period Huawei, HiSilicon CR 36.321 13.0.0 0823 - F Rel-13 LTE_eD2D_Prox-Core

7.5.5 Other

36.300

Samsung Exhibit 1025, Page 1517 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161513 Clean up and corrections for eD2D Interdigital Asia LLC CR 36.300 13.2.00841 - F Rel-13 LTE_eD2D_Prox-Core
=> moved from 7.5.1
- LG doesn't think that discovery from the second change shouldn't be deleted, as even after L2 link establishment occurs the discovery can continue. Huawei thinks it should be removed as this procedure relates to the UE requesting resources.
=> In section 23.10.3 keep the multiple
=> We will create on CR combining all corrections
=> The CR is revised in R2-161797

R2-161797 Corrections for eD2D Interdigital Asia LLC CR 36.300 13.2.00841 1 F
=> Revised in R2-161805 and moved to email discussion

Email discussion

✉ **[93#21][LTE/eD2D] – 36.300 correction CR - Interdigital**

- Agreed to the CR capturing all agreed corrections to 36.300 (R2-161805)
- Deadline: end of next week

R2-161071 Corrections on description of eProSe in TS 36.300 Huawei, HiSilicon CR 36.300 13.2.00822 - F Rel-13 LTE_eD2D_Prox-Core
NOTE: CR number duplicated due to a system error so another CR number will be provided during the meeting
- Ericsson wonders whether we should also add something in the case the gap is configured. Huawei thinks that we already have some text in 300 describing text. InterDigital thinks that we can adapt the suggested changes.
- Nokia Net wonders whether for commercial gaps the discovery takes priority. Ericsson indicates that this is the case.
=> The text on gap should be revisited after gap discussions
=> The CR is agreed and merged in R2-161797

R2-161420 Miscellaneous corrections for sidelink in 36.300 ZTE Corporation CR 36.300 13.2.0 0833 - F Rel-13 LTE_eD2D_Prox-Core
=> moved from 7.5
- Ericsson doesn't think we should remove the support for broadcast. LG thinks that we also support unicast, how should this be captured. ZTE thinks that if we keep the text there then this will be incorrect, so we should either remove it or add unicast. Qualcomm indicates that from a PHY perspective it is broadcasting.
=> "support for broadcast transmission" is not removed
- Ericsson wonders what is the intention of the first change. ZTE indicates that this is to align with the SA2 definition. Nokia Net would have a preference to indicate unicast and broadcast and thinks that SA2 doesn't accurately captures it. Qualcomm thinks that we should align with SA2 as this is what we decided.
=> We should align to SA2 definition.
- Ericsson wonders why "dedicated" is removed from the last change. Qualcomm indicates that for inter-frequency/PLMN it should be there. Huawei checked and the RRC spec doesn't allow resource pools to be provided by dedicated signalling.
- LG thinks that some more offline is required for the text on gaps. ZTE just wants to make it more readable and separate for transmission and reception.
=> Come back to the text after the gap discussion
=> The CR is agreed and merged in R2-161797 with the changes above

R2-161440 Corrections on sidelink related description in TS36.300 CATT CR 36.300 13.2.00835 - F Rel-13 LTE_eD2D_Prox-Core
- Panasonic thinks the priority order is not correct for gap case
=> We will come back to the gap priority after the gap discussions
- Huawei thinks that Group Destination ID is being used in RAN1. CATT thinks that we should tell RAN1 to change it. Ericsson clarifies that this is also used in the MAC and to make this change we would have to bring CRs to RAN1. Intel thinks that technical perspective group destination ID can cause some confusion. Qualcomm indicates that this was discussed in RAN1 and it wasn't agreed.
=> For now we will keep the existing terminology "group destination ID"
=> The last changes in section 23.10.4 are not needed

Samsung Exhibit 1025, Page 1518 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Qualcomm noticed that all the CRs are using different terminology for unicast and when merging we should use one terminology

=> The terminology "one-to-one communication" should be used.

- Huawei is not sure if we should introduce the control plane figure.

=> The CR is agreed merged in R2-161797 with the changes above

36.331

R2-161081 eSL changes resulting from review for ASN.1 freeze Samsung Telecommunications CR 36.331 13.0.02001 F Rel-13 LTE_eD2D_Prox-Core

=> Revised in R2-161177

R2-161177 eSL changes resulting from review for ASN.1 freeze Samsung Telecommunications CR 36.331 13.0.02001 1 F Rel-13 LTE_eD2D_Prox-Core

=> Moved from 7.19.1

- Ericsson agrees to use this as a baseline and would like to have one merged CR capturing all other agreed changes.

=> The CR is agreed as a baseline and revised in R2-161798

R2-161798 eSL corrections Samsung Telecommunications CR 36.331 13.0.02001 2 F

=> CR is moved to email discussion

Email discussion

✉ **[93#22][LTE/eD2D] – 36.331 correction CR - Samsung**

- Agreed to the CR capturing all agreed corrections to 36.331
- Deadline: end of next week

R2-161796 Review issue list for ASN.1 freeze Ericsson, Samsung

=> We will not go through the issue list and all remaining issues have contributions

=> Noted

R2-161705 Sidelink UE Information procedure Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell CR 36.331 13.0.02085 - F Rel-13 LTE_eD2D_Prox-Core

- Ericsson, Qualcomm, and Samsung are a bit hesitant to do this even though it is interesting.
- Ericsson also indicates that now we have if configured, else required. Nokia Net indicates that this is to clarify what the if/else correspond to.

=> Any clarifications needed on the if/else can be done during the merged CR review

=> The CR is not pursued

R2-161476 Correction related to E.289 Ericsson draftCR 36.331 13.0.0Rel-13 LTE_eD2D_Prox-Core

NOTE: Tdoc type should be "CR", not "draftCR"

=> Moved from 7.19.2

- CATT thinks that this is for PS and it should be clarified. Ericsson thinks that this is clear because it is for UEs out-of-coverage.
- Samsung thinks that we can just add discovery at the beginning of the sentence. Ericsson thinks that in that case it would read like it is one frequency for both. Huawei thinks it should be one frequency. CATT indicates that the agreement is that it can be the same but it is not mandated to be the same. Qualcomm doesn't see why it cannot be the same.

=> Agree that the same frequency will be used for PS communication and PS discovery for out-of-coverage

=> Change the text to "for the frequency used for sidelink communication or discovery, if out of coverage on that frequency as defined in TS 36.304 [4, 11.4]"

=> With this change the CR is agreed and merged in R2-161798

R2-161403 Miscellaneous corrections for sidelink in 36.331 ZTE Corporation CR 36.331 13.0.0 2037 - F Rel-13 LTE_eD2D_Prox-Core

=> Moved from 7.5

- Ericsson wonders what version the CR was based on. ZTE indicates that it is based on the baseline CR from Himke.

On the number of HARQ processes:

- Ericsson thinks that the agreement on the HARQ process was that the number was fixed. Qualcomm confirms that it will be fixed. ZTE thinks that we should clarify this in the MAC

Samsung Exhibit 1025, Page 1519 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

spec. Qualcomm clarifies that in MAC we refer to 36.306 or we should make sure that we do.
=> No signalling needed to configure the number of HARQ process and confirm we refer to 36.306 in the MAC
- Nokia Net thinks that there are some problems with the ASN.1 changes. Samsung indicates that these issues were already resolved in the latest CRs and no changes are needed.
=> The CR is revised R2-161932

R2-161932 Miscellaneous corrections for sidelink in 36.331 ZTE Corporation CR 36.331 13.0.0 2037 - F Rel-13 LTE_eD2D_Prox-Core
=> The Rapporteur will try to align the name in the final merged CR and has already ported the first change
=> the CR is not pursued

R2-161477 Correction related to E.102 Ericsson draftCR 36.331 13.0.0 Rel-13 LTE_eD2D_Prox-Core
NOTE: Tdoc type should be "CR", not "draftCR"
=> Moved from 7.19.2
- Nokia Net asks if there is a use of the destinationInfoListUC in MAC and we should cross check it. Nokia Net confirms that there may be some issues in the MAC as well.
- LG supports the CR and thinks that these changes would avoid a problem identified with the unicast lists.
=> The CR is agreed and merged in R2-161798
=> A MAC CR will be prepared to capture the corresponding impacts

R2-161589 Miscelaneous eD2D corrections Qualcomm Incorporated CR 36.331 13.0.02071 - F Rel-13 LTE_eD2D_Prox-Core
=> Moved from 7.5

1. Increased number of preconfigured discovery Rx pool from 4 to 16 to avoid issues of partial coverage scenario.
2. Increased number of preconfigured discovery pool from 1 to 4 to avoid issues of partial coverage scenario.

- Nokia Net thinks that these changes are functional changes. Samsung indicates that we agreed to these numbers to align with Rel-12. Qualcomm explains that in Rel-12 we only had one Tx pool, but now we have 4Tx pools, so to resolve partial overlap we would need more than 4
=> The Tx pools and RX pools will be increased to 4 and 16 respectively. The reason for change should be updated to properly capture the reason
On multipleTx definition
- Samsung and Intel doesn't understand the concern. Qualcomm is concerned that if it says shall, the UE would be confused if it doesn't have enough data. Nokia Net suggests to put "allowed to" instead. Ericsson and LG sympathise with the proposal.
- Panasonic and Nokia Net think that the second sentence should also be softened
=> The definition will be softened, instead of shall to "should"
Last change in section 5.10.5
- Samsung doesn't see why we have removed non-PS relay. Qualcomm replies that this is applicable to non-PS and commercial. Samsung indicates that the section is only about PS. Qualcomm needs to come back to this.
=> In section 5.10.5 in the last change add "else if configured by upper layers to monitor sidelink discovery announcements; and if the Pcell or the cell the UE is camping on used for sidelink discovery monitoring broadcasts *SystemInformationBlockType19*"
Section 5.10.6
- ZTE doesn't want to remove this sentence "i.e. receive during idle periods or by using a spare receiver;" but just change the wording, from receiver to transmitter. Ericsson thinks that there is an obvious wording should be transmit and not receive. Samsung confirms that the words were changed in the last version of the CR. Intel thinks it is better to remove it. LG thinks that the behaviour will be specified by RAN4 so we can remove it.
- Huawei indicates that this was in Rel-12. Ericsson thinks that companies can submit a Rel-12 CR if they want to change it.
=> The i.e. text will be removed
SL-DiscResourcePool

Samsung Exhibit 1025, Page 1520 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Samsung wonders why we are changing the CellID to a list. Qualcomm is trying to align according to the last RAN2 agreement. LS supports

=> The change is acceptable and the field name should also be changed to "physCellIdList" in both rx and tx pools

Synch configuration

- Samsung would like to do some further check

=> The changes in the CR will be merged into R2-161798

R2-161445 Miscellaneous corrections to 36.331 CATT CR 36.331 13.0.02047 - F Rel-13 LTE_eD2D_Prox-Core

=> For 5.10.11.1 section we can wait until we have the inter-layer interaction discussion

=> Changes on section 5.10.11.3 should be done in the merged CR and the "or" in the second else if should also be deleted

=> The S-RSRP and SD-RSRP definition will be included in the merged CR

=> The CR is not pursued and the two changes above will be merged into R2-161798

R2-161401 Correction for KD-sess Identity in 36.323 ZTE Corporation CR 36.323 13.0.00155 - F Rel-13 LTE_eD2D_Prox-Core

=> The CR is agreed

R2-161290 Alignment with 36.331 LG Electronics FranceCR 36.304 13.0.00291 - F Rel-13 LTE_eD2D_Prox-Core

=> fix editorial in 11.4.1 "apply" instead of applies

=> fix parameter name to disc*ellSelectionInfo* in 11.4.1

=> The CR is agreed in R2-161808 r1 with the changes above

7.11 SI: Feasibility Study on LTE-based V2X Services

(FS_LTE_V2X; leading WG: RAN1; started: June. 15; target: June 16; WID: RP-151109)

Time budget: 1.0 TU

Including output of email discussion [92#45][LTE/V2X] Capacity Analysis - LG

Documents in this agenda item handled in the LTE Break Out session

Incoming LSs:

R2-161012 LS on clarification of RSU types (R1-157821; contact: CATT) RAN1 LS in to: RAN2 Rel-14 FS_LTE_V2X

- Qualcomm would like to indicate to RAN1 that RAN2 has down prioritize scenario 3.

=> Noted

R2-161023 Reply LS R2-155003 on V2X message characteristics (S1-154509; contact: Qualcomm) SA1 LS in to: RAN2 Rel-14 FS_LTE_V2X

Above 2 LSs moved froom 3.2 to 7.12

=> Noted

Latency analysis and enhancements

R2-161116 Summary of email discussion [92#37][LTE/V2X] Latency analysis LG Electronics France discussion result of email discussion [92#37][LTE/V2X] Rel-14 FS_LTE_V2X

=> Add all parameter sets to the TP

- LG indicates that a fixed backhaul delay has been assumed
- QC thinks that this analysis is being done by RAN3 with different backhaul delays. What should we do with this analysis? LG thinks that we can use the value we have assumed as a worst case scenario and we can use the existing spreadsheet to get results with other values.
- QC wonders if we can draw the conclusion in RAN2 that for Scenario 1 and 2 latency is not a problem. LG thinks that we can meet the requirements if a short scheduling period is used. In our observations we can summarize the assumptions we have used to reach the conclusions. QC thinks that with all value ranges 1 or 10ms we are well within the latency requirement. Intel, and Ericsson agree.

Samsung Exhibit 1025, Page 1521 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- ZTE wonders if this UE is in connected mode. LG confirms the UE is connected mode for both RX and TX UEs.
- CATT thinks that we should only focus on Scenario 2 as for Scenario 1 the latency requirements cannot be met for mode 1 with the current scheduling period value. QC clarifies that even for mode 1 there is a scenario where the latency can be met. LG confirms. Intel thinks that mode 1 requirements can be met for both 1ms and 10ms assuming mean value.
- Qualcomm thinks that there are configurations available that can meet latency requirements.
- Huawei indicates that in their observations the requirements for S2 can be met with MBMS and SC-PTM even if the UE is in idle.

Semi Persistent Scheduling introduces latency in case there is timing mismatch between V2V message generation at upper layer and SPS transmission opportunity at AS
- Intel doesn't understand why it is difficult to align the timing. Qualcomm doesn't think this matters

Scenario 3
- Qualcomm doesn't think we should put effort on an unclear scenario 3. Ericsson, Huawei shares QC's view.
- LG thinks we can be down-prioritized for scenario 3, but for V2P this scenario can be important. Qualcomm wonders why V2P can't be done with scenario 2.
- ZTE thinks that scenario 3 if used for V2N and V2I, should be treated with equal priority.

=> Noted

Agreements:
- The latency requirements can be met for Scenario 1 (mode 1) when SR is set to 1ms and 10ms, the UE is in RRC CONNECTED and assuming mean value.
- The latency requirements can be met for Scenario 2 for connected mode UEs assuming:
  - 20ms backhaul delay and no delays related to mobility
  - Short scheduling period (i.e. SR or SPS period - 1ms and 10ms)
  - For MBSFN the scheduling period set to 40ms
- The latency requirements can be met for Scenario 2 using SC-PTM for idle mode UEs assuming:
  - 20ms backhaul delay and no delays related to mobility
  - SR set to 1ms and 10ms
  - Scheduling period 10ms for mean and 1ms for max
- Scenario 3 analysis is down-prioritized for V2V. FFS for V2P.

=> Add this to the backhaul delay assumptions to the TP

R2-161678 Proposed TP update for V2X LG Electronics discussion
late
[CB]

R2-161186 Latency Evaluation and Enhancements CATT discussion
Not treated

Capacity analysis and enhancements

R2-161658 Summary of email discussion on [92#45][LTE/V2X] Capacity Analysis LG Electronics discussion
late
=> Revised in R2-161800

R2-161800 Summary of email discussion on [92#45][LTE/V2X] Capacity Analysis LG Electronics discussion result fo email discussion on [92#45][LTE/V2X]
- LG indicates that there is an offline discussion on the simulation assumptions for the DL.

=> Noted

- On Observation 1: Short SR/SPS periods (i.e. 1 and 10ms SR period, 10 and 40ms SPS period) significantly increase UL overhead for V2V, particularly in urban case with 15 km/h and in Freeway case with 70km/h where the number of vehicles is high.

Samsung Exhibit 1025, Page 1522 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Qualcomm thinks that even though UL overhead increases, we are still within the capacity. LG indicates that the capacity can be met if 100% of the resources are used by V2V, but what is a realistic number. QC, Intel, thinks that V2V should be prioritized over all services so it is ok if we assume 100%. ZTE thinks that we shouldn't impact the LTE services. Ericsson, and NEC share ZTE's view.
- Sequans doesn't think that 10ms increases the overhead too much.
- Qualcomm thinks that we should have a bench mark to determine whether we have capacity problem.
- Huawei indicates that we assumed that there is a dedicate V2X carrier, so we can assume. LG think that we also need to consider co-existence with SL.

=> We cannot assume that 100% of the resources are available for V2V

- Ericsson indicates that in cases where capacity is limited then latency cannot be met.
- LG thinks that for 40ms the capacity is challenging to be met.
- Qualcomm wonders if the assumption for 10ms SPS is that the UE is given a resource every 10ms and not using 90% of the resources. Intel thinks that we can use 100ms SPS period and if the packet generation and SPS are aligned we can then meet latency requirement and capacity. LG thinks that if the timing is completely misaligned then we can't meet the requirements. Qualcomm doesn't see this as a problem as we can change scheduling mechanism. Oppo shares the same view.
- Qualcomm thinks that we should have a statement about the alignment of SPS and packet generation. Intel agrees and we can check if it can be done. Ericsson's understanding is that the packet generation is not very periodic. Intel thinks that if this is the case we should notify RAN1 because they are assuming periodic packet generation. Ericsson indicates that the traffic model for RAN1 was for simulation purposes. The packet generation is in the ETSI specs. LG agrees with Ericsson that the size of the packet can be unpredictable.
- Intel thinks that if traffic model is not periodic then we can just use dynamic scheduling. Ericsson still sees a benefit of using SPS to reduce load of SR.

On DL

- LG summarizes that it is challenging to meet the DL capacity for all the urban cases.
- Ericsson thinks that if we do some QoS improvements we can also consider using unicast for some UEs. It is essential to combine unicast and broadcast. Qualcomm thinks that unicast LTE mechanisms can still be used. LG confirms that SA2 will look at QoS.

On Mobility

- Qualcomm thinks that for LTE we can support up to 250km/hr. LG understands that the requirements in LTE are not as tight as for V2V. Ericsson thinks that this is not a critical issue as we can solve it by eNB implementation or deployments. ZTE thinks that for MBMS and SC-PTM the mobility is not an issue.

- Short SR/SPS periods (i.e. 1 and 10ms SR period, 10 and 40ms SPS period) increase UL overhead for V2V, particularly in urban case with 15 km/h and in Freeway case with 70km/h where the number of vehicles is high.
- However, with dynamic scheduling UL capacity can be met with 1ms SR, assuming 100% of UL resources are available.
- However, for SPS with 10ms the UL capacity cannot be met and for 40ms it is very challenging to meet.
  - Assuming 100% of the resources are not available for V2V, some UL enhancements can be considered.
- If our assumption of 100ms periodicity are confirmed and if somehow SPS can be aligned with the packet generation then an SPS of 100ms can be used.
- It is FFS whether the packet generation is periodic and what the actual size of the packets are.
- It is challenging to meet the DL capacity requirement for the urban cases. We will study DL enhancements to improve the DL capacity.
  - Unicast cannot meet the capacity requirements for urban cases and freeway cases option 1.
  - We will focus on improvements to broadcast mechanisms.
- Message drop rates increase for UEs with high speed due to high handover failure rates particularly in Freeway cases with 140 km/h, and consequently overall PRR performance is degraded.
  - The criticality of these failures is FFS.

Samsung Exhibit 1025, Page 1523 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161104	Capacity analysis for Uu transport of V2V service	Huawei, HiSilicon	discussion
R2-161159	Capacity analysis for Uu transport of V2V service	ZTE Corporation	discussion
R2-161468	V2X Scenario 2 capacity analysis	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion

late

Above 3 Tdocs not treated

Overall Enhancements

R2-161571 Overview of V2X Enhancements for Further RAN2 Work Ericsson discussion

Proposal 1 Study the potential of enhancements to SPS (e.g. allowing multiple SPS configurations per UE) as a means to reduce latency in V2X.

- LG would like to study SPS to reduce overhead. Intel is confused with the periodicity of patterns.
- Huawei wonders if this is for Uu only or for PC5. Ericsson's intention is for Uu. Huawei doesn't see the need to enhance SPS, until we know more. Ericsson's assumption is that the packets are not generated periodically.
- This is for UL SPS

Proposal 2 Study the potential of handover improvements, focusing on improvements for PC5 as a means to reduce latency in V2X.

- ZTE thinks that Uu would be more reliable than PC5. Ericsson clarifies that this is for UEs that are doing PC5 and when they switch cells a mechanism to improve failures is needed. Panasonic would like to understand what the improvement is, since the UE is not prevented from reading the SIB in advance. Ericsson would like to avoid interruption time due to synchronization and time to acquire system information. Panasonic thinks that the optimizations are not very large since the UE should be synchronized with the target cell as it already measured the cell. LG agrees with Panasonic.
- Intel thinks that this would be a new requirement, as the UE can only read the SIB after the handover.
- ZTE is fine with the proposal.
- Huawei thinks that you cannot configure tx pools in the handover command. Panasonic confirms you can.
- LG observes that tx pool could be a problem for cell selection/reselection.

=> Need further thinking if this is a problem for the rx pool. RAN2 thinks that the maybe no problem for tx pool for connected mode.

Proposal 3 Study improvements to MSMS/SC-PTM services on the basis of UE geographical coordinates.

- LG asks what are the AS layer impacts and whether this can be done in the application layer. Ericsson thinks we can discuss where this happens, the intention is to capture that there is some benefits.
- Huawei thinks that we should first study the need for improvement. Qualcomm has performed a study and if we transmit in all cells there is definitely a problem. Intel thinks that the location information can also be used by the eNB for dynamic purposes.
-

Proposal 4 Study potential benefits and solutions for adaptive HARQ retransmissions for SC-PTM.

- LG is fine to study adaptive retransmission, but is hesitant given the UL overhead. Maybe this enhancement can target V2P. We should further include MBMS. LG further is concerned because UEs in idle should also receive such traffic.
- Huawei clarifies that we already studied this in SC-PTM and don't need to study again. The conclusion was that it was beneficial for small number of UEs in the cell.
- Samsung thinks that the UEs are fast moving and this may not be too beneficial.
- Intel is fine to look at that, but it should be RAN1 that looks at that.

=> RAN2 will not study the enhancements. If companies are interested in discussing the gains and benefits of adaptive MCS and HARQ retransmissions for DL broadcast, they can submit documents in RAN1.

Samsung Exhibit 1025, Page 1524 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Proposal 5 Study the potential of RRC suspend-resume functionality as a mean to reduce latency in V2X.

- Intel is fine with studying but we don't want to have a parallel study, so we should wait. Qualcomm thinks that we should be careful as for NB-IoT there was no mobility. LG is supportive of this proposal. LG further thinks we should consider it in the context of V2X architecture.
- Huawei wonders if we have to consider idle mode and what is the use case. LG considers the case where the UE is using PC5 and needs to connect all of a sudden and the re-establishment procedures.
- Panasonic thinks we should down prioritize as power is not an issue
- Intel is open to study.
- Qualcomm is not sure of the use case for idle mode and we need to have focus. Samsung thinks that the NB-IoT is for signalling reduction and not latency. If it fails the latency is worst.
- InterDigital thinks that V2P use case for idle mode can become important.

=> for V2V Uu we will down prioritize the idle mode case

QoS aspects
Study the potential of the QoS framework in V2X.

- Intel and LG think that SA2 should study first and then we can discuss it.
- Nokia Net thinks that we should first decide on the framework and then discuss the details.
- Ericsson and Huawei think that this is critical and we should inform SA2. Huawei sees a benefit for RAN2 to study it in parallel.
- Panasonic doesn't see what the problem is given the Rel-13 priority mechanisms.
- Ericsson thinks that at a minimum we should inform SA2 that we will be studying QoS issues.

=> For next meeting companies can bring contributions to RAN2 describing RAN specific issues to study related to QoS for Uu and PC5. RAN2 does not exclude that these enhancement will have SA2 impacts.

Study the usage of different V2X resource pools for V2I, V2N, V2X

- LG is fine to study. Huawei isn't sure we need to study this. Intel thinks this is premature and it depends on QoS. Ericsson doesn't think this is related to QoS and this UEs are not trusted so the Rel-13 framework cannot be used. Qualcomm thinks that trust can be checked at higher layer.

=> We will revisit later

Proposal 11 Study the impact of supporting inter-operator deployments in V2X, without need for tight coordination between the operators.

- LG thinks that inter-operator deployments are very important, but don't need to restrict to tight coordination.

Proposal 12 Study the UE reporting procedure of geographical coordinates, with the purpose of improving the resource allocation, taking the size of these reports into account.

- LG indicates that this is being studied at the WI phase.

=> Noted

Agreements:
- FFS if SPS enhancements are beneficial, based on findings and better understanding of the traffic characteristics.
- Study mechanisms to improve MBMS/SC-PTM services on the basis of UE geographical location. Whether there is a need for a specific AS mechanism or the application layer mechanism is sufficient it is FFS.
- We will study impact of supporting inter-operator deployments.

✉ **[93#23][LTE/V2X SI] –TP to be sent to RAN1 and LS – LG**

- Scope: capture agreed observations into a TP and agree to a LS
- deadline: end of next week

✉ **[93#39][LTE/V2X SI] – discuss additional observations - LG**

- Scope: discuss additional observations and try to agree on observations
- deadline: before submission deadline for next meeting

Samsung Exhibit 1025, Page 1525 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161659 Challenges and potential enhancements for Uu based V2V LG Electronics discussion
=> Revised in R2-161795
R2-161795 Challenges and potential enhancements for Uu based V2V LG Electronics discussion
Proposal 5: RAN2 consider synchronous PDSCH transmissions from multiple cells as a potential solution for downlink enhancement.
- RAN1 should discuss this.
- Ericsson thinks that for the time being we have enough to focus on. Huawei thinks that if it is not clear whether this is needed so first we should discuss the need.

=> RAN2 will not discuss this. If companies are interested in discussing the need and benefits of this proposal they can submit documents to other WGs.

Proposal 3: RAN2 investigate solutions to reduce MBSFN latency for both control and user plane and consider reduction of the MSI period e.g. to 10ms as a potential solution for downlink enhancement.
- ZTE supports and would like to add MCCH

=> RAN2 will investigate the need and solutions (if needed) to reduce MBSFN latency, primary targeting control plane (but may be used for user plane) as a potential solution for downlink enhancement.
=> Noted

R2-161243 Uu for V2V and V2P Qualcomm Incorporated discussion
R2-161240 Considerations and enhancements for V2X Intel Corporation discussion
R2-161105 Uu-based V2V Transport Based on Location Information Huawei, HiSilicon discussion
R2-161436 Discussion on Latency for Uu-based V2V transport Huawei, HiSilicon discussion
R2-161187 Considerations on Mobility Enhancements CATT discussion
Above 5 Tdocs not treated

R2-161108 Capacity analysis for UL Uu based V2V Sequans Communications discussion
UL
Proposal 2:RAN2 acknowledge that it is beneficial for V2X application to introduce dynamic resource allocation for additional SR opportunities
- Ericsson wonders what dynamic is. Sequans would like to study how to dynamically signal additional SR opportunities via L1/L2. Ericsson isn't convinced that the load changes so quickly. Sequans thinks that for V2X this can happen more.
- Huawei wonders if there is an issue for SR. Sequans responds that it can be an issue if we don't have 100% of resource.

=> Noted

R2-161565 Discussion on Uu Enhancements for V2X Ericsson discussion
R2-161293 Discussion on UE Reporting Issues for V2X Shenzhen Coolpad Technologies discussion
R2-161320 Discussion on the need of PC5 link measurement for V2X ITRI discussion
R2-161335 Discussion on resource allocation for PC5 based V2V KT Corporation discussion
R2-161430 Discussion on the eMBMS based V2X broadcast ZTE Corporation discussion
R2-161566 Sidelink Resource Allocation in V2X Ericsson discussion
R2-161572 Layer- 2 Protocol Stack for PC5-based V2X Ericsson discussion
R2-161188 Consideration on V2X Congestion CATT discussion
R2-161174 Capacity analysis for the case of high density FUJITSU LIMITED discussion
R2-161656 UL and DL resource utilization for Uu-based V2V service Intel Corporation discussion
Above 10 Tdocs not treated

V2X Scenarios

=> Contributions should focus on clarifying FFS on the TP, and how to capture the V2N, V2I, and V2P in view of the existing agreed/prioritized scenarios. No new complicated scenarios are expected.

R2-161568 V2X Scenarios Ericsson discussion
R2-161670 Further discussion on V2X scenarios LG Electronics discussion
R2-161431 Some considerations on multi-carrier and multi-operator support for V2V scenarios ZTE Corporation discussion
R2-161100 Operating Scenarios for the Uu-based V2I Huawei, HiSilicon discussion
R2-161103 Further Considerations and Text Proposals for Scenario 1 Huawei, HiSilicon discussion

Samsung Exhibit 1025, Page 1526 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161106 Further consideration and TP for V2V Scenario 2 and Scenario 3 Huawei, HiSilicon discussion
R2-161189 Uu/PC5 V2V Link Selection CATT discussion
Above 7 Tdocs not treated

Withdrawn:
R2-161402 Discussion on Multi-PLMN for V2X GM - OnStar Europe discussion late
R2-161677 Proposed LS on Uu based V2X LG Electronics LS out

RSU discussion
R2-161190 Discussion on V2X Architecture CATT discussion
Not treated
R2-161185 [draft] Reply LS on RSU Scenarios CATT LS out
=> Add RAN3 to cc
=> the following text has been agreed:
RAN1 requested RAN2 to provide information on agreed scenarios for feasibility study of RSU.

In RAN2#91bis meeting, the scenarios regarding to eNB and UE type RSU were discussed and agreed on the following two scenarios:

- *Scenario 2: UL to DL via E-UTRAN (eNB and RSU eNB type).*
- *Scenario 3: SL to UL via UE type RSU and DL from E-UTRAN (bi-directional will also be included).*

The above two scenarios regarding to RSU have been captured in section 4.2 and section 4.3 of TR 36.885.

In RAN2#93, RAN2 agreed to down prioritize the work on Scenario 3 for V2V. FFS for V2P.

=>With this change the LS is approved in R2-161801

R2-161570 On the Role of the RSU Ericsson discussion
R2-161099 Discussion on V2I/V2N/V2P transport based on PC5 Huawei, HiSilicon discussion
R2-161124 Discussion on UE type RSU Guangdong OPPO Mobile Telecom. discussion
R2-161163 Considerations on eNB type RSU and UE type RSU ZTE Corporation discussion
R2-161636 Resource allocation mechanism for PC5 interface of V2X Potevio Company Limited discussion
R2-161648 Some consideration of RSU Potevio Company Limited response
Above 6 Tdocs not treated

QoS
R2-161101 QoS Support for V2X transmission Huawei, HiSilicon discussion
R2-161567 Traffic Management in V2XEricsson discussion
R2-161125 Discussion on Uu-based V2X Guangdong OPPO Mobile Telecom. Discussion

R2-161102 Draft LS on V2X QoS support Huawei, HiSilicon LS out
R2-161569 DRAFT LS on V2X Subscriber Classification Ericsson LS out
Above 5 Tdocs not treated

Withdrawn:
R2-161635 Some consideration of RSU Potevio Company Limited discussion

Samsung Exhibit 1025, Page 1527 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Agreed outgoing LS

R2-161801 Discussion on V2X Architecture CATT discussion

Comeback on Friday

R2-161806 eD2D Capability Qualcomm Incorporated CR 36.331 13.0.02070 1 C Rel-13 LTE_eD2D_Prox-Core

[CB] to confirm agreement on inter-frequency transmission capability bit in main session

=> Separate capabilities (two) will be introduced
- one capability bit for inter-frequency transmission discovery support – indicates support of discovery transmission in non-serving PCell frequency
- one capability bit for SLSS support

=> Multiple transmission operation is optional and a capability bit is used. If supported, UEs support 8 (fixed) TX HARQ processes.

=> Relay operation is optional and no separate UE capability signalling is introduced. Support of relay operation is implicitly determined based on the SidelinkUEInformation message.

=> Remote UE operation is optional and no separate UE capability signalling is introduced. Support of remote UE operation is implicitly determined based on the SidelinkUEInformation message.

=> Gap support is an optional feature without any capability bit.

=> Rel-13 UEs that support communication support priority handling (PPPP)

=> Out-of-coverage discovery is mandatory for all Rel-13 UEs that support PS communication and no capability bit is introduced (as the UE is out-of-coverage)

R2-161809 Corrections of TS 36.331 for Relay eMBMS service Huawei CR 36.331 13.0.0 [CB]

✉ **[LTE/eD2D] – [CB] - Huawei**
- Determine what signalling needs to be added
- If agreed to introduce it, agree to the CR.

R2-161678 Proposed TP update for V2X LG Electronics discussion

E-mail discussion for the meeting

✉ **[93#19][LTE/eD2D] – Capabilities - Qualcomm**
- Agree to 36.306 CR introducing D2D capabilities for Rel-13
- Deadline: end of next week

✉ **[93#20][LTE/eD2D] – MAC corrections - Ericsson**
- Agree to the merged 36.321 CR R2-161804
- Deadline: one week after the meeting

✉ **[93#21][LTE/eD2D] – 36.300 correction CR - Interdigital**
- Agreed to the CR capturing all agreed corrections to 36.300 (R2-161805)
- Deadline: end of next week

✉ **[93#22][LTE/eD2D] – 36.331 correction CR - Samsung**
- Agreed to the CR capturing all agreed corrections to 36.331
- Deadline: end of next week

✉ **[93#23][LTE/V2X SI] –TP to be sent to RAN1 and LS – LG**
- Scope: capture agreed observations into a TP and agree to a LS

Samsung Exhibit 1025, Page 1528 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- deadline: end of next week

✉ **[93#39][LTE/V2X SI] – discuss additional observations - LG**
- Scope: discuss additional observations and try to agree on observations
- deadline: before submission deadline for next meeting

Summary of Agreements on Rel-13

ProSe

Capabilities
- For discovery: separate capabilities (two) will be introduced
  - one capability bit for inter-frequency transmission discovery support – indicates support of discovery transmission in non-serving PCell frequency
  - one capability bit for SLSS support
- Multiple transmission operation is optional and a capability bit is used. If supported, UEs support 8 (fixed) TX HARQ processes.
- Relay operation is optional and no separate UE capability signalling is introduced. Support of relay operation is implicitly determined based on the SidelinkUEInformation message.
- Remote UE operation is optional and no separate UE capability signalling is introduced. Support of remote UE operation is implicitly determined based on the SidelinkUEInformation message.
- Gap support is an optional feature without any capability bit.
- Rel-13 UEs that support communication support priority handling (PPPP)
- Out-of-coverage discovery is mandatory for all Rel-13 UEs that support PS communication and no capability bit is introduced (as the UE is out-of-coverage)

V2X

Latency
- The latency requirements can be met for Scenario 1 (mode 1) when SR is set to 1ms and 10ms, the UE is in RRC CONNECTED and assuming mean value.
- The latency requirements can be met for Scenario 2 for connected mode UEs assuming:
  - 20ms backhaul delay and no delays related to mobility
  - Short scheduling period (i.e. SR or SPS period - 1ms and 10ms)
  - For MBSFN the scheduling period set to 40ms
- The latency requirements can be met for Scenario 2 using SC-PTM for idle mode UEs assuming:
  - 20ms backhaul delay and no delays related to mobility
  - SR set to 1ms and 10ms
  - Scheduling period 10ms for mean and 1ms for max
- Scenario 3 analysis is down-prioritized for V2V. FFS for V2P.

Capacity

- Short SR/SPS periods (i.e. 1 and 10ms SR period, 10 and 40ms SPS period) increase UL overhead for V2V, particularly in urban case with 15 km/h and in Freeway case with 70km/h where the number of vehicles is high.
- However, with dynamic scheduling UL capacity can be met with 1ms SR, assuming 100% of UL resources are available.
- However, for SPS with 10ms the UL capacity cannot be met and for 40ms it is very challenging to meet.
  - Assuming 100% of the resources are not available for V2V, some UL enhancements can be considered.

Samsung Exhibit 1025, Page 1529 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- If our assumption of 100ms periodicity are confirmed and if somehow SPS can be aligned with the packet generation then an SPS of 100ms can be used.
- It is FFS whether the packet generation is periodic and what the actual size of the packets are.
- It is challenging to meet the DL capacity requirement for the urban cases. We will study DL enhancements to improve the DL capacity.
  - Unicast cannot meet the capacity requirements for urban cases and freeway cases option 1.
  - We will focus on improvements to broadcast mechanisms.
- Message drop rates increase for UEs with high speed due to high handover failure rates particularly in Freeway cases with 140 km/h, and consequently overall PRR performance is degraded.
  - The criticality of these failures is FFS.

Agreed enhancements to study

- FFS if SPS enhancements are beneficial, based on findings and better understanding of the traffic characteristics.
- Study mechanisms to improve MBMS/SC-PTM services on the basis of UE geographical location. Whether there is a need for a specific AS mechanism or the application layer mechanism is sufficient it is FFS.
- We will study impact of supporting inter-operator deployments.
- For V2V Uu we will down prioritize the idle mode case enhancements
- For next meeting companies can bring contributions to RAN2 describing RAN specific issues to study related to QoS for Uu and PC5. RAN2 does not exclude that these enhancement will have SA2 impacts.

Samsung Exhibit 1025, Page 1530 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex I:
LTE Breakout (NB-IoT) session

On Tuesday, Wednesday and Thursday of RAN2 #93, in parallel to the main LTE session, NB-IoT session was held in room State Hall in Palace hotel chaired by session chairman Johan Johansson (MediaTek) addressing:

From Tuesday to Thursday:
7.16 LTE: Rel-13: WI: Narrowband IOT

The corresponding report of this session R2-161774 was presented and approved on Friday and the contents is provided in this Annex J for convenience reasons.

7.16 WI: Narrowband IOT

(NB_IOT-Core; leading WG: RAN1; started: Sep. 15; target: Mar. 16; WID: RP-152284)

Time budget: N/A

7.16.1 General

Organization, Requirements, Overall CP/UP aspects

Pass 1

Incoming LSs:

R2-161014 LS on questions on NB-IoT (R3-160135; contact: Vodafone) RAN3 LS in
cc: RAN2 Rel-13 NB_IOT-Core

⇒ **Noted**

R2-161015 LS on Release of Control Plane for DONAS (R3-160140, contact: Alcatel-Lucent) RAN3 LS in
cc: RAN2 Rel-13 NB_IOT-Core

⇒ **Noted**

R2-161016 LS on Multiple uplink NAS PDUs in CIoT optimization (R3-160142; contact: Huawei) RAN3 LS in
cc: RAN2 Rel-13 NB_IOT-Core

⇒ **Noted**

R2-161017 LS on CIOT optimization (R3-160147; contact: Samsung) RAN3 LS in
to: RAN2 Rel-13 NB_IOT-Core

Draft Reply LS in R2-161879 (Samsung), include agreements related to the question.

⇒ **The Reply LS is postponed, as the topic was not treated at this meeting.**

R2-161041 Reply LS to R3-160142 = R2-161016 on Multiple uplink NAS PDUs in CIoT optimization (S2-160828; contact: Qualcomm) SA2 LS in
cc: RAN2 Rel-13 NB_IOT-Core

- Docomo wonders what is the use case for the multiple packets in the UL? If this is fragmentation?
- QC thinks there is no restriction, could be multiple Data packets, or Data and Signalling.

⇒ **Noted**

R2-161042 Reply to R2-156971 LS on NB-IoT work progress in RAN2 (S2-160905; contact: Vodafone) SA2 LS into: RAN2 Rel-13 NB_IOT-Core

Samsung Exhibit 1025, Page 1531 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Vodafone thinks we don't need explicit reply to this LS. General progress update is sufficient.
- We will discuss this later based on contributions.
- Docomo wonders what are the requirements, from SA2 perspective, this seems not clear.

⇒ **Noted**

Above 6 LSs moved from 3.2 to 7.16.1

R2-161045 LS on RRC parameters for NB-IoT (R1-160230; contact: Huawei) RAN1 LS in to: RAN2 Rel-13 NB_IOT-Core

- We need to take this into account.
- Qualcomm think we need a lot more information. Intel agrees.

⇒ **We await update, RRC CR author could attempt to add.**

⇒ **Noted**

R2-161048 LS on Clarifications on RRC Resume Request (S3-160337; contact: Nokia) SA3 LSin to: RAN2 Rel-13 NB_IOT-Core

- We need to reply, and we can discuss based on contributions.
- Ericsson think that SA3 has considered options that are maybe not the most likely ones.
- Huawei think we might add questions to SA3.

Draft Reply LS in R2-161880 (Nokia), include agreements related to the question.

R2-161880 DRAFT Reply LS on Clarifications on RRC Resume Request Nokia to SA3LSout Rel-13 NB_IOT-Core

- Intel think Q2 is related to MSG5 resume complete and we wait until that comeback has been treated. QC think that we should be celarer what is Question vs what is answer.
- Huawei think we should answer politely to Q3 as well. Intel think we should respond that the resume operation is indeed similar to horizontal handover.
- Ericsson think that MSG4 is sent with security, at least integrity protected, and thus sent on SRB1.
- On Q2 we should respond for both MSG4 and MSG5.
- "channel" should be removed
- Further updates expected

DRAFT update in R2-161944.

R2-161050 Response LS to C1-160784 on questions on CIoT (S2-160906; contact: Vodafone) SA2 LSin to: RAN2 Rel-13 NB_IOT-Core

- Was presented already
- Offline discussion is going on.

⇒ **Noted**

R2-161664 Remaining issues related to CT1/SA2 questions NEC discussion related to LS from SA2 in S2-160906 Rel-13 NB_IOT-Core

- There is no parallel operation of CP solution and UP solution.
- Only one DRB.
- RRC indication for MME selction.
- The reason for the multi-DRB question is about bad-coverage smart-phone that switched to NB-IOT. Sierra wiless think there are other cases as well.
- DT and Huawei think we should not discuss multiple RBs.
- Ericsson think that the limitation on multiple DRB is not in our fundamental design.
- We could respond on the status of our assumptions.

⇒ **We input to offline email discussion**

⇒ **Noted**

R2-161056 LS on maximum DL TBS support for NB-IoT (R1-161246; contact: Huawei) RAN1 LSin to: RAN2

⇒ **Noted**

Samsung Exhibit 1025, Page 1532 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161057 Reply LS to R4-161140 on channel raster for NB-IoT (R1-161269; contact: ZTE) RAN1 LSin
cc: RAN2

⇒ **Noted**

R2-161060 Response to LS on NB-IoT work progress in RAN2 (contact: NTT Docomo) LSin
- Qualcomm think that "Emergency" cause should not be used. Vodafone agrees.
- Nokia think that establishment cause should be different between NB-IOT and non-NB-IOT
- Discussed based on R2-161530.

⇒ **We send a Response LS to CT1 (docomo). Draft in R2-161942.**

Organization

R2-161376 Impacts Overview of RAN2 Agreements on Specifications Huawei, HiSilicon, Neul, China Telecom discussion

- We use this for guidance in the work

⇒ **Noted**

TS 36.300

R2-161604 Introduction of NB-IoT Huawei (Rapporteur) CR36.30013.2.0 0844 - B Rel-13 NB_IOT-Core
late

- Ericsson want to keep updated the agreements in the appendix. Parts that relate to other working groups should be reviewed and maybe reworked by other working groups.
- Huawei agrees that other WGs should input. Huawei think we need to finalize this CR for RP. Intel think we should nto send a running CR to plenary. TIM think we should wait until Friday on the RP.
- Ericsson think we should send an LS.

DRAFT LS to RAN3 and RAN1 in R2-161881, asking for Stage-2 input (Huawei)

R2-161881 DRAFT LS on updates for TS 36.300 (contact: Huawei) LSout to: RAN1, RAN3 Rel-13 NB_IOT-Core

⇒ **Shall mention section 4 architecture in the list, ask to provide input in the actions change to "relevant sections" for RAN3 in the actions, attach current running CR, add note about the status of the current running CR.**

⇒ **Update in R2-161885, which is approved unseen.**

L1-optimized multi-carrier operation

R2-161053 LS on multiple NB-IoT carriers operation for NB-IoT (R1-161219; contact: NTT DOCOMO)
- Mediatek wonders if this is configured by eNB. Docomo responds that this is configured by eNB.
- Docomo think that the solution is equally applicable both CP and UP solution. Vodafone agrees. ZTE agrees in general.
- ZTE wonders on which PRB PRACH is located. Vodafone think it is only on the anchor.
- DT want to close the discuss early.
- TIM suggests that if we cannot conclude on stage-3 CR at this meeting we should not pursue in this release.

⇒ **Offline effort that proposes way forward in RAN2, identifies the RAN2 impact, proposes stage-3 solution (Docomo).**

R2-161888 Way forward on RAN2 aspects of multiple PRB operations NTT DOCOMO, INC., Ericsson, Vodafone, Qualcomm, ZTE, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Intel
- Huawei want to be added as a co-source.

Samsung Exhibit 1025, Page 1533 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

⇒ **Agreed (all proposals)**

R2-161261 Multiple NB-IoT carrier operations Intel Corporation discussion

R2-161394 Multiple NB-IoT carriers operation ZTE Corporation discussion

R2-161460 L1 multi-carrier operation MediaTek Inc. discussion

R2-161650 RAN2 aspects of multiple NB-IoT carrier operation NTT DOCOMO, INC. discussion

R2-161878 Multi-PRB support for NB-IoT, Ericsson AT&T

Above 5 tdocs not treated

Security

R2-161742 Security aspects of NB-IoT Ericsson discussion

- Intel think we don't need to have a key change, we could do as for re-establishment. Ericsson think that such approach involves more signalling.
- Intel think we can use Idle-Connected transition for changing keys.
- Intel agrees that at cell change we would change keys.
- There is an opportunity to discuss offline.
- We will come back to the topic based other contributions, and maybe to this one.

⇒ **Noted**

Pass 2

Positioning

R2-161757 E-Mail discussion and companies view on NB-IOT Positioning Vodafone GmbH report

- Huawei wonders what e.g. LPP means? Would this be required in NB-IOT terminals
- Vodafone think this would be optional in the NB-IOT UE. Intel think that the main intention with these proposals is that any positioning signalling would be by non-AS.
- Intel think that the 3GPP archietcture can be used.
- Docomo supports proposal 1 but don't want to support LPP. Docomo don't want to have LPP.
- Huawei think we could support e.g. LPPa.
- AT&T think that including positioning can delay the NB-IOT feature, and also affect the cost. AT&T want NB-IOT asap.
- Huawei think we should not impact the AS CP.
- DT think we should share to the outside that NB-IOT support positioning and that we should not have AS protocol impact.
- Ericsson supports positioning, but think that many networks do not support LPP. LPPa can be used.
- Vodafone think it is important that solutions are applicable to both CP and UP solutions. CATT agrees, same solution can be appleid to both. Nextnav support Vodafone way forward.
- Docomo think that ECID is the method to use. Positioning should be done by AS CP.
- Qualcomm think that LPP is suitable as it covers all cases. HUawei think LPP doesn't work. QC think some work is needed, but that is the case for all cases.
- DT would be fine to not have any UE assistance.
- Intel point out that UE measruments for positioning is optional
- AT&T proposes to postpone to Rel-14. Samsung agrees.
- LPP support RAT indepdent methods and thise can be used.
- DT think we could agree on 1, 2, 3.
- Ericsson and Docomo think we should go further.

Agreements:

Samsung Exhibit 1025, Page 1534 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

1. Positioning may be supported within NB-IOT system.
2. Positioning can be supported by eNB measurments.
3. RAN2 will assume the existing LCS arch.
4. RAN2 assume that some variant of CID could be supported in Rel-13.
5. RAN2 assume there is no UE support for RAT-measurements in Rel-13
6. No Rel-13 work for this is expected in RAN2.

R2-161313 Positioning support in NB-IoT Ericsson discussion
R2-161377 Discussion on Positioning in Release 13 Huawei, HiSilicon, Neul, China Telecom discussion

R2-161148 Consideration on Positioning in NB IoT CATT discussion

R2-161255 On Positioning support for NB-IoT in Rel-13 Intel Corporation discussion

Above 4 documents not treated

TS 36.306

R2-161315 Specification impact 36.306 for NB-IoT Ericsson discussion
late

Not Treated

R2-161324 Introduction of NB-IoT UE capabilities Ericsson CR36.30613.0.0 0331 - B Rel-13NB_IOT-Core
late

Only by Email Discussion

⇒ **Noted**

TS 36.302

R2-161375 36.302 Running CR Huawei draftCR 36.302B Rel-13 NB_IOT-Core

Only by Email Discussion

⇒ **Noted**

Withdrawn:

R2-161316 Introduction of NB-IoT UE capabilities Ericsson draftCR 36.30613.0.0 Rel-13 NB_IOT-Core

R2-161415 E-Mail discussion and companies view on NB-IOT Positioning Vodafone GmbH report Rel-13 NB_IOT-Core

7.16.2 Control Plane

7.16.2.1 Radio Resource Control - RRC

General

R2-161359 36.331 Running CR to capture agreements on NB-IoT Huawei draftCR 36.33113.0.0 B Rel-13NB_IOT-Core, updated in

R2-161760 36.331 Running CR to capture agreements on NB-IoT Huawei draftCR 36.33113.0.0 B Rel-13NB_IOT-Core

Samsung Exhibit 1025, Page 1535 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Terminology for UP solution and CP solution to be determined.
- Naming of messages need to be discussed. There are benefits of keeping the same names.
- ZTE are ok in general with this CR. ZTE would like to have definitions for "UE in NB-IoT". ZTE think we should have another term for "Non-NB-IoT". LG think that we can use "Except for NB-IoT" etc ..
- Chair think we should have a "full" CR at the end of this meeting.

⇒ **Ongoing offline on CR completion (Huawei)**

⇒ **Offline on perfection of terminology (ZTE)**

- Offline discussion result on terminology:
- Ericsson want to use "UE using NB-IoT" instead of "UE in NB-IoT". LG disagrees.

⇒ **We use "Except for NB-IoT .. " to indicate non-applicability to NB-IOT, instead of "non-NB-IoT".**

R2-161360 36.331 running CR implementation Neul, Huawei, HiSilicon, discussion

⇒ **Noted**

R2-161877 ASN.1 handling for NB-IoT Neul, Huawei, HiSilicon, discussion late

- Ericsson don't have a clear opinion now. There may be other ways to have the same efficiency. How would this coexist will CIOT in non-NB-IOT?
- Neul think that some changes would need to be applied/duplicated then also for LTE.
- DT supports this proposal to branch on top level. It is important to have small size.
- Huawei think we must branch somewhere and this is a good solution.
- Intel think we should progress the functionality first.
- Docomo are concerned that this may be a burden for the eNBs. Huawei think this is not a burden, because it is clear. DT agrees.

Agreements:
- For the purpose of making the ASN.1 for the CR we apply the preprocessing command tagging approach. Final decision in a joint session.

R2-161362 RRC procedures - stage 3 aspects Neul, Huawei, HiSilicon, discussion

P3

- Nokia wonders if we also have a default L1 configuration. Neul think maybe. Nokia think that there may be problems having default L1 configuration.

Agreements:
- SRB1 configuration, MAC configuration, and PHY configuration can be provided in RRC Connection Setup message If they are not signalled explicitly, default values apply (FFS for PHY configration), or for the UP solution: Stored configuration. - IEs SelectedPLMN-Identity and RegisteredMME are supported in the RRC Connection Setup Complete message for NB-IoT. This applies to both the Control plane and the user plane solution. - The following parameters are not supported in the RRC Connection Setup Complete message for NB-IoT. This applies to both the control plane and the user plane solution. o rlf-InfoAvailable, logMeasAvailable, connEstFailInfoAvailable, logMeasAvailableMBSFN o mobilityState o mobilityHistoryAvail o rn-SubframeConfigReq - IEs dedicatedInfoCDMA2000-1XRTT and dedicatedInfoCDMA2000-HRPD

Samsung Exhibit 1025, Page 1536 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

	are not supported in the UL Information Transfer message in NB-IoT. This applies to both the control plane and the user plane solution. - IEs dedicatedInfoCDMA2000-1XRTT and dedicatedInfoCDMA2000-HRPD are not supported in the DL Information Transfer message in NB-IoT. This applies to both the control plane and the user plane solution. - At least the following release causes are defined in NB-IoT: others, loadBalancingTAUrequired. This applies to both the control plane and user plane solution.

R2-161256 RAN impacts to enable CIoT solutions Intel Corporation discussion

Not Treated

UP solution

R2-161166 Summary of email discussion: [NBAH#04][NBIOT/Resume] RRC Functions for suspend - resume Huawei report result of email discussion [NBAH#04] Rel-13 NB_IOT-Core late

P2
- Ericsson wonders why this would be needed. Intel agrees.
- Nokia think UE and Network should have the same view on whether the context is valid or not.
- Intel think that Contexts could be released on other contstraints than timer. Qualcomm agrees.

P3
- Qualcomm think that C-RNTI and PhysCellID is not sufficient, especially C-RNTI.
- Vodafone think that PhysicalCell ID doesn't work well, and also think that an ID larger than 16 bits should be used.
- Huawei are surprised that we should come back on C-RNTI, and point out that short MAC-I is also there. Intel think that short MAC-I does not help in addressing.
- Blackberry think it would work fine. Intel think that for reestablishment we are only considering prepared contexts.
- Ericsson would like to know what are the benefits with using PhyCellId + C-RNTI.
- ZTE think we are restricted with respect to Message 3 size.
- Continue the discussion when we have treated a couple of papers.
- Vodafone think we can add more bits to MSG3. Ericsson agrees.
- Huawei think we should not ask RAN1 for more bits for MSG3.

P4
- Huawei think this was agreed already last meeting. Nokia think that we should avoid such optimizations. DT think we should postpone this. QC agrees.
- We may come back later.

P5
- Ericsson asks for justification. Huawei think that eNB does not always need to provide NCC.
- This is related to when we start security.
- QC think we should send NCC is a securlity protected message. Intel think that NCC do not need to be secured.
- Chair wonders if we need to secure message 4 in order to do the required configurations.
- Huawei think we don't need to configure DRBs in MSG4. Intel think we can send both secure and non-secured message in one transmission.

P7
- Ericsson think that the input to the MAC calculation is the contents of the message and this need to be verified by SA3.

P9
- Qualcomm think we should not have the count at all or store it. Ericsson think that we want to store as little as possible.
- LG thik it is simpler to reset but think there might be less security.

P10 & P11

Samsung Exhibit 1025, Page 1537 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Discss later based on other docs

P12

- Ericsson think we should allow delta configuration to avoid further reconfigurations.
- LG wonders what kind of delta configuration could there be? Ericsson this it is strange to not have delta configuration. LG think that the UE situation has not changed.

P14

- ZTE think this is only needed in case of delta configuration.
- Ericsson think this is not needed, and don't understand why it is needed.
- Nokia think this is needed, in all cases. Huawei agrees, and think this is needed to ack security activation. Nokia think that the UE should ack that it can comply with the configuration. Intel point out that the complete message is assumed to be sent with the configuration applied. If the configuraion cannot be applied UE performs a re-establishment.
- Intel think that from RRC point of view this is not needed regardless configuration, as UE will recover failure anyway, but could accept to have it.
- Intel think that one benefit with the complete message is that it contains the full MAC. Docomo think that this message can be useful in future releases.
- Docomo wodnders when the UE can be scheduled without confirm message. Intel explains that this does not depend on the RRC message. Docomo think it is not certain when a configuration has been applied.
- Chair asks to accept the proposal. Request to come-back from ericsson.

P15

- Huawei explains that the reason is simplicity.
- Ericsson think that the fallback should be more optimized and think it is difficult to introduce later.
- Vodafone think that failed resume may happen quite often and it may be important to optimize this.
- Chair think that AS-NAS interaction is needed at this case.
- Nokia wonders in the alt2 more optimized recovery if the eNB needs any of the "early capabilities" of the UE.
- Blackberry think that this will not happen very often and that AS-NAS interaction is simpler if we go back to Idle.
- Huawei wonders how S-TMSI is transferred. Ericsson explains that it can be in Message 5.

Agreements:

- Introduce one new code point (e.g. rrcSuspend) for the ReleaseCause in RRCConnectionRelease message.
- We will not Introduce a valid time for the stored AS context after RRC is suspended.
- RAN2 assume that multiplexing of CCCH and DTCH in Msg3 is not supported, meaning that we will not spend time to enable this.
- eNB provides the NCC in RRC resume (MSG4),
- We assume that we can fully resume by one transmission, also if it requires reconfiguration, by transmitting both an unsecured and a secured message in the same transmission.
- Re-keying is not supported at RRC resume, unless SA3 thinks re-keying would happen frequently.
- Reuse the ShortMAC-I used at RRC reestablishment as the authentication token also for resume.
- UE provides the authentication token in Msg3.
- UE resets the COUNT at RRC resume.
- delta configuration in RRC resume is supported.
- Introduce the RRC resume reject message. It is FFS if it is a new RRC message or we just reuse the existing RRC message.
- UE replies by a RRC resume complete message (Msg5) to the eNB after resuming the AS context. It is FFS if it is a new RRC message or we just reuse the existing RRC message.
- In case of RRC resume failure, the eNB may send an RRC connection setup, after which the UE does the needed AS-NAS interaction, and UE responds by NAS + RRC connection confirm message.

Samsung Exhibit 1025, Page 1538 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

⇒ **The complete security solution will be sent to SA3, to give an opportunity for review.**

⇒ **Send a LS to SA2, CT1, indicating this (Ericsson), Draft in R2-161886.**

R2-161751 RRC Resume signalling flow and RRC actions Ericsson discussion

R2-161522 NB-IoT – Further details on RRC suspend and resume Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

R2-161627 Resumption procedure for data and signalling LG Electronics Inc. discussion, updated in

R2-161754 Resumption procedure for data and signalling LG Electronics France discussion

Resume

R2-161337 The details of UE contexts keeping China Unicom discussion

R2-161731 Remaining issues of U-plane based solution with AS information stored in RAN NTT DOCOMO, INC. discussion

R2-161732 RRC protocol extension for NB-IoT UEs supporting U-plane based solution with AS information stored in RAN NTT DOCOMO, INC. CR36.331 13.0.0 2092 - B Rel-13 NB_IOT-Core

R2-161393 Further discussion on UP solution ZTE Corporation discussion

R2-161267 Bearer resumption issues for CIoT UP solution Intel Corporation discussion

R2-161319 Discussion on exception handling for RRC connection resumption in data transfer via DRB mode ITRI discussion

R2-161744 draft CR for RRC Connection Suspend and Resume Ericsson draftCR 36.331 13.0.0 Rel-13 NB_IOT-Core
late

Resume Failure / Fallback

R2-161741 RRC Resume fallback Ericsson discussion

R2-161628 The detailed procedure of solution 18 LG Electronics France discussion, updated in R2-161755

R2-161755 The detailed procedure of solution 18 LG Electronics France discussion

R2-161184 Consideration on resume failure of UP solution ASUSTEK COMPUTER (SHANGHAI) discussion

R2-161607 Further discussion on NB-IoT resume failure HTC Corporation discussion
The above 16 documents not treated

MSG3

Results of email discussion:

R2-161745 Email discussion report on Message 3 size for NB-IoT Ericsson (Rapporteur) report result of email discussion [NBAH#03] Rel-13 NB_IOT-Core
late

- Ericsson think that we can request more bits if needed. Mediatek think it is clear form RAN1 that we can have more if we need.

Samsung Exhibit 1025, Page 1539 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- ZTE assumed that we can fit all information in 64 bits. Huawei Agrees. Nokia think that bigger size may bring some more work in RAN1. DT agrees.
- Huawei think this is related to coverage and that we should keep the message as small as possible.
- Ericsson think that 80bits could be the min TB size for a well design solution (including data volume indication).
- Ericsson RAN1 delegate points out that a main difference to LTE is that in NB-IOT the transmission time is flexible and not restricted to 1ms so coverage is not a concern.
- Vodafone think we should send an LS back to RAN1. They don't want to restrict functionality unless it is needed.

RRC RESUME, Main Options

80 bits:
- Resume ID 40 bits (unspecified)
- Est Cause 3 bits
- Short MAC-I 16 bits
- DVI 4 bits
- MAC overhead 8 bits
- RRC Overhead 4 bits
- Spare 5 bits

64 bits:
- Resume ID 25 bits (CRNTI + PCI)
- Est Cause 3 bits
- Short MAC-I 16 bits
- DVI 4 bits
- MAC overhead 8 bits
- RRC Overhead 4 bits
- Spare 3 bits

R2-161378 Discussion on Msg3 Size Huawei, HiSilicon, Neuldiscussion

Not Treated

MSG3 - Resume ID

R2-161743 Resume ID Ericsson discussion

- ZTE could agree to P1 and P3 for the sake of progress.
- Huawei wonders if C-RNTI is assumed to be used. Huawei think that specific suspend C-RNTI is not needed.
- Vodafone supports the 40bits, but think we should design what is useful.
- Sony point out that PCI is problematic because nearby cells may have the same PCI.
- LG think that C-RNTI is sufficient for identifying a UE in a cell.
- Huawei think that short MAC-I resolves PCI confusion. Huawei also thinkt that if the eNBs are not close neighbours there will not be a X2 interface between the eNBs. Nokia agrees.
- Intel think that extending MSG3 with new identities is difficult, and that short MAC-I does not resove PCI confusion, and that there is no reason to think that X2 will not be available.
- Huawei think that if there are multiple possibilities for eNB based on PCI it is possible to try them all and determine based on short MAC-I
- CATT think that R3 agreed on a X2 based context fetch.
- Vodafone think that with PCI it only works for stationary UEs and that we should be future proof.
- DT think that we don't need this and that the traffic model clearly gives that this is not needed. Sony think that this is related to mobiltiy and not traffic model.
- SW think we should be future proof and go for 80 bits. SW would like to know what is the downside of using 80-bits.

Samsung Exhibit 1025, Page 1540 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- TIM think we should find a solution without impacting RAN1 and stick to the 64 bits. Vodafone think it is clear that we can ask for more and we can send an LS and get a response tomorrow.
- China telecom think we should stick with 64 bits.
- ZTE proposes to go with 64-bit MSG3 / 25-bit Resume ID where Resume ID is allocated by the eNB

Show of hands:
- Support 80-bit MSG3 / 40-bit Resume ID? [7]
- Support 64-bit MSG3 / 25-bit Resume ID? [18]

Agreements:
- We agree to 64-bit MSG3 / 25-bit Resume ID

Vodafone, Ericsson and sierra wireless have concerns with this agreement.

R2-161946 Resume ID Ericsson, Intel, AT&T, Vodafone, Verizon Wireless, Qualcomm late Discussion

R2-161653 RRC Connection Resume at different eNB NTT DOCOMO, INC. discussion

R2-161149 Resume ID CATT discussion

MSG3 - Data Volume Indicator

R2-161527 Discussion on RRC open issues Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

R2-161671 Data volume indicator for NB-IOT LG Electronics Inc. discussion

R2-161269 Considerations on message 3 for NB-IoT Intel Corporation discussion

R2-161392 Consideration for Msg3 in NBIOT ZTE Corporation discussion

MSG3 - CP/UP indication and UE Capabilities

R2-161361 UE capabilities reporting Neul, Huawei, HiSilicon, discussion

Moved to 7.16.2.1 from 7.16.1

R2-161665 Differentiation of Solution 2 and 18 in RRC Connection Establishment NEC discussion related to LS from SA2 in R2-161042 Rel-13 NB_IOT-Core

R2-161390 Consideration for CPUP indicator in NB-IoT ZTE Corporation discussion

R2-161733 LCID assignment for NB-IoT UEs to indicate support of S1-based architecture enhancements NTT DOCOMO, INC. CR36.321 13.0.0 0850 - B Rel-13 NB_IOT-Core

Above 11 documents not treated

MSG3 - Establishment Cause

R2-161530 Establishment Cause for NB-IoT UE NTT DOCOMO INC., KDDI Corporation discussio

- DT think this is not acceptable and that NB-IOT and Non-NB-IOT should not be mixed.
- Vodafone and QC think emergency can not be used.
- LG think it is intersting to use existing code points, but also think that “emergency” should not be used.

Samsung Exhibit 1025, Page 1541 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Intel proposes to use “delaytolerantaccess” and “mo-data” for normal and exceptional reporting.
- Neul don’t want to do this as delaytolerantaccess has specific meaning, and is linked to specific behaviour and timers in NAS. Nokia also think we should not do this.
- Intel think we need to provide more information. LG think CT1/SA1 could do this.
- Docomo think we should respond with information on how the cause values would map to AC beahviour.

Agreements:
- We will not use the existing “emergency” or “delaytolerantaccess” cause value for NB-IOT.
- For NB-IOT we stick to current agreement. For NB-IOT we use: mt-Access, mo-Signalling, mo-Data, mo-ExceptionData
- In our ASN.1 we make sure that the RRS establishment cause is extendible.

RRC Messages for Resume

R2-161619 Re-use of RRC connection re-establishment procedure for RRC Resume signalling BlackBerry UK Limited discussion

RRC Connection Failure

R2-161698 Leaving RRC_CONNECTEDLG Electronics Inc. discussion, updated in

R2-161756 Leaving RRC_CONNECTEDLG Electronics France discussion

R2-161735 NAS Recovery for NB-IoT UE NTT DOCOMO INC. discussion

R2-161259 The need of recovery procedure for RLF Intel Corporation discussion

R2-161380 Radio Link Failure Huawei, HiSilicon, Neuldiscussion

Access Control

R2-161379 Access Control Enabled Indication Huawei, HiSilicon, Neuldiscussion

R2-161306 Access control for NB-IoT Ericsson discussion, updated in

R2-161876 Access control for NB-IoT Ericsson discussion

R2-161176 The mechanism for access control related system information update FUJITSU LIMITED discussion

R2-161253 Access control mechanism for NB-IoT Intel Corporation draftCR 36.33113.0.0 B Rel-13 NB_IOT-Core

CP solution

R2-161363 Data transfer procedures for rge C-Plane solution Neul, Huawei, HiSilicon, discussion

R2-161411 Specifying solution 2 in the AS specification Samsung Electronics discussion

RRC connection release - RAI

R2-161314 Release Assistance Indicator Ericsson discussion

R2-161458 Early RRC Connection Release for UP solution Sequans Communications discussion

Samsung Exhibit 1025, Page 1542 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RRC connection release – Implicit Release

R2-161139 Implicit Connection Release for NB-IOT Sony discussion

R2-161459 Autonomous RRC Connection Release Sequans Communications discussion

RRC connection release – Other

R2-161175 RRC Suspend Procedure FUJITSU LIMITED discussion

R2-161449 RRC Connection Release for CP solution Sequans Communications discussion

Above 19 documents not treated

Measurement Report

R2-161309 Measurement reporting in NB-IoT Ericsson, NTT DOCOMO INC, China Mobile Com. Corporation discussion

- DT think this is not neccesary and think we have no time. Vodafone agrees. CMCC and Docomo want this feature. Docomo point out that the impact is small.
- Vodafone think that there are technical concerns too
- 4 companies object to having this in rel-13.

⇒ **We will not pursue this in Rel-13**

R2-161323 Measurement reporting in NB-IoT Ericsson CR36.33113.0.0 2028 - B Rel-13 NB_IOT-Core

CR

R2-161531 The necessity of NB-IoT UE Measurement Reporting NTT DOCOMO INC. discussion late

Above 2 documents not treated

Withdrawn:

R2-161310 Measurement reporting in NB-IoT Ericsson draftCR 36.33113.0.0 Rel-13 NB_IOT-Core

7.16.2.2 System Information

R2-161254 Report of email discussion [NBAH#05][NBIOT/SI] System Information Intel Corporation discussion late

- We remember but don't need to agree on Rec 1 as this is already agreed in R1

P2

- Ercisson think H-SFN should be sent in SIB1. LG support Ericsson. Neul think it should be in MIB. Intel shares the concern from Neul.
- Ericsson think that the clock drift is at most 2s in 3h so we don't need H-SFN in the MIB. Neul think that clock accuracy may impact price. Mediatek indicates as assumption of 50ppm. Ericsson clarifies their assumption for clock accuracy is 200ppm.

P5

- LG does not agree to this and wonders why this proposed. Intel explains that the majority wanted this bit. LG think this can be in SIB1. Qualcomm think that UE need to check this every time he need to do an access, and the UE do not need to read SIB1 for every access. LG think the need to be paging for Access Control. Qualcomm point out that not

Samsung Exhibit 1025, Page 1543 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

every device need to be paged. Ericsson think that UE in eDRX anyway need to check the MIB at access.

P10

- Ericsson think that this means that SI could then only change 32 times in 24h
- DT think that this is more than sufficient.

P11

- Neul think we could use 5 bits. Intel think we don't need to worry about wrap-around.
- Ericsson has a proposal of using 10 bits and configurable wich bits are configurable. Ericsson really want to have their proposal discussed.

P12

- Ericsson want to use the modification period as the period when SIB1 cannot change in order to enable reception accumulation.
- Intel point out that SIB1 is not related to modification period in legacy, and that 500ms is the time when SIB1 cannot change for eMTC.
- Intel think that if this is the case then parameters for DRX need to transmitted in MIB, in order to calculate the BCCH modification period before receiving SIB1.
- Gemalto think that the modification period for SIB1 always need to be shorter or the same as for other SIBs.
- Intel think that the range of modification periods, from L1 point of view it need to be > 500ms but not a huge value ..
- LG wondes why we need multiple modification periods.
- DT and Vodafone think that if we can change all SI in 40s then we could use this as a fixed value for all SI change.

P14.1

- Neul explains that they want this in SIB1 in case it changes, and Neul assumes this need to be read before every page reception. Intel think that paging configuration will not change very often. Gemalto think that we can know from Value tag and SI modification information.

Agreements:

- The SFN has 10bits (i.e. 10.24s), same length as in LTE, but only the 4 most significant bits of SFN need to be carried in MIB.
- The H-SFN has 10bits (i.e. 2.91h), same length as in Rel-13 LTE.
- We assume that H-SFN is sent in SIB1. FFS if some part need to be sent in MIB.
- Update of H-SFN do not impact the value tag.
- The value tag for system information, systemInfoValueTag, (which is sent in MIB) is defined as an INTEGER (0..31) (the same as in LTE and eMTC).
- The schedulingInfoSIB1 for NB-IoT is defined as an index-based approach (similarly to eMTC); details are left FFS (e.g. index range and information that would indicate).
- We include a 1 bit in MIB for indicating AC activation/deactivation.
- To take as baseline legacy BCCH modification period range, i.e. up to 40.96s; the extension of this range is left FFS until RAN1/2 further progress on their SIB design. BCCH modification excludes changes to MIB and SIB1.
- The range of the NB-IoT SI window length is different and extended in comparison to Rel-13 eMTC; value range details are FFS until RAN1/2 further progress on their SIB design.
- The range of the NB-IoT SI period lengths is different and extended in comparison to legacy and Rel-13 eMTC; value range details are FFS until RAN1/2 further progress on their SIB design.
- To define the SI value tag (in MIB) validity time fixed to 24h in NB-IoT design.
- The principles for Update and the related UE assumptions for how the UE detects SI change using both the MIB Value tag and the SI short Value tags is exactly as for eMTC.
- RAN2 assumes that the time over which SIB1 cannot change may need to be extended compared to eMTC.
- We asume that the period when SIB1 cannot change for L1 rx accumulation can be fixed in the specification.
- SIB1 contains information that the UE needs for suitability check of a cell.
- SIB2 etc contains information that the UE needs when camped on a cell.

Samsung Exhibit 1025, Page 1544 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

P15.3
- Neul proposes to have value X configurable. DT think that this is very rare then we can have a fixed value.
- Intel points out that if we configure X to something else then 1024 we limit the eDRX cycle. Neul think that the UE can read SI in the middle of eDRX sleep.

P21.3
- We wait for RAN1

Agreements:
- To consider the following points related to the SI notification through paging:
- UEs, using DRX cycle that is greater than the BCCH modification period, do not use the systemInfoModification (which might be sent in paging) to know about changes of the SI message while in RRC_IDLE.
- UEs, using DRX cycle that is smaller or equal to the BCCH modification period, do use the systemInfoModification (which might be sent in paging) to know about changes of the SI message while in RRC_IDLE.
- Take as a baseline that the same definition as for eDRX applies for NB-IoT, which is captured in the endorsed CR to 36.331 as "If the UE configured with a DRX cycle longer than the modification period receives a Paging message including the systemInfoModification-eDRX, it acquires the new system information at the next H-SFN boundary defined by H-SFN mod X = 0".
- X = 1024.
- We confirm that The changes of AC barring information sent within SIB-AC are not indicated to the UEs. The network only indicates when scheduling information of SIB-AC is included in SIB1 (i.e. through a change of the system information value tag sent in MIB or through the systemInfoModification sent in paging).
- We call the NB-IOT AC feature “Access Barring” (AB).
- Not to define any barring time in the AS level and leave it up to higher layers when to re-initiate an RRC connection establishment.
- The ac-BarringInfo and eab-Param-r11 are not used for NB-IoT SI, although we expect the eab-Param is (almost) identical to what we need.
- The SIB(s) to be considered for NB-IoT:
  - SIB1-nb - Cell access/selection, other SIB scheduling
  - SIB2-nb - radio resource configuration information
  - SIB3-nb - Cell re-selection information for intra-frequency, inter-frequency
  - SIB4-nb - Neighboring cell related information relevant for intra-frequency cell re-selection
  - SIB5-nb - Neighboring cell related information relevant for inter-frequency cell re-selection
  - SIB16-nb - GPS time and UTC info (we can reuse the LTE SIB16).
  - SIB14-nb - Access barring

SI Contents

R2-161382 Contents of MIB from RAN2 Huawei, HiSilicon, Neuldiscussion

Already covered

⇒ **noted**

R2-161155 Open issues of SI content CATT discussion

P1

Samsung Exhibit 1025, Page 1545 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Intel wonders if we will have “available subframes” for NB0IOT. CATT think this is ralted to RAN decision to not have TDD.

P2

- We wait for RAN4 to indicate whether multiBandInfoList, freqBandIndicatorPriority-r12, additionalSpectrumEmission is needed.
- Ericsson doesn’t think the blacklist is needed. QC think a blacklist can be useful.

Agreements:
- The IE tdd-Config is not needed for Rel-13 NB-IoT. - NB-IoT features introduce for FDD only UEs should be kept optional in ASN.1 to allow for future introduction of TDD NB-IoT support later. - We will not have intraFreqBlackCellList or similar or cellSelectionInfo-v1130 for NB-IOT

R2-161457 System Information Contents Huawei, HiSilicon, Neul Ltd. Discussion

Alerady covered

⇒ **noted**

R2-161632 Allowing different frequency bands between eMTC/NB-IoT UEs and legacy UEs NTT DOCOMO, INC. discussion

- Intel think that there could be problems which need to be revoled by signaling.
- DT agrees that the freqBandIndicator in NB-IoT SIB can be set independently

P2

- Chair think we don’t need to send an LS

Agreements:
- RAN2 confirm that the freqBandIndicator in NB-IoT SIB can be set independently.

SI change

R2-161381 System Information Update Notification Huawei, HiSilicon, Neuldiscussion

- P6: Intel and Ericsson think we can use both Paging record and PDCCH
- Huawei indicates that scheduling Paging and sending the bit to inidicate SI change in DCI can always be done. Ericsson think that we can indicate which SI message has been changed in the paging message.

⇒ **We leave it to RAN1 if the DCI with SI change indication can also be used to schedule a paging message.**

R2-161637 System Information Update for NB-IOT Ericsson discussion

R2-161649 System Information Change and Paging Mechanisms INTERDIGITAL COMMUNICATIONS discussion

R2-161682 System Information Update Notification in NB-IoTLG Electronics Inc. discussion

R2-161684 System information change in NB-IoT LG Electronics Inc. discussion

SI other

R2-161407 System Information for In-band NB-IoT Samsung Electronics discussion

R2-161140 System Information Area Scope and Value Tag Sony discussion

Samsung Exhibit 1025, Page 1546 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Above 6 documents not treated

7.16.2.3 Idle mode procedures

36.304

R2-161529 36.304 running CR to capture agreements on NB-IoT Nokia Networks draftCR 36.304 13.0.0 Rel-13 NB_IOT-Core

- Nokia points out that maybe the non support of priority base cell reselection may be premature.
- DT wonders if this new section is kept in the final version. DT would like to keep consistency. Neul agrees and brings up the example “acceptable cell”.
- Nokia verifies that the intention is to keep all changes in a central place. Ericsson support this approach if it is clear. Nokia think that for the current contents it is clear with a central section.
- For RRC we agreed to do tagging on bullet or paragraph level to clarify applicability for functionality. ZTE think that the problems is not for truly optional.
- Ericsson think we should add “in this release”.
- Intel wonders if the “applicablity list” will be the same in the different TSes. Nokia point out that other features may impact other specifications.

⇒ **Offline (Nokia), Capture agreements from this meeting. Discuss and agree on how to update the TS for NB-IOT**

Thursday, pass2:

⇒ **we treat this by email.**

R2-161528 NB-IoT implementation in 3GPP TS 36.304 Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

General and Cell Selection

R2-161307 Idle mode mobility in NB-IoT Ericsson discussion

P1:
- DT agrees.
- Neul think P1 is not clear. Nokia agrees. Is this about S-criterion being flexible?
- Ericsson clarifies that the suitability threshold will be set so it matches the network supprot for Coverage enhancement.

P2
- DT agrees
- Ericsson clarifies that this is the max CE level for any cell
- Intel would like to wait

P3
- Samsung think that RSRP is enough for R-13. Huawei agrees. RAN4 are pending RAN1 and RAN2 decision if RSRQ is needed.
- Intel want to wait for RAN4 input, to understand if RSRQ is feasible.
- LG supports proposal 3.
- Sony think RSRQ is needed for suitability but maybe not for cell reselection.
- QC think RSRQ is good to have in bad coverage.

P5a
- DT agrees that these are not needed.

P5b
- DT think this is needed. NB-IoT UEs is stationary and canot get out of these problems. Docomo and Nokia agrees.
- Sony think we will not have another solution for this problem
- Neul think this is quite complex. Ericsson agrees.

P5
- Pcompensation dependens on if we have UEs of different power classes.

9a

Samsung Exhibit 1025, Page 1547 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Mediatek supports this.
- Neul wonders if this is related to coverage level.

9b
- Gemalto are not sure. These thresholds doesn't always help. QC also think that complementary methods are needed, which are likely impl dependent.
- LG supports this proposal.
- Ericsson explains that threshold shall be different in different coverage levels.
- DT point out that NB-IOT may support mobille UEs as well.
- Neul point out that we may have just two levels.
- Don't pursue this proposal for Rel-13

P10
- How to agree on a default value?
- Ericsson think the thresholds should be mandatory.
- DT think the parameters are very depedent on the cell and frequency. IF we cannot determine a value we cannot use it.
- Nokia think RAN1 or RAN4 should determine the default value.

P13
- Vodafone think this shall be supported

Agreements:
- UEs supporting NB-IoT supports the maximum coverage enhancement level (this can be revisited if there is justification).
- NB-IoT supports RSRP.
- It is FFS if NB-IoT supports RSRQ measurements.
- In NB-IoT the selection criteria S is fulfilled when both Srxlev > 0 AND Squal > 0 (Squal is FFS).
- Qrxlevminoffset and Qqualminoffset are not supported in NB-IoT.
- Qoffsettemp and the related fucntionality is supported in NB-IoT. Small simplification could be considered, based on proposal this meeting.
- In NB-IoT the cell suitability criteria S is defined as:
  Srxlev = Qrxlevmeas – Qrxlevmin - Qoffsettemp – Pcompensation (FFS)
  FFS: Squal = Qqualmeas – Qqualmin – Qoffsettemp
- It is FFS if we introduce a default value and an option to broadcast a single value for Qoffsetfreq to be used for all inter-frequencies (revisit after disc on cell reseelction).
- NB-IoT supports cell specific offsets for intra-frequency, but not for inter-frequency.
- NB-IoT supports a separate measurement threshold for intra-frequency and inter-frequency measurements (i.e. SIntraSearch and SnonIntraSearch).
- The UE is not required to perform intra-frequency measurements when the serving cell is above the intra-frequency measurement threshold.
- The UE is not required to perform inter-frequency measurements when the serving cell is above the inter-frequency measurement threshold.
- It is FFS if NB-IoT supports a default value for the measurement thresholds (i.e. SIntraSearch and SnonIntraSearch).
- NB-IoT supports the intra-frequency cell reselection indicator (intraFreqReselection) which is used when the cell is barred.

For the sake of updating 36.304 for NB-IOT:
- RAN2 assumes that NB-IoT supports higher priority PLMN search.
- RAN2 assumes that NB-IoT supports manual mode PLMN selection.

⇒ **We will send a LS to SA1, CT1, CT5 asking to extend the value range of period for search for higher priority PLMN, Draft in R2-161884 (DT).**

R2-161884 DRAFT LS on extension of search for higher priority PLMN cycle beyond 8 hours Deutsche Telecom LSout

⇒ **Approved. Final version in R2-161945**

Samsung Exhibit 1025, Page 1548 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161384 Idle Mode MobilityHuawei, HiSilicon, Neuldiscussion

P5 & P6
- Ericsson think that this is to differetiate between different kinds of UEs, with different capability. Huawei think this is not the case.
- LG think that we may need to differntiate the measreuement requirements. Intel think we may need to differentiate CE levels for RACH.
- Chair think that we need to consider if we need just a threshold or the full cell selection.
- Ericsson think that this is not needed, especially as UE are assumed to support the full CE. QC agrees.

Agreements:
- For cell seelction we will just have one set of S-criteria (i.e. no differentiation between normal and extended coverge)

R2-161097 Measurement considerations for NB-IoT Gemalto N.V.discussion

R2-161669 Measurement rules for cell reselection in NB-IoT LG Electronics France discussion

R2-161385 Cell Reserved for Future Use Flag and IFRI Huawei, HiSilicon, Neuldiscussion

R2-161409 Discussion on Cell Selection and Reselection for NB-IoT Samsung Electronics discussion

Above 4 documents not treated

Cell Reselection and Load Distribution

R2-161413 E-Mail Discussion and companies view on Inter Frequency Load Balancing Vodafone GmbH report

- Sony think we need other mechanism as well (in addition to redirection information in RRC release message) to prevent the UE to reselect away from the carrier that he is redirected to. DT agrees something is needed, e.g. a timer.
- DT proposes that we use a timer. Ericsson does not agree.
- Ericsson would like to be able to not always apply offsets. Ericsson explains that this is for very bad coverage. Chair wonders if this could be a RAN4 issue. Ericsson would like some network control. Gemalto think this could be also in good coverage and agrees something is needed.

✉ **Email discussion on Cell Reselection and Load Distribution (the topics listed above) for next meeting (Ericsson).**

Agreements:
- Ranking based mechanism is supported for inter-frequency cell reselection for NB-IOT.
- Inter-frequency mobility based on priority is not supported
- To introduce redirection information in a RRC Dedicated message
- RRC connection release / suspend will include redirection information.

R2-161096 Mobility considerations for NB-IoT Gemalto N.V.discussion

R2-161308 Load balancing in NB-IoT Ericsson discussion

R2-161136 NB-IoT Load Distribution Discussion ZTE Corporation discussion

R2-161138 NB-IOT Measurements for reselection and redirection Sony discussion

Samsung Exhibit 1025, Page 1549 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161491 NB-IoT cell load management QUALCOMM INCORPORATED discussion

R2-161673 Inter-frequency Load Distribution in NB-IoT LG Electronics France discussion

R2-161260 Idle mode mobility and load balancing Intel Corporation discussion

R2-161301 Power Consumption of Cell Reselection in NB-IoT III discussion

R2-161383 Inter-frequency Load Balancing Huawei, HiSilicon, Neuldiscussion

R2-161410 Inter-frequency Load Distribution for NB-IoT Samsung Electronics discussion

R2-161481 Ranking-based Load Balancing for NB-IoT CATR discussion

Above 11 documents not treated

7.16.2.4 Paging

R2-161386 Paging Stage 3 Analysis Huawei, HiSilicon, Neuldiscussion

P1
- Intel wonders what is this DRX cycle. Intel asks about the intention with respect to ranges.
- Docomo also want the max eDRX cycle to be the same as for LTE.

P2
- Intel want to wait for RAN1 to know how many repetitions are performed. Neul also think that the full time (worst case) for transmission of a page should be taken into accoutn as it is useless to retransmit before a first transmission has been done. Qualcomm agrees that we need R1 input.
- CATT wonders how the PTW can work with a very long DRX cycle. Chair think we only need to know when PTW. CATT think that a benefit of using a legacy number like 2.56s is that we don't need to discuss PTW overlap.

P4
- Huawei propose we discuss this later

P6
- Chair think that the table may be changed depending on which subframes are available, depending on RAN1 agreements. Ericsson would like to check.
- Huawei proposes to send a LS. QC agrees that we still want this kind of functionality.
- Intel don't want to send a LS. QC think we can sent the LS.

Text proposals
- Nokia wonders how to capture. Intel proposes to capture agreements in an informative annex.
- Chair think we need to progress the normative parts.
- Docomo wonders if the intention is that eDRX is mandatory for the network. Intel think that also PSM can be used. LG Neul think eDRX is mandatory for NB-IOT

Agreements:
- From signalling point of view we assume that eDRX is optional.
- One Frame is still assumed to be 10ms.
- SFN Range of LTE is reused
- HSFN is incremented when SFN wraps around
- HSFN Range of LTE is reused
- The maximum paging eDRX cycle of the UE is 1024 hyperframes.
- It if FFS if the paging DRX cycle in NB-IoT is (e.g. 5.12s, 2.56s).
- Reuse the LTE approach for paging frames and paging occasions, i.e., the paging occasion as computed in LTE Rel-12 is used as the starting point for repetitions.
- Keep the IMSI and S-TMSI as the UE identifiers for paging, i.e. the same size as in LTE for the Identities.
- It is FFS if the FDD configurations for paging subframe locations are the same as LTE FDD.

Samsung Exhibit 1025, Page 1550 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Intended Comeback Thursday was not done at meeting: to try to agree of as much as possible on the resulting text in the pseudo-CRs to reflect the intended behaviour.

⇒ **We send a LS to RAN1 asking which subframes that may be available for paging. Draft LS in R2-161882 (Huawei)**

R2-161882 Draft LS on available subframes for paging Huawei LSout

- Editorial comment: WI-code should be "NB-IOT-Core"

⇒ **With this change the LS is approved unseen in R2-161943.**

R2-161311 Paging and DRX in Idle mode in NB-IoT Ericsson discussion

P3:
- Intel wonders if the UE and eNB will have the same understanding of the number of repetitions.
- Nokia want to check offline how eMTC works.

P4:
- LG points out that P4 shall not be applicable for PDSCH as the size of the message may be different and require different number of repetitions.

P12
- The intention is to distribute PTW start more uniformly.

Agreements:
- The Paging Occasion refers to the starting sub-frame of the NB-PDCCH repetitions.
- Following eMTC principles, we assume that there is a broadcasted configuration that helps the UE to receive paging on different Coverage levels. The configuration is specified by RAN1.
- RAN2 assumes that the Paging message from MME to eNB does not include the short DRX cycle length.
- RAN2 assumes that NB-IOT paging can use the same eDRX paging information (e.g. eDRX cycle, e.g. PTW) over S1 as LTE.
- It is FFS if we need to change the calcuation of the start offset of the PTW (first paging occasion of the PTW) within a Hyper Frame (HF) to achieve more uniform distribution based on UE ID. We decide based on stage-3 proposal (at this meeting).

⇒ **We send a LS to RAN3, SA2. DRAFT LS in R2-161883, including also previous agreements on all information signalled between MME-eNB and short DRX assumption (Ericsson).**

R2-161883 DRAFT LS on Paging in NB-IoT Ericsson LSout

- Bullet 1: Chair think that it is not clear if the short paging cycle is sent in system information or not, and that we should pont out that the paging cycle is not UE-specific.
- Second last: remove "for the UE in eDRX"
- Should add the agreement that CEL is sent to MME.

⇒ **Approved unseen with these updates, R2-161948 final version.**

R2-161312 Physical channels for paging in NB-IoT Ericsson discussion

P6
- Ericsson indicates that this is discussed in RAN1. Chair think we can then follow RAN1 decision, whatever that will be.

P7
- Ericsson suggests to not discuss this.

Samsung Exhibit 1025, Page 1551 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Agreements:
- NB-IoT supports paging multiplexing, i.e. paging multiple UEs at the same time, i.e. schedule multiple paging records in one paging message.
- The UE monitors the NB-PDCCH with the P-RNTI for paging.

R2-161523 Paging procedure for NB-IoT Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

- On P2 and P3, Chair point out that we earlier agreed the opposite.
- No support

⇒ **Noted**

R2-161151 Discussion on Paging Schemes CATT discussion

R2-161461 Paging enhancements MediaTek Inc. discussion

- DT think there is no paging capacity problem in Rel-13.
- Ericsson think that this is resolved by PDCCH, multiplexing and multiple paging occasions in a PTW.

⇒ **Noted**

R2-161150 Discussion on paging enhancements for NB-IoT CATT discussion

R2-161137 Issues for Paging in NB-IOT ZTE Corporation discussion

R2-161142 Paging Capability Sony discussion

- Ericsson think there are other options, such as UE detach, PSM etc.
- Sierra Wireless and MTK think the behaviour is interesting.
- Intel has some sympathy for this proposal. Vodafone as well, but think this could be discussed for the network release.
- Sony wonders if UE independent switch off is “allowed” UE behaviour.

⇒ **Not pursued in Rel-13**

R2-161152 Discussion of false paging CATT discussion

- All covered already

⇒ **Noted**

R2-161258 Remaining open aspects on NB-IOT Paging Intel Corporation discussion

- All covered already

⇒ **Noted**

7.16.3 User Plane

R2-161332 UP modelling for U-plane solution NTT DOCOMO INC. discussion Update of R2-160526

R2-161141 Considerations on PRACH resources for NB-IoT Sony discussion

Above 2 documents not treated

7.16.3.1 MAC/RLC

Samsung Exhibit 1025, Page 1552 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

MAC

R2-161644 36.321 running CR to capture agreements on NB-IoT Rel-13 NB_IOT-Core Ericsson draftCR 36.321 B
late, updated in

R2-161875 36.321 running CR to capture agreements on NB-IoT Rel-13 NB_IOT-Core Ericsson draftCR 36.321 B
late

- ZTE think we need better review and we need more input from RAN1.
- Neul think we need to progress more before doing CRs. Neul have concerns that NB-IOT may be different to eMTC.
- Ericsson point out that we can still treat eMTC parts and NB-IOT parts separately.
- DT think we should have two sets of CRs that are disjoint.
- ZTE think we should anyway base the CR on eMTC CRs.

⇒ **We use eMTC CRs as the "baseline" when discussing NB-IOT stage-3.**

MAC - Random Access

R2-161387 Random Access Procedure Huawei, HiSilicon, Neuldiscussion

P1:
- Ericsson would like to wait for positioning.
- Neul think that positioning is a separate discussion.
- Docomo clarifies that this means that only UE triggered RACH
- "PDCCH order" is the PDCCH ordering a RACH transmission.
- Intel indicates that RAN1 is discussing PDCCH order for multiple-PRB.
- Ericsson points out that PDCCH order is needed for DL data arrival.
- DT think PDCCH order is not needed. TIM agrees and asks to postpone. Vodafone think we are not sure about the trafic model so vodafone proposes that we assume it is there. DT think we have a clear traffic model.
- LG think that if we don't have PDCCH order, the consequence is UL delay to get in synch.
- CATT wonders if there are any gains in excluding PDCCH order?
- Neul think that addition of many small features bring complexity. LG agrees there is not much complexity.
- Vodafone thinks that the traffic model is not certain.
- Docomo would like to have this.
- QC think that the time frame for Connection is around 20s, and would ike to keep the PDCCH order.
- DT has concerns that we spend too much time on small things.

Show of hands, need for PDCCH order for DL data arrival
Yes 9
No 6
We go with the majority view.

P3
- ZTE point out that we may need to further fragment the RACH resource pools.
- LG point out that preamble groups may be overlapped for different coverage levels for eMTC. The chair thinks that IF the eNB need to celarly discriminate between coverage levels, then the configuration should be such that there is no overlap.
- ZTE point out that maybe there are other differences in L1.

Agreements:
- Only Contention based RACH is supported in NB-IoT. We may revisit this if contention free RACH is found needed for positioning.
- RAN2 assumes that PDCCH order is supported for DL data arrival (and the agreement above is applicable)
- Preambles (RACH resource) classification according to coverage levels in eMTC is reused in NB-IoT. UE selects a preamble group according to its coverage level. (this is not intended to prevent further fucntionality, e.g. having more resrouce pools for other purpose).

Samsung Exhibit 1025, Page 1553 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161135 Remaining issues on Random Access in NB-IoT ZTE Corporation discussion

P3
- Chair wonders if we have power ramping.

P5
- Chair wonders if there is a particular value.
- ZTE think we should at least have the same values as for eMTC as a baseline. ZTE think we can have information from R1 to determine range at this meeting
- Neul proposes that we should remove some small values, specifics later.
- QC wonders how this is intened to work. ZTE clarifies that we have common but different values for different CEL.
- QC wonders if we may need different timers for single-tone and multi-tone.

Agreements:
- Global PREAMBLE_TRANSMISSION_COUNTER and per coverage level PREAMBLE_TRANSMISSION_COUNTER_CE are used for NB-IoT.
- If we have power ramping (RAN1), Global PREAMBLE_TRANSMISSION_COUNTER is used to achieve power ramping for the received target preamble power.
- MAC contention resolution timer for NB-IoT is configured per-CEL.
- Higher end of Range of MAC contention resolution timer for NB-IoT should be extended compared to LTE (considering e.g. PUSCH/PDCCH/PDSCH repetition number, single tone PUSCH, etc).
- We will consider removeing some values in the lower end of Range of MAC contention resolution timer for NB-IoT compared to LTE (values that does not work for NB-IOT even in good coverage).
- If the Contention Resolution is considered not successful the UE should continue in the same PRACH CE level to proceed to the transmission of preamble.

R2-161391 Analysis on preamble transmission related issues in NB-IoT ZTE Corporation discussion

- Ericsson think we should discuss in the coffe break with RAN1 check status, and come back.

P1:

- ZTE explains that they expect change but the details are unknown now.

P5

- LG think we should first agree for eMTC and then we discuss later.
- Ericsson wonders about the range
- ZTE indicates that in the paper, one example gives 4800 RA-RNTIs which seems to be the upper bound. For the shorter forumla we have 400 RA-RNTIs.

Agreements:
- For NB-IoT, we expect RA response window length should be extended (a lot) compared to Rel-12 LTE.
- The system frame index of the first radio frame of the specified PRACH should be considered in the RA-RNTI calculation.
- RA-RNTI calculation formula may be defined as follows (FFS):
  - RA-RNTI=1+t_id + 10*freTone_id + k1*(SFN mod (W/10)), with the Code information in the RAR, OR
  - RA-RNTI=1+t_id+10*(SFN mod (W/10), with the Tone information in the RAR,

  Where:

Samsung Exhibit 1025, Page 1554 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- o t_id is the index of the first subframe of the specified PRACH (0≤ t_id <10) within an attempt,
- o freTone_id is the index of the specified frequency resource location within that subframe, in ascending order of frequency domain (the range of freTone_id can be configured, e.g. 0≤freTone_id <12, if 15kHz Single Tone is used),
- o SFN is the index of the first radio frame of the specified PRACH,
- o W is RAR MAX window size (in subframes).
- o K1 depends on the number for freq tones.

After offline on RA-RNTI calculation:
- There was an offline discussion, where ALT1 was selected for eMTC (LTE).
- We clarify that the FFS is mainly dependent on what information we can and need to send in RAR, e.g. if RAN1 decides to have code multiplexing or not.

R2-161526 Random Access procedure for NB-IoT Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell discussion

MAC - Random Access Backoff

R2-161406 E-Mail Discussion and companies view on the need for MAC BI Vodafone GmbH report

Agreements:
- The RACH Backoff mechanism is introduced in Rel 13
- The RACH Back off mechanism is based on MAC BI.
- Limited changes to the mechanism like reduction of the MAC BI size from 4 bits to other value, and corresponding changes to range can be considered if needed and time allows.

R2-161639 Use of RA back-off indicator Ericsson discussion

P2
- LG point out that for eMTC we have not done this. Ericsson think that for NB-IOT we have less bandwidth and longer delays (less RACH opportunities etc)
- Intel want to wait for RAN1. Ericsson don't think we need this.
- Sony wonders if extending the values really help.
- Several companies think we should use the LTE range. Ericsson think the result is that UEs may need to Backoff multiple times.

⇒ **Noted**

MAC - DRX

R2-161638 NBAH#06 - NB-IoT- DRX dormancy - email report Ericsson discussion

- Ericsson think we need to optimize otherwise we will not reach 10 year battery life. Neul agrees.
- LG think that changing the start condition had less support than changing the stop conditions, but LG would be ok to stick to current DRX as the connections are anyway short. Intel agrees that we should stick to legacy, because it would anyway be difficutl to set the timer to an appropriate value.

Tentative: We use the LTE legacy DRX as-is also for NB-IOT (confirm previous agreement).

R2-161641 Connected Mode DRX for NB-IoT Ericsson discussion

Samsung Exhibit 1025, Page 1555 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

P2
- Neul support proposal 2.
- LG think that we could instead state that PDCCH is not monitored at PUSCH transmission and think that Ericsson proposal has significant impact.
- Ericsson think that the main goal is to makt the setting of the timer independent of the transmission time, and thus be able to set it to shorter values.

R2-161676 DRX enhancement for NB-IOT LG Electronics Inc. discussion

- LG suggests offline
- Ericsson think that it is regretful if we need to go with legacy. Huawei and Neul too.
- LG think we already had an email discussion. Sony think we also agreed to go to DRX as fast as possible,
- Chair think that there is not sufficient support to make changes.

⇒ **Baseline is still that we use the LTE legacy DRX (timers, triggering conditions etc) as-is also for NB-IOT (confirm previous agreement)**

MAC - Support for UL scheduling

R2-161153 Volume indication for NB-IoT data CATT discussion

- Ericsson would prefer to have DVI in MAC as this is for scheduling, but are open for optimizations. ZTE and Intel agrees.
- LG prefers RRC because the data volume cannot be reported to MAC unless we specify a new condition in MAC. Nokia has a similar understanding and think that DRB establishment indicator is needed and can be the same. Qualcomm think RRC is more efficient. NEC agrees, and wonders if this can be used to differentiate the solutions. CATT agrees. Neul agrees.
- Ericsson think this is anyway new functioanltiy and we anyway need modifications. Legacy BSR is not usable.
- ZTE think that the MAC solution will occupy one byte, and gives opportunity for additional indications in this byte. ZTE do not want to agree on RRC solution until we have discussed message 3 size.
- We will discuss proposal 3 based on other contributions later.

Agreements:
- Volume indication can be sent in msg3 for NB-IoT.
- Common volume indication mechanism should be designed for solution 2 and solution 18.

MAC - HARQ

R2-161388 HARQ in MAC Layer Huawei, HiSilicon, Neuldiscussion

- ZTE wonders why we don't have non-adaptive for the UL. Ericsson think that RAN1 has agreed this, and think there are specific R1 optimizations possible.
- LG understands that retransmissions within a bundle is non-adaptive.
- Docomo think that today we have separate buffers for Broadcast and Unicast.
- We have already agreed that UE does not receive SI in CONNECTED and agreed that we only have one HARQ process for unicast.

Agreements:
- Adaptive and asynchronous HARQ is used for both uplink and downlink (except for transmissions within a bundle). We understand that R1 has already agreed this.

R2-161642 Scheduling and HARQ principles for NB-IoT Ericsson discussion

- Ericsson indicates that most of this is treated in RAN1 now and we expect information from them

Samsung Exhibit 1025, Page 1556 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Intel think that PDCCH for UL transmission can be interleaved with the transmissions triggered by DL assignment.

Agreements:
- It is FFS if after a downlink assignment has been received on the NB-PDCCH the UE is not required to monitor the NB-PDCCH again until after the HARQ feedback has been transmitted.
- It is FFS if after a uplink assignment has been received on the NB-PDCCH the UE is not required to monitor the NB-PDCCH again until after the NB-PUSCH transmission.

R2-161941 RAN1-RAN2 sync on Scheduling and HARQ design for NB-IoT Disc Ericsson
- CATT: wonders if it is possible to have rx PDCCH for both PDSCH and PUSCH on the same subframe. Ericsson answers no in general but the specific case of PDCCH scheduling PDSCH + PUSCH for HARQ feedback is supported.
- LG: Can the UE receive PDCCH and PDSCH at the same subframe. Ericsson explains no.

P4:
- Qualcomm wonders what “semi-static” means. Ericsson explains that is it configured per CEL.
- Intel wonders if the parameters can be changed dynamically as the UE changes coverage level. Ericsson think this need to be decided.

P5:
- Neul wonders what is the range. Ericsson think that this has not been agreed yet in R1, but think the time-line is relaxed, min 4 sub-frames.

P1/P5
- LG: Is the scheduling information and message the same. E explains that scheduling information is carried in DCI.

P6-10
- Docomo wonders if “feedback: is ack/nack. Ericsson confirms.

Agreements:

RAN2 ASSUMPTIONS, Based on ran1 agreements, used to start the work on the relevant part of MAC.
- Scheduling information for both downlink and uplink data is transmitted on a downlink physical control channel denoted NB-PDCCH. The scheduled uplink and downlink data is transmitted on shared data channels denoted NB-PUSCH and NB-PDSCH respectively.
- NB-IoT supports only cross-subframe scheduling and no same-subframe scheduling.
- The transmission duration in number of sub-frames for the NB-PDCCH, the NB-PDSCH and the NB-PUSCH is variable.
- The transmission duration in number of sub-frames is semi-static for the NB-PDCCH and is indicated for the NB-PDSCH/NB-PUSCH as part of the scheduling information transmitted on the NB-PDCCH.
- The start time of the NB-PDSCH/NB-PUSCH relative to the NB-PDCCH is signaled as part of the scheduling message.
- HARQ feedback information for downlink data is sent on on the UL (Phy channel FFS). HARQ feedback information for uplink data is sent on NB-PDCCH.
- UL HARQ re-transmissions should not be triggered by absence of HARQ feedback on the NB-PDCCH.
- The HARQ re-transmissions in both downlink and uplink are asynchronous.

R2-161408 Discussions on MAC functionalities for NB-IoT Samsung Electronics discussion

RLC

Samsung Exhibit 1025, Page 1557 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R2-161333 Discussion on how to capture NB-IOT in RLC NTT DOCOMO INC. discussion

- Chair wonders if the 36.322 is written in such as way so that it allows the non-supported functions to be treated as “optional”, e.g. by having “ bla bla if supported”-annotations. Maybe some small changes e.g. additions of “if supported” or “if configured” might anyway be needed for clarity.
- Qualcomm thinks still that we should capture applicability to NB-IOT.

⇒ **Not to specify the restriction in spec unless RLC specific restriction (which is RRC uncontrollable) is foreseen.**

⇒ **There should be some general statement that can guide an implementor to understand the applicability to NB-IOT.**

R2-161887 CR for 36.322 NTT Docomo

- QC proposes to have a list of applicable agreements in an annex for traceability.
- Docomo agrees
- LG think we could list agreements in the cover page

⇒ **We list the agreements relevant to RLC in the cover page.**

R2-161643 RLC AM considerations for NB-IoT Ericsson discussion

P3
- Qualcomm thinks that for CP solution this is not needed. Ericson confirns that this is for RRC reestablishment.
- LG don’t think we should differentiate between the solutions.

P6
- What does it mean. Ericsson clarifies that this is proposed in the spec. Sony wonders what happens when UE changes coverage level.
- Docomo wonders if we should apply default values in general.

P7
- Docomo wonders how RLC can trigger failure to upper layer properly. Chair think thie meahcnism would need to be disabled if this is to work
- LG think that there is no point to set the value to zero, and that we already decided to not support RLC-UM. Qualcomm shares the view of LG.

P8:
- LG thnk this impacts the LC inhibit mechanism and makes it dependent on the contents. LG think that a SR is triggered at the end of a data burst.
- Neul agrees with the proposed behaviour.
- Sony think that the UE should send the SR. LG agrees.

Agreements:
- Confirm that RLC AM functionality, including in-sequence delivery and duplicate detection, as specified in 36.322, is applicable to NB-IoT.
- Confirm that RLC re-segmentation is supported in NB-IoT.
- Confirm that RLC re-establishment is supported for the UP solution but is not required for the CP solution in NB-IoT (to be clear by RRC).
- Confirm that PDCP re-establishment is supported in NB-IoT for the UP solution but is not required for the CP solution in NB-IoT.
- Use different default values based on coverage level for the t-PollRetransmit timer for NB-IoT.
- We expect that the following is possible: if there is a poll, this poll will also be “accompanied by” an UL grant and the UE can use this UL grant to transmit a Status Report, and thus the UE does not need to generate a Schedulng request for such status report transmission.
- We assume that the Logical Channel SR prohibit timer can be used to enable this, so that the UL grant is not delivered after the UE has started executing scheduling request, and this timer is supported for NB-IOT
- This timer is a mandatory capability for NB-IOT UEs.

Samsung Exhibit 1025, Page 1558 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

After explanatory offline discussions regarding the feasiblity of the point on sched request prohibit.

- LG reports that offline discussion on SR prohibit did not fully converge. There is the benefit that Sched request can be prevented for RLC-AM status report, but the side effect is that sched request and most UL transmissions will be delayed.
- Ericsson proposes that Logical channel SR prohibit timer shall be mandatory.

R2-161257 Further discussion on RLC-AM for NB-IOTIntel Corporation discussion

R2-161364 RLC AM Optimisations Neul, Huawei, HiSilicon, discussion

R2-161640 Delay triggering SR in NB-IoT Ericsson discussion

R2-161462 RLC-AM enhancements MediaTek Inc. discussion

R2-161608 Restricting RLC Status Report transmission in NB-IOT LG Electronics Inc. discussion

Above 5 documents not treated

7.16.3.2 PDCP

R2-161489 Introduction of NB-IoT functionality to PDCP protocol QUALCOMM INCORPORATED draftCR 36.323 13.0.0 B Rel-13 NB_IOT-Core

Treated by email only

⇒ **Noted**

R2-161609 Need for PDCP TM in NB-IOT LG Electronics Inc. discussion

R2-161262 PDCP transparent mode for NB-IoT with CIoT CP solution Intel Corporation discussion

Above two documents not treated.

CONTINUATION Discussion

For planning of the remaining work for the WI.

- Huawei think we need input from each TS editor. LG think that we don't need this input.
- ZTE think an email discussion will anyway be the status report discussion on the R2 reflector. Intel think that the rapporteur could submit RAN2 part of status report on the RAN2 reflector early and that we could do this on email as a first part of Status Report review.
- ZTE think we can have an email review of the open issues list after the CR email discussions are finalised. WI rapporteur can assemble initial version and other contributors help to add.

⇒ **We assume that CR editors will help out to generate open issue lists.**

DISCUSSION ON WHAT IS NEEDED WRT WI status and CRs for RP

- Vodafone think we need clear open issue lists per specification, and would like each CR author to be active in this. Vodafone think we should use teleconference. DT agrees.
- LG think that we should have technical endorsement at RP for running CRs.
- Running CRs to be submitted to RP, but not for approval.

Short Email Discussions, update running CRs with decisions from this meeting.

✉ **Email discussion on CR for 36.300 (Huawei)**
✉ **Email discussion on CR for 36.331 (Huawei)**

Samsung Exhibit 1025, Page 1559 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- ✉ **Email discussion on CR for 36.304 (Nokia)**
- ✉ **Email discussion on CR for 36.321 (Ericsson)**
- ✉ **Email discussion on CR for 36.322 (NTT Docomo)**
- ✉ **Email discussion on CR for 36.323 (Qualcomm)**
- ✉ **Email discussion on CR for 36.302 (Huawei)**
- ✉ **Email discussion on CR for 36.306 (Ericsson)**

Discussion on running CR to 36.300: Proposal to keep Appendix updated reflecting the current decision status
Discussion on running CR to 36.331: Proposal to include preliminary ASN.1

Long Email Discussions (for next meeting)

- ✉ **Email discussion on Cell Reselection and Load Distribution (the topics listed) for next meeting (Ericsson).**

TOWARDS NEXT MEETING

⇒ **We can have a Teleconference for early treatment and addressing open issues before the next RAN2 meeting.**

COMEBACKs

R2-161944 DRAFT Reply LS on Clarifications on RRC Resume Request Nokia to SA3LSout Rel-13 NB_IOT-Core

Comeback Friday (was R2-161880)

R2-161942 Draft Response to LS on NB-IoT work progress in RAN2 NTT Docomo to: CT1 LSout
Comeback Friday (was R2-161060)

R2-161886 Draft LS on Resume Ericsson to: SA2, CT1 LSout

Comeback Friday

R2-161889 Changes to include paging in RRC for NB-IoT Huawei, HiSilicon, Neul
R2-161890 Changes to include paging in 36.304 for NB-IoT Huawei, HiSilicon, Neul

LS out

R2-161885 LS on updates for TS 36.300 (contact: Huawei) LSout to: RAN1, RAN3 Rel-13 NB_IOT-Core
R2-161945 LS on extension of search for higher priority PLMN cycle beyond 8 hours (contact: Deutsche Telecom) LSout to: SA1, CT1 Rel-13 NB_IOT-Core
R2-161943 LS on available subframes for paging (contact: Huawei) LSout to:RAN1 Rel-13 NB_IOT-Core
R2-161948 LS on Paging in NB-IoT (contact: Ericsson) LSout to: RAN3, SA2, CT1 Rel-13 NB_IOT-Core

Samsung Exhibit 1025, Page 1560 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex K: History

Document history		
Date	**TSG RAN WG2 Tdoc**	**Subject**
08.02.2016	-	Skeleton report for RAN WG2 #93 provided before the meeting
11.02.2016	-	Update 1 of skeleton report for RAN WG2 #93 provided before the meeting
12.02.2016	-	Update 2 of skeleton report for RAN WG2 #93 provided before the meeting
14.02.2016	-	Update 3 of skeleton report for RAN WG2 #93 provided before the meeting
24.02.2016	-	Draft report v0.1 for RAN WG2 #93 provided after the meeting

Author: **Mr. Yong-Jun Chung (3GPP TSG RAN WG2 MCC Support)**

ETSI Mobile Competence Centre (MCC)
Tel. +33 (0)4 92 94 42 00
email: Yong-jun.Chung@etsi.org

Samsung Exhibit 1025, Page 1561 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
x	x	Yes, No	withdrawn, not treated, noted, revised, endorsed, agreed, postponed	Late: request/ submission after 06.02.15 9:00am CET	R2-16xxxx	-	-	agenda, report, LS in, LS out, CR, pCR (text proposal), draftCR (running CR), draft TR (technical report), draft TS (technical specification), Discussion, other			for CRs: CR number allocation for LSs: linking between Tdocs				-	acronym		-		especially for problems in the Tdoc allocation
2.1	General: Approv	Yes	approved		R2-161001	Proposed agenda for RAN2 #93 in St. Julian's, Malta, 15.02.-	Intel (RAN2 Chairman)	agenda												
2.2	General: Approv	Yes	revised	late	R2-161002	Draft Report for RAN2 #92 in Anaheim, USA, 16.11.-20.11.2015	ETSI MCC	report										R2-161067		
2.2	General: Approv	Yes	revised	late	R2-161003	Draft Report of RAN2 NB-IOT Ad-hoc Meeting in Budapest, Hungary, 19.01.-21.01.2016	ETSI MCC	report										R2-161069		
2.2	General: Approv	Yes	revised	late	R2-161004	Draft Report of RAN2 Rel-13 LTE ASN.1 Review Ad-hoc Meeting in Helsinki, Finland, 13.01.-14.01.2016	ETSI MCC	report										R2-161068		
2.4	General: Others	Yes	available	late	R2-161005	RAN2 Compendium v30.0 after RAN#70	ETSI MCC	other												
11.3	UTRA Rel-13: W	Yes	noted		R2-161006	LS reply to S4-151565 = R2-156043 on EVS over UTRAN (R1-157584; contact: Ericsson)	RAN1	LS in						cc: RAN2; no reply answer	Rel-13	EVSoCS_UTRAN-Core			R1-157584	moved from 3.3 to 11.3
7.12	LTE Rel-13: WI:	Yes	noted		R2-161007	LS on Support of EBF/FD-MIMO Features for TM9 (R1-157829; contact: Samsung)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	LTE_EBF_FDMIMO-Core			R1-157829	moved from 3.2 to 7.12
7.5	LTE Rel-13: WI:	Yes	noted		R2-161008	Reply LS to R2-154998 on ProSe UE-to-Network relay (S2-154369; contact: LGE)	SA2	LS in						to: RAN2; no reply answer	Rel-13	eProSe-Ext-SA2, LTE_eD2D_Prox-Core			S2-154369	moved from 3.2 to 7.5
7.5	LTE Rel-13: WI:	Yes	noted		R2-161009	Reply LS to R3-152366 = R2-156022 on ProSe UE Relaying Support (S2-154426; contact: Ericsson)	SA2	LS in						to: RAN2; no reply answer	Rel-13	LTE_eD2D_Prox-Core			S2-154426	moved from 3.2 to 7.5
7.5	LTE Rel-13: WI:	Yes	noted		R2-161010	Reply LS to R2-154999 on ProSe Direct Discovery out of coverage (C1-154853; contact: LGE)	CT1	LS in						to: RAN2; no reply answer	Rel-13	eProSe-Ext-CT			C1-154853	moved from 3.2 to 7.5
11.3	UTRA Rel-13: W	Yes	noted		R2-161011	Reply LS to S4-151565 = R2-156043 on EVS over UTRAN (C4-152164; contact: Qualcomm)	CT4	LS in						cc: RAN2; no reply answer	Rel-13	EVSoCS-S4			C4-152164	moved from 3.3 to 11.3
7.11	LTE Rel-13: SI:	Yes	noted		R2-161012	LS on clarification of RSU types (R1-157821; contact: CATT)	RAN1	LS in						to: RAN2; reply LS provided in R2-161801	Rel-14	FS_LTE_V2X			R1-157821	moved from 3.2 to 7.11
7.6.1	LTE Rel-13: WI:	Yes	noted		R2-161013	LS on WLAN mobility set configuration for LWA (R3-152905; contact: Intel)	RAN3	LS in						cc: RAN2; no reply answer	Rel-13	LTE_WLAN_radio-Core			R3-152905	moved from 3.2 to 7.6.1
7.16.1	LTE Rel-13: WI:	Yes	noted		R2-161014	LS on questions on NB-IoT (R3-160135; contact: Vodafone)	RAN3	LS in						cc: RAN2; no reply answer	Rel-13	NB_IOT-Core			R3-160135	moved from 3.2 to 7.16.1
7.16.1	LTE Rel-13: WI:	Yes	noted		R2-161015	LS on Release of Control Plane for DONAS (R3-160140, contact: Alcatel-Lucent)	RAN3	LS in						cc: RAN2; no reply answer	Rel-13	NB_IOT-Core			R3-160140	moved from 3.2 to 7.16.1
7.16.1	LTE Rel-13: WI:	Yes	noted		R2-161016	LS on Multiple uplink NAS PDUs in CIoT optimization (R3-160142; contact: Huawei)	RAN3	LS in						cc: RAN2; no reply answer	Rel-13	NB_IOT-Core			R3-160142	moved from 3.2 to 7.16.1
7.16.1	LTE Rel-13: WI:	Yes	noted		R2-161017	LS on CIOT optimization (R3-160147; contact: Samsung)	RAN3	LS in						to: RAN2; no reply answer	Rel-13	NB_IOT-Core			R3-160147	moved from 3.2 to 7.16.1
3.2	LSin: LTE releva	Yes	noted		R2-161018	LS on distinction of intra-band non-contiguous CA types (R4-158226; contact: NTT DOCOMO)	RAN4	LS in						to: RAN2; no reply answer	Rel-11	TEI11			R4-158226	
7.7	LTE Rel-13: WI:	Yes	noted		R2-161019	Further LS to R4-156637 = R2-156034 on RS-SINR measurement report mapping (R4-158389; contact: Ericsson)	RAN4	LS in						to: RAN2; no reply answer	Rel-13	LTE_MC_load-Core			R4-158389	mooved froom 3.2 to 7.7
3.2	LSin: LTE releva	Yes	noted		R2-161020	LS on maximum UL Transmission timing difference in dual connectivity (R4-158409; contact: Huawei)	RAN4	LS in						to: RAN2; Reply LS provided in R2-161998	Rel-13	LTE_dualC_enh-Core			R4-158409	
3.2	LSin: LTE releva	Yes	noted		R2-161021	LS on introduction of new establishment cause for mobile-originating calls (RP-152295; contact: Noka Networks)	RAN	LS in						to: RAN2; no reply answer	Rel-12	TEI12			RP-152295	

Samsung Exhibit 1025, Page 1562 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
5.1	Joint UMTS/LTE	Yes	noted		R2-161022	Reply LS to R2-153876 on ACDC mechanism (S1-154287; contact: Intel)	SA1	LS in						to: RAN2; no reply answer	Rel-13	ACDC-ST1			S1-154287	moved from 3.1 to 5.1
7.11	LTE Rel-13: SI: I	Yes	noted		R2-161023	Reply LS R2-155003 on V2X message characteristics (S1-154509; contact: Qualcomm)	SA1	LS in						to: RAN2; no reply answer	Rel-14	FS_LTE_V2X			S1-154509	moved from 3.2 to 7.11
7.15	LTE Rel-13: WI:	Yes	noted		R2-161024	Reply LS to RP-151623 = R2-154015 on New WI on LTE-WLAN RAN Level Integration supporting legacy WLAN (S2-154407; contact: Alcatel-Lucent)	SA2	LS in						to: RAN2; no reply answer	Rel-13	LTE_WLAN_radio_legacy-Core			S2-154407	moved from 3.2 to 7.15
7.15	LTE Rel-13: WI:	Yes	noted		R2-161025	Reply LS to R2-154915 on IPsec tunnelling mechanism for LTE-WiFi aggregation (S2-154408; contact: Alcatel-Lucent)	SA2	LS in						to: RAN2; no reply answer	Rel-13	LTE_WLAN_radio_legacy-Core			S2-154408	moved from 3.2 to 7.15
3.2	LSin: LTE releva	Yes	noted		R2-161026	Reply LS to R2-153008 on 3GPP Work on Explicit Congestion Notification for Lower Layer Protocols (SP-150829; contact: Samsung)	SA	LS in						cc: RAN2; no reply answer	Rel-10	ECSRA_LAA			SP-150829	
7.4.1	LTE Rel-13: WI:	Yes	noted		R2-161027	Response LS to R4-156699 = R2-156036 on measurement gap based intra-frequency cell detection for narrow band operation of LC UE (R1-157861; contact: Ericsson)	RAN1	LS in						cc: RAN2; no reply answer	Rel-13	LTE_MTCe2_L1-Core			R1-157861	moved from 3.2 to 7.4.1
7.4.1	LTE Rel-13: WI:	Yes	noted		R2-161028	Reply LS to R2-155509 = R1-156492 and R2-157082 = R1-157808 on direct indication of system information update and other fields (R1-157925; contact: Qualcomm)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	LTE_MTCe2_L1-Core			R1-157925	moved from 3.2 to 7.4.1; it was discussed under 7.9.1
7.5	LTE Rel-13: WI:	Yes	noted		R2-161029	Reply LS to R2-154998 on ProSe UE-to-Network relay (C1-154880; contact: LGE)	CT1	LS in						to: RAN2; no reply answer	Rel-13	eProSe-Ext-CT			C1-154880	moved from 3.2 to 7.5
3.2	LSin: LTE releva	Yes	noted		R2-161030	Reply LS to RP-152295 = R2-161021 on introduction of new establishment cause for mobile-originating calls (C1-160792; contact: Nokia Networks)	CT1	LS in						to: RAN2; no reply answer	Rel-12	TEI12			C1-160792	
3.2	LSin: LTE releva	Yes	noted		R2-161031	LS on request for information related to IoT (ISO/IEC JTC1/WG10 LS)	ISO/IEC JTC1/WG10	LS in						to: RAN2; LS will be sent in RAN	Rel-13	NB_IOT-Core				
7.1	LTE Rel-13: WI:	Yes	noted		R2-161032	LS on CR to 36.201 for Introduction of LAA (R1-157744; contact: Alcatel-Lucent)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	LTE_LAA-Core			R1-157744	moved from 3.2 to 7.1
7.4.1	LTE Rel-13: WI:	Yes	noted		R2-161033	LS on RRC parameters for LTE eMTC (R1-157891; contact: Ericsson)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	LTE_MTCe2_L1-Core			R1-157891	moved from 3.2 to 7.4.1
7.1	LTE Rel-13: WI:	Yes	noted		R2-161034	LS on CR to 36.201 for Introduction of LAA (R1-157900; contact: Alcatel-Lucent)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	LTE_LAA-Core			R1-157900	moved from 3.2 to 7.1
7.1	LTE Rel-13: WI:	Yes	noted		R2-161035	LS on RAN1 agreements on LAA (R1-157905; contact: Ericsson)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	LTE_LAA-Core			R1-157905	moved from 3.2 to 7.1
3.2	LSin: LTE releva	Yes	noted		R2-161036	Reply LS to S5-154454 on RAN Sharing Enhancements for LTE (R3-152873; contact: Ericsson)	RAN3	LS in						to: RAN2; no reply answer	Rel-13	RSE-RAN_LTE-Core			R3-152873	
8	UTRA Release 1	Yes	noted		R2-161037	LS on Applicability of FGI3/4 for UMTS test cases for Absolute Priority Reselection in CELL_FACH (R5-155780; contact: Qualcomm)	RAN5	LS in						to: RAN2; reply LS provided in R2-161818	Rel-8				R5-155780	moved from 3.3 to 8
7.1	LTE Rel-13: WI:	Yes	noted		R2-161038	LS on LAA (RP-152280; contact: Qualcomm)	RAN	LS in						cc: RAN2; no reply answer	Rel-13	LTE_LAA-Core			RP-152280	moved from 3.2 to 7.1
7.6.1	LTE Rel-13: WI:	Yes	noted	late	R2-161039	Reply LS to R2-154935 on System Aspects for LTE-WLAN Radio Level Integration and Interworking Enhancement (S2-154456; contact: Huawei)	SA2	LS in						to: RAN2; no reply answer	Rel-13	LTE_WLAN_radio-Core			S2-154456	moved from 3.2 to 7.6.1
3.2	LSin: LTE releva	Yes	noted		R2-161040	Reply LS to S4-151160 = R2-154019 on QoS for EVS-VBR Codec Operation (S2-160618; contact: Ericsson)	SA2	LS in						to: RAN2; no reply answer	Rel-13	EVS_codec, QOSE2EMTSI			S2-160618	
7.16.1	LTE Rel-13: WI:	Yes	noted		R2-161041	Reply LS to R3-160142 = R2-161016 on Multiple uplink NAS PDUs in CIoT optimization (S2-160828; contact: Qualcomm)	SA2	LS in						cc: RAN2; no reply answer	Rel-13	NB_IOT-Core			S2-160828	moved from 3.2 to 7.16.1
7.16.1	LTE Rel-13: WI:	Yes	noted		R2-161042	Reply to R2-156971 LS on NB-IoT work progress in RAN2 (S2-160905; contact: Vodafone)	SA2	LS in						to: RAN2; no reply answer	Rel-13	NB_IOT-Core			S2-160905	moved from 3.2 to 7.16.1

Samsung Exhibit 1025, Page 1563 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Upload ed	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.6.1	LTE Rel-13: WI:	Yes	noted		R2-161043	LS on Co-existence between LTE-WLAN Radio Level Integration and other WLAN offloading solutions (e.g. ANDSF) (S2-160894; contact: Nokia Networks)	SA2	LS in						to: RAN2; no reply answer	Rel-13	LTE_WLAN_radio-Core			S2-160894	moved from 3.2 to 7.6.1
11.3	UTRA Rel-13: W	Yes	noted		R2-161044	LS on EVS over CS (S4-160310; contact: Qualcomm)	SA4	LS in						to: RAN2; no reply answer	Rel-13	EVSoCS			S4-160310	moved from 3.3 to 11.3
7.16.1	LSin: LTE releva	Yes	noted	late	R2-161045	LS on RRC parameters for NB-IoT (R1-160230; contact: Huawei)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	NB_IOT-Core			R1-160230	moved from 3.2 to 7.16.1
7.6.1	LTE Rel-13: WI:	Yes	noted	late	R2-161046	Reply LS to R2-157123 on LTE-WLAN Aggregation (S3-160272; contact: Nokia Networks)	SA3	LS in						to: RAN2; no reply answer	Rel-13	LTE_WLAN_radio_legacy-Core			S3-160272	moved from 3.2 to 7.6.1
7.15	LTE Rel-13: WI:	Yes	noted	late	R2-161047	Reply LS to R2-157126 on LWIP Solution and DRB distinction (S3-160274; contact: Nokia Networks)	SA3	LS in						to: RAN2; no reply answer	Rel-13	LTE_WLAN_radio_legacy-Core			S3-160274	moved from 3.2 to 7.15
7.16.1	LTE Rel-13: WI:	Yes	noted	late	R2-161048	LS on Clarifications on RRC Resume Request (S3-160337; contact: Nokia Networks)	SA3	LS in						to: RAN2; reply LS provided in R2-162019	Rel-13	NB_IOT-Core			S3-160337	moved from 3.2 to 7.16.1
3.2	LSin: LTE releva	Yes	noted	late	R2-161049	LS on TM10 CRS-IM UE capability report signalling introduction (R4-158196; contact: Intel)	RAN4	LS in						to: RAN2; no reply answer	Rel-13	LTE_CRSIM-Perf			R4-158196	
3.2	LSin: LTE releva	Yes	noted	late	R2-161050	Response LS to C1-160784 on questions on CIoT (S2-160906; contact: Vodafone)	SA2	LS in						to: RAN2; no reply answer	Rel-13	NB_IOT-Core			S2-160906	also allocated in 7.16.1
3.2	LSin: LTE releva	Yes	noted	late	R2-161051	Reply LS to R2-157131 on Control of Unattended/Background Traffic (S1-160326; contact: Verizon)	SA1	LS in						to: RAN2; no reply answer	Rel-13	TEI13			S1-160326	
7.2	LTE Rel-13: WI:	Yes	noted	late	R2-161052	LS on Transmission Power Offset Values for PUCCH Format 4/5 (R1-161212; contact: Samsung)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	LTE_CA_enh_b5C-Core			R1-161212	moved from 3.2 to 7.2
3.2	LSin: LTE releva	Yes	noted	late	R2-161053	LS on multiple NB-IoT carriers operation for NB-IoT (R1-161219; contact: NTT DOCOMO)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	NB_IOT-Core			R1-161219	moved from 3.2 to 7.16.1
7.12	LTE Rel-13: WI:	Yes	noted	late	R2-161054	LS on EB/FD-MIMO Terminologies (R1-161220; contact: Nokia Networks)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	LTE_EBF_FDMIMO-Core			R1-161220	moved from 3.2 to 7.12
3.2	LSin: LTE releva	Yes	noted	late	R2-161055	Reply LS to R2-157131 on Control of Unattended/Background Traffic (C1-161279; contact: Huawei)	CT1	LS in						to: RAN2; no reply answer	Rel-13	TEI13			C1-161279	
7.16.1	LTE Rel-13: WI:	Yes	noted	late	R2-161056	LS on maximum DL TBS support for NB-IoT (R1-161246; contact: Huawei)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	NB_IOT-Core			R1-161246	moved from 3.2 to 7.16.1
7.16.1	LTE Rel-13: WI:	Yes	noted	late	R2-161057	Reply LS to R4-161140 on channel raster for NB-IoT (R1-161269; contact: ZTE)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	NB_IOT-Core			R1-161269	moved from 3.2 to 7.16.1
3.2	LSin: LTE releva	Yes	noted	late	R2-161058	LS on PDSCH collision with PSS/SSS/PBCH (R1-161276; contact: Huawei)	RAN1	LS in						to: RAN2; no reply answer	Rel-13	TEI13			R1-161276	
3.2	LSin: LTE releva	Yes	noted	late	R2-161059	Reply LS to R3-152873 from RAN3 to SA5 on RAN Sharing Enhancements for LTE (S5-161341; contact: Ericsson)	SA5	LS in						cc: RAN2; no reply answer					S5-161341	
7.16.1	LTE Rel-13: WI:	Yes	noted	late	R2-161060	Response to R2-156971 LS on NB-IoT work progress in RAN2 (C1-161187; contact: NTT DOCOMO)	CT1	LS in						to: RAN2; reply LS provided in R2-162020	Rel-13	NB_IOT-Core			C1-161187	moved from 3.2 to 7.16.1
3.3	LSin: UMTS rele	Yes	available	late	R2-161061	LS on RAN1 multi-carrier enhancements for UMTS agreements (R1-161185; contact: Huawei)	RAN1	LS in						to: RAN2; not treated	Rel-14	FS_UTRA_Mce			R1-161185	
3.3	LSin: UMTS rele	Yes	available	late	R2-161062	LS on RAN1 Cell Fach DTx/DRx Enhancements (R1-161187; contact: Qualcomm)	RAN1	LS in						to: RAN2; not treated	Rel-14	FACH_DTXDRX-Core			R1-161187	
3.2	LSin: LTE releva	Yes	noted	late	R2-161063	LS on TR update for latency reduction (R1-161421; contact: Ericsson)	RAN1	LS in						to: RAN2; no reply answer	Rel-14	FS_LTE_LATRED			R1-161421	
3.2	LSin: LTE releva	Yes	available	late	R2-161064	Reply LS on Paging Enhancements (R3-160516; contact: Huawei)	RAN3	LS in						to: RAN2; not treated	Rel-13	LTE_MTCe2_L1, TEI13			R3-160516	
3.2	LSin: LTE releva	Yes	noted	late	R2-161065	Reply LS to R2-157115 on SD-RSRP range (R4-161162; contact: Qualcomm)	RAN4	LS in						to: RAN2; no reply answer	Rel-13	LTE_eD2D_Prox-Core			R4-161162	
3.2	LSin: LTE releva	Yes	noted	late	R2-161066	LS on IEEE802.11 RSSI Measurement Report Mapping (R4-161185; contact: Ericsson)	RAN4	LS in						to: RAN2; no reply answer	Rel-13	LTE_WLAN_radio-Core			R4-161185	
2.2	General: Approv	Yes	revised		R2-161067	Draft Report v2.0 for RAN2 #92 in Anaheim, USA, 16.11.-20.11.2015	ETSI MCC	report									R2-161002	R2-161070		

Samsung Exhibit 1025, Page 1564 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
2.2	General: Approv	Yes	approved		R2-161068	Report of RAN2 Rel-13 LTE ASN.1 Review Ad-hoc Meeting in Helsinki, Finland, 13.01.-14.01.2016	ETSI MCC	report										R2-161004				
2.2	General: Approv	Yes	approved		R2-161069	Report of RAN2 NB-IOT Ad-hoc Meeting in Budapest, Hungary, 19.01.-21.01.2016	ETSI MCC	report										R2-161003				
2.2	General: Approv	Yes	approved		R2-161070	Report v3.0 for RAN2 #92 in Anaheim, USA, 16.11.-20.11.2015	ETSI MCC	report										R2-161067				
7.5.5	LTE Rel-13: WI:	Yes	merged		R2-161071	Corrections on description of eProSe in TS 36.300	Huawei, HiSilicon	CR	36.300	13.2.0	0850	-	F	merged in R2-161797	Rel-13	LTE_eD2D_Prox-Core			R2-161797	CR number duplicated due to a system error so another CR number will	xxx
7.5.1	LTE Rel-13: WI:	Yes	noted		R2-161072	Discussion on Multiple Relay UE IDs for a Relay UE	Huawei, HiSilicon	discussion							Rel-13	LTE_eD2D_Prox-Core					
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161073	Corrections for sidelink operation in TS 36.321	Huawei, HiSilicon	CR	36.321	13.0.0	0822	-	F		Rel-13	LTE_eD2D_Prox-Core					
7.5.4	LTE Rel-13: WI:	Yes	noted		R2-161074	Constraint for Multi-transmission in a SC period	Huawei, HiSilicon	discussion							Rel-13	LTE_eD2D_Prox-Core					
7.5.4	LTE Rel-13: WI:	Yes	withdrawn		R2-161075	Corrections on Multi-transmission in a SC period	Huawei, HiSilicon	CR	36.321	13.0.0	0823	-	F		Rel-13	LTE_eD2D_Prox-Core					
7.5.1	LTE Rel-13: WI:	Yes	noted		R2-161076	Discussion on conditions to be Remote Ues	Huawei, HiSilicon	discussion							Rel-13	LTE_eD2D_Prox-Core					
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161077	Corrections of conditions to be remote Ues	Huawei, HiSilicon	CR	36.331	13.0.0	2000	-	F		Rel-13	LTE_eD2D_Prox-Core					
7.5.2	LTE Rel-13: WI:	Yes	available		R2-161078	Discussion and TP on the carrier for PS discovery	Huawei, HiSilicon	discussion							Rel-13	LTE_eD2D_Prox-Core					
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161079	Discussion and TP on sidelink relay communication	Huawei, HiSilicon	discussion							Rel-13	LTE_eD2D_Prox-Core					
7.5.1	LTE Rel-13: WI:	Yes	revised		R2-161080	Discussion and TP on Relay eMBMS service	Huawei, HiSilicon	discussion							Rel-13	LTE_eD2D_Prox-Core		R2-161803			
7.19.1	LTE Rel-13: LTE	Yes	revised		R2-161081	eSL changes resulting from review for ASN.1 freeze	Samsung Telecommunications	CR	36.331	13.0.0	2001	-	F		Rel-13	LTE_eD2D_Prox-Core		R2-161177			
7.19.1	LTE Rel-13: LTE	Yes	revised		R2-161082	Miscellaneous changes resulting from review for ASN.1 freeze	Ericsson (Rapporteur)	CR	36.331	13.0.0	2002	-	F		Rel-13	TEI13		R2-161201			
7.19.1	LTE Rel-13: LTE	Yes	revised		R2-161083	Review issue list for ASN.1 freeze	Ericsson, Samsung	discussion							Rel-13	TEI13		R2-161202			
4.1	Joint UMTS/LTE	Yes	revised		R2-161084	Correction to GLONASS IOD value range	Intel Corporation	CR	36.355	13.0.0	0138	-	F		Rel-13	LCS_LTE, TEI13		R2-161767			
4.1	Joint UMTS/LTE	Yes	revised		R2-161085	Correction to GLONASS IOD value range	Intel Corporation	CR	25.331	13.1.0	5826	-	F		Rel-13	RANimp-ANSS, TEI13		R2-161768			
7.4.1	LTE Rel-13: WI:	Yes	available		R2-161086	Addition of low complexity UEs and coverage enhancement features	Ericsson	CR	36.331	13.0.0	2003	-	B		Rel-13	LTE_MTCe2_L1-Core					
7.6.2.3	LTE Rel-13: WI:	Yes	available		R2-161087	Introduce an LWAAP specification - TS 36.360 v0.0.0 on LTE-WLAN Aggregation Adaptation Protocol (LWAAP)	LG Electronics Inc.	discussion	36.360	0.0.0				result of e-mail discussion [92#42][LTE/WLAN]	Rel-13	LTE_WLAN_radio-Core		R2-161787		Tdoc type will be changed to draft TS	x
7.6.2.2	LTE Rel-13: WI:	Yes	noted		R2-161088	Discussion on WLAN Mobility Set Configuration for LWA	CATT	discussion							Rel-13	LTE_WLAN_radio-Core					
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161089	Discussion on LWA Status Report Cause Value	CATT	discussion							Rel-13	LTE_WLAN_radio-Core					
7.6.2.2	LTE Rel-13: WI:	Yes	noted		R2-161090	Discussion on LWA Association Timer Setting	CATT, Broadcom	discussion							Rel-13	LTE_WLAN_radio-Core					
7.6.2.3	LTE Rel-13: WI:	Yes	noted		R2-161091	Discussion on Support of UE based Flow Control in LWAAP	CATT, LG, ITRI	discussion							Rel-13	LTE_WLAN_radio-Core					
7.6.2.3	LTE Rel-13: WI:	Yes	available		R2-161092	Support of eNB based Polling for LWA Status Report in LWAAP	CATT	discussion							Rel-13	LTE_WLAN_radio-Core					
7.6.3.1	LTE Rel-13: WI:	Yes	available		R2-161093	UE behaviour in RRC_IDLE mode	CATT, Fujitsu, ZTE	discussion							Rel-13	LTE_WLAN_radio-Core					
7.6.3.1	LTE Rel-13: WI:	Yes	noted		R2-161094	Procedures of LTE-WLAN Interworking Enhancements	CATT	discussion							Rel-13	LTE_WLAN_radio-Core					
7.8	LTE Rel-13: WI:	Yes	revised		R2-161095	The correction on the description of 5.5.4.1	CATT	draftCR	36.331	13.0.0	-	-	F		Rel-13	LTE_dualC_enh-Core		R2-161861		Tdoc type should be "CR", not "draftCR"	
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161096	Mobility considerations for NB-IoT	Gemalto N.V.	discussion							Rel-13	NB_IOT-Core					
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161097	Measurement considerations for NB-IoT	Gemalto N.V.	discussion							Rel-13	NB_IOT-Core					
7.4.2	LTE Rel-13: WI:	Yes	noted		R2-161098	Increased SIB validity introduction to TS36.331	Gemalto N.V.	discussion							Rel-13	LTE_MTCe2_L1-Core				moved from 7.4.1 to 7.4.2	
7.11	LTE Rel-13: SI: (	Yes	available		R2-161099	Discussion on V2I/V2N/V2P transport based on PC5	Huawei, HiSilicon	discussion							Rel-14	FS_LTE_V2X					
7.11	LTE Rel-13: SI: (	Yes	available		R2-161100	Operating Scenarios for the Uu-based V2I	Huawei, HiSilicon	discussion							Rel-14	FS_LTE_V2X					
7.11	LTE Rel-13: SI: (	Yes	available		R2-161101	QoS Support for V2X transmission	Huawei, HiSilicon	discussion							Rel-14	FS_LTE_V2X					
7.11	LTE Rel-13: SI: (	Yes	available		R2-161102	Draft LS on V2X QoS support	Huawei, HiSilicon	LS out							Rel-14	FS_LTE_V2X					
7.11	LTE Rel-13: SI: (	Yes	available		R2-161103	Further Considerations and Text Proposals for Scenario 1	Huawei, HiSilicon	discussion							Rel-14	FS_LTE_V2X					
7.11	LTE Rel-13: SI: (	Yes	available		R2-161104	Capacity analysis for Uu transport of V2V service	Huawei, HiSilicon	discussion							Rel-14	FS_LTE_V2X					
7.11	LTE Rel-13: SI: (	Yes	available		R2-161105	Uu-based V2V Transport Based on Location Information	Huawei, HiSilicon	discussion							Rel-14	FS_LTE_V2X					

Samsung Exhibit 1025, Page 1565 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.11	LTE Rel-13: SI: (	Yes	available		R2-161106	Further consideration and TP for V2V Scenario 2 and Scenario 3	Huawei, HiSilicon	discussion							Rel-14	FS_LTE_V2X				
7.1.2	LTE Rel-13: WI:	Yes	noted		R2-161107	L3 reset for LAA measurements ?	Samsung R&D Institute UK	discussion							Rel-13	LTE_LAA-Core				
7.11	LTE Rel-13: SI: (	Yes	noted		R2-161108	Capacity analysis for UL Uu based V2V	Sequans Communications	discussion							Rel-14	FS_LTE_V2X				
7.1.2	LTE Rel-13: WI:	Yes	available		R2-161109	LAA L3 filter output reset	Samsung R&D Institute UK	CR	36.331	13.0.0	2004	-	F		Rel-13	LTE_LAA-Core				
7.6.2.1	LTE Rel-13: WI:	Yes	available		R2-161110	LWA bearer type inconsistency	Samsung R&D Institute UK	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.1	LTE Rel-13: WI:	Yes	available		R2-161111	LWA bearer type inconsistency	Samsung R&D Institute UK	CR	36.300	13.2.0	0823	-	F		Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161112	User Preference Handling	Samsung R&D Institute UK	discussion	36.331						Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	noted		R2-161113	LWA carrier/AP identification	Samsung R&D Institute UK	discussion	36.331						Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161114	LWA Configuration Control	Samsung R&D Institute UK	discussion	36.331						Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	noted		R2-161115	LWA Measurement aspects	Samsung R&D Institute UK	discussion	36.331						Rel-13	LTE_WLAN_radio-Core				
7.11	LTE Rel-13: SI: (	Yes	noted		R2-161116	Summary of email discussion [92#37][LTE/V2X] Latency analysis	LG Electronics France	discussion						result of email discussion [92#37][LTE/V2X]	Rel-14	FS_LTE_V2X				
6.1.2	LTE: Rel-12 and	Yes	noted		R2-161117	Clarification on MBMS	ZTE Corporation, ZTE Trunking Technology Corporation	discussion							Rel-12					
7.3	LTE Rel-13: WI:	Yes	not pursued		R2-161118	Clarification on the use of neighbor cell information	ZTE Corporation, ZTE Trunking Technology Corporation	draftCR	36.300	13.0.0	-	-			Rel-13	LTE_SC_PTM-Core				Tdoc type should be "CR", not "draftCR"
7.3	LTE Rel-13: WI:	Yes	revised		R2-161119	Corrections on SC-PTM MAC specification	ZTE Corporation, ZTE Trunking Technology Corporation	draftCR	36.321	13.0.0	-	-			Rel-13	LTE_SC_PTM-Core		R2-161865		Tdoc type should be "CR", not "draftCR"
7.3	LTE Rel-13: WI:	Yes	noted		R2-161120	Discussion on SC-PTM counting	ZTE Corporation, ZTE Trunking Technology Corporation	discussion							Rel-13	LTE_SC_PTM-Core				
7.3	LTE Rel-13: WI:	Yes	available		R2-161121	Discussion on SC-PTM counting	ZTE Corporation, ZTE Trunking Technology Corporation	draftCR	36.331	13.0.0	-	-			Rel-13	LTE_SC_PTM-Core				Tdoc type should be "CR", not "draftCR"
7.3	LTE Rel-13: WI:	Yes	not pursued		R2-161122	Clarification on the SC-PTM UE capability	ZTE Corporation, ZTE Trunking Technology Corporation	draftCR	36.306	13.0.0	-	-			Rel-13	LTE_SC_PTM-Core				Tdoc type should be "CR", not "draftCR"
7.3	LTE Rel-13: WI:	Yes	available		R2-161123	Draft LS on SC-PTM counting	ZTE Corporation, ZTE Trunking Technology Corporation	other							Rel-13	LTE_SC_PTM-Core				wrong Tdoc type used; Type should be LS out
7.11	LTE Rel-13: SI: (	Yes	available		R2-161124	Discussion on UE type RSU	Guangdong OPPO Mobile Telecom.	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI: (	Yes	available		R2-161125	Discussion on Uu-based V2X	Guangdong OPPO Mobile Telecom.	discussion							Rel-14	FS_LTE_V2X				
7.6.2.1	LTE Rel-13: WI:	Yes	noted		R2-161126	Discussion on LTE-WLAN capabilities	Guangdong OPPO Mobile Telecom.	discussion							Rel-13	LTE_WLAN_radio-Core				
7.18	LTE Rel-13: LTE	Yes	withdrawn		R2-161127	Considering on enhancing VoLTE technologies	China Mobile Com. Corporation	discussion	26.445						Rel-13	TEI13				
11.11	UTRA Rel-13: U	Yes	revised		R2-161128	Introduction of capability for extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	25.306	13.0.0	0498	-	F		Rel-13	LTE_MC_load-Core		R2-161840		
11.11	UTRA Rel-13: U	Yes	revised		R2-161129	Introduction of capability for extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	25.331	13.1.0	5827	-	F		Rel-13	LTE_MC_load-Core		R2-161836		
11.11	UTRA Rel-13: U	Yes	agreed		R2-161130	Editorial cleanups in the table header with multi-carrier physical channel combinations	Rapporteur	CR	25.302	13.1.0	0243	-	D		Rel-13	TEI13				

Samsung Exhibit 1025, Page 1566 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
11.11	UTRA Rel-13: U	Yes	agreed		R2-161131	Editorial cleanups in structure of the UL MAC control information formats	Rapporteur	CR	25.321	13.1.0	0816	-	D		Rel-13	TEI13				
11.6	UTRA Rel-13: W	Yes	noted		R2-161132	Introduction of DB-DC-HSUPA and DB/DC-HSUPA+CS features into earlier releases	Nokia Networks, Qualcomm Inc., Huawei, HiSilicon, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	HSUPA_DB_MC-Core, DC_HSUPA_CS-Core				
4.1	Joint UMTS/LTE	Yes	noted		R2-161133	LTE capability container size in UMTS network	Nokia Networks, Qualcomm Incorp., Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-10	TEI10				
7.4.3	LTE Rel-13: WI	Yes	noted		R2-161134	Remaining issues on eMTC random access	ZTE Corporation	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.16.3.1	LTE Rel-13: WI	Yes	noted		R2-161135	Remaining issues on Random Access in NB-IoT	ZTE Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.2.3	LTE Rel-13: WI	Yes	available		R2-161136	NB-IoT Load Distribution Discussion	ZTE Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.2.4	LTE Rel-13: WI	Yes	available		R2-161137	Issues for Paging in NB-IOT	ZTE Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI	Yes	available		R2-161138	NB-IOT Measurements for reselection and redirection	Sony	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI	Yes	available		R2-161139	Implicit Connection Release for NB-IOT	Sony	discussion							Rel-13	NB_IOT-Core				
7.16.2.2	LTE Rel-13: WI	Yes	available		R2-161140	System Information Area Scope and Value Tag	Sony	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI	Yes	available		R2-161141	Considerations on PRACH resources for NB-IoT	Sony	discussion							Rel-13	NB_IOT-Core				
7.16.2.4	LTE Rel-13: WI	Yes	noted		R2-161142	Paging Capability	Sony	discussion							Rel-13	NB_IOT-Core				
7.18	LTE Rel-13: LTE	Yes	withdrawn		R2-161143	sf60 Long DRX Cycle	Apple, Mediatek inc, Broadcom, Qualcomm inc	draftCR	36.331	13.0.0	-	-	B		Rel-13	TEI13				
7.4.2	LTE Rel-13: WI	Yes	available		R2-161144	SIB Acquisition Based on EC level	CATT	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.2	LTE Rel-13: WI	Yes	noted		R2-161145	Acquisition of an SI message	CATT	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.4	LTE Rel-13: WI	Yes	noted		R2-161146	The Extension of Parameter nB	CATT	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.4	LTE Rel-13: WI	Yes	available		R2-161147	Distribution of UEs in multiple paging narrowbands	CATT	discussion								LTE_MTCe2_L1-Core				
7.16.1	LTE Rel-13: WI	Yes	available		R2-161148	Consideration on Positioning in NB IoT	CATT	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI	Yes	available		R2-161149	Resume ID	CATT	discussion							Rel-13	NB_IOT-Core				
7.16.2.4	LTE Rel-13: WI	Yes	available		R2-161150	Discussion on paging enhancements for NB-IoT	CATT	discussion							Rel-13	NB_IOT-Core				
7.16.2.4	LTE Rel-13: WI	Yes	available		R2-161151	Discussion on Paging Schemes	CATT	discussion							Rel-13	NB_IOT-Core				
7.16.2.4	LTE Rel-13: WI	Yes	noted		R2-161152	Discussion of false paging	CATT	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI	Yes	noted		R2-161153	Volume indication for NB-IoT data	CATT	discussion							Rel-13	NB_IOT-Core				
7.2.1	LTE Rel-13: WI	Yes	revised		R2-161154	Corrections and missing agreement on the eCA	Beijing Xinwei Telecom Techn.	CR	36.331	13.0.0	2005	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161859		
7.16.2.2	LTE Rel-13: WI	Yes	noted		R2-161155	Open issues of SI content	CATT	discussion								NB_IOT-Core				
7.6.2.2	LTE Rel-13: WI	Yes	available		R2-161156	LS on UE WLAN Connection Timing	CATT	LS out							Rel-13	LTE_WLAN_radio-Core				
7.2.1	LTE Rel-13: WI	Yes	revised		R2-161157	Capture the UE capability for the extension of the MeasObjectId to 64	Beijing Xinwei Telecom Techn.	CR	36.306	13.0.0	0323	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161860		
7.1.2	LTE Rel-13: WI	Yes	revised		R2-161158	corrections on RSSI measurment	Beijing Xinwei Telecom Techn.	CR	36.331	13.0.0	2006	-	F		Rel-13	LTE_LAA-Core		R2-161916		CR number missed in CR coversheet
7.11	LTE Rel-13: SI: I	Yes	available		R2-161159	Capacity analysis for Uu transport of V2V service	ZTE Corporation	discussion							Rel-14	FS_LTE_V2X				
11.11	UTRA Rel-13: U	Yes	noted		R2-161160	On Rel-13 sub-features and UE capabilities	Qualcomm Incorporated	discussion							Rel-13	TEI13				
7.6.2.2	LTE Rel-13: WI	Yes	available		R2-161161	Introduction of LTE-WLAN Aggregation	QUALCOMM CDMA Technologies	CR	36.331	13.0.0	2007	-	B		Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI	Yes	revised		R2-161162	LWA Miscellaneous Corrections	QUALCOMM CDMA Technologies	CR	36.331	13.0.0	2008	-	B	endorsed for further update	Rel-13	LTE_WLAN_radio-Core		R2-161955		moved from 7.2.2 to 7.6.2.2 by author's request
7.11	LTE Rel-13: SI: I	Yes	available		R2-161163	Considerations on eNB type RSU and UE type RSU	ZTE Corporation	discussion							Rel-14	FS_LTE_V2X				
7.6.3.2	LTE Rel-13: WI	Yes	available		R2-161164	Introduction of RCLWI	QUALCOMM CDMA Technologies	CR	36.331	13.0.0	2009	-	B		Rel-13	LTE_WLAN_radio-Core				moved from 7.2.2 to 7.6.3.2
7.18	LTE Rel-13: LTE	Yes	withdrawn		R2-161165	Discussion on uplink data compression	China Mobile Com. Corporation	discussion							Rel-13	TEI13				
7.16.2.1	LTE Rel-13: WI	Yes	noted	late	R2-161166	Summary of email discussion: [NBAH#04][NBIOT/Resume] RRC Functions for suspend - resume	Huawei	report						result of email discussion [NBAH#04]	Rel-13	NB_IOT-Core				
7.3	LTE Rel-13: WI	Yes	noted		R2-161167	Corrections on SC-PTM	Huawei, HiSilicon	discussion							Rel-13	LTE_SC_PTM-Core				

Samsung Exhibit 1025, Page 1567 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.3	LTE Rel-13: WI:	Yes	revised		R2-161168	Corrections on SC-PTM	Huawei, HiSilicon	CR	36.331	13.0.0	2010	-	F		Rel-13	LTE_SC_PTM-Core		R2-161872		
11.11	UTRA Rel-13: U	Yes	revised		R2-161169	Correction on signalling transmission control due to access group blocking of DTCH	Ericsson, Huawei, HiSilicon, Nokia Networks	CR	25.300	13.0.0	0035	-	C		Rel-13	TEI13, EDCH_enh-Core		R2-161830		
11.11	UTRA Rel-13: U	Yes	revised		R2-161170	Correction on signalling transmission control due to access group blocking of DTCH	Ericsson, Huawei, HiSilicon, Nokia Networks	CR	25.306	13.0.0	0499	-	C		Rel-13	TEI13, EDCH_enh-Core		R2-161831		
11.11	UTRA Rel-13: U	Yes	revised		R2-161171	Correction on signalling transmission control due to access group blocking of DTCH	Ericsson, Huawei, HiSilicon, Nokia Networks	CR	25.331	13.1.0	5828	-	C		Rel-13	TEI13, EDCH_enh-Core		R2-161832		
7.9.1	LTE Rel-13: WI:	Yes	merged		R2-161172	Corrections on eDRX	FUJITSU LIMITED	CR	36.331	13.0.0	2011	-	F	merged intoR2-161898	Rel-13	LTE_extDRX-Core		R2-161898		
7.9.1	LTE Rel-13: WI:	Yes	revised		R2-161173	Correction on PO monitoring during paing window in eDRX	FUJITSU LIMITED	CR	36.304	13.0.0	0289	-	F		Rel-13	LTE_extDRX-Core		R2-161896		
7.11	LTE Rel-13: SI:	Yes	available		R2-161174	Capacity analysis for the case of high density	FUJITSU LIMITED	discussion							Rel-14	FS_LTE_V2X				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161175	RRC Suspend Procedure	FUJITSU LIMITED	discussion							Rel-13	NB_IOT-Core				
7.16.2.2	LTE Rel-13: WI:	Yes	available		R2-161176	The mechanism for access control related system information update	FUJITSU LIMITED	discussion							Rel-13	NB_IOT-Core				
7.5.5	LTE Rel-13: WI:	Yes	revised		R2-161177	eSL changes resulting from review for ASN.1 freeze	Samsung Telecommunications	CR	36.331	13.0.0	2001	1	F		Rel-13	LTE_eD2D_Prox-Core	R2-161081	R2-161798		moved from 7.19.1 to 7.5.5
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161178	LWA Issue List for ASN.1 Freeze	QUALCOMM CDMA Technologies	discussion							Rel-13	LTE_WLAN_radio-Core				
7.4.2	LTE Rel-13: WI:	Yes	available		R2-161179	Message classes and logical channels (related to E.231)	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core				
11.12.2	UTRA Rel-13: U	Yes	available		R2-161180	Optimizations for the ASN.1 structure of the RRC reconfiguration messages	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	TEI13				
11.1.2	UTRA Rel-13: W	Yes	revised		R2-161181	Corrections and clarifications to URA_PCH with seamless transition to CELL_FACH state functionality.	Ericsson	CR	25.331	13.1.0	5829	-	F		Rel-13	UTRA_EDL_L23-Core		R2-161849		
7.5.1	LTE Rel-13: WI:	Yes	noted		R2-161182	Discussion on Relay UE serving multiple sidelinks for one Remote UE	ASUSTEK COMPUTER (SHANGHAI)	discussion							Rel-13	LTE_eD2D_Prox-Core				
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161183	Discussion on Relay UE serving multiple sidelinks for one Remote UE	ASUSTEK COMPUTER (SHANGHAI)	CR	36.331	13.0.0	2012	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161184	Consideration on resume failure of UP solution	ASUSTEK COMPUTER (SHANGHAI)	discussion							Rel-13	NB_IOT-Core				
7.11	LTE Rel-13: SI:	Yes	revised		R2-161185	[draft] Reply LS on RSU Scenarios	CATT	LS out							Rel-14	FS_LTE_V2X		R2-161801		
7.11	LTE Rel-13: SI:	Yes	available		R2-161186	Latency Evaluation and Enhancements	CATT	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI:	Yes	available		R2-161187	Considerations on Mobility Enhancements	CATT	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI:	Yes	available		R2-161188	Consideration on V2X Congestion	CATT	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI:	Yes	available		R2-161189	Uu/PC5 V2V Link Selection	CATT	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI:	Yes	available		R2-161190	Discussion on V2X Architecture	CATT	discussion							Rel-14	FS_LTE_V2X				
7.2.1	LTE Rel-13: WI:	Yes	revised		R2-161191	Introduction of extended number of measurement object identities	HTC Corporation	CR	36.331	13.0.0	2013	-	B	RAN2 agreement on increasing the maximum number of MeasObjectId to 64 in RAN2#90 was missed to be introduced when WI was closed	Rel-13	LTE_CA_enh_b5C-Core		R2-161762		CR cat.B is not allowed for closed WI
7.2.1	LTE Rel-13: WI:	Yes	available		R2-161192	Introducing capability signalling for extended number of measurement object identities	HTC Corporation	CR	36.331	13.0.0	2014	-	B	RAN2 agreement on increasing the maximum number of MeasObjectId to 64 in RAN2#90 was missed to be introduced when WI was closed	Rel-13	LTE_CA_enh_b5C-Core				CR cat.B is not allowed for closed WI
7.2.1	LTE Rel-13: WI:	Yes	available		R2-161193	Introducing capability signalling for extended number of measurement object identities	HTC Corporation	CR	36.306	13.0.0	0324	-	B	RAN2 agreement on increasing the maximum number of MeasObjectId to 64 in RAN2#90 was missed to be introduced when WI was closed	Rel-13	LTE_CA_enh_b5C-Core				CR cat.B is not allowed for closed WI
7.3	LTE Rel-13: WI:	Yes	revised		R2-161194	Clarification on SC-PTM	HTC Corporation	CR	36.300	13.2.0	0824	-	F		Rel-13	LTE_SC_PTM-Core		R2-161863		Tdoc number missed in CR coversheet
7.13	LTE Rel-13: WI:	Yes	available		R2-161195	Correction to RLF report	HTC Corporation	CR	36.331	13.0.0	2015	-	F		Rel-13	LTE_eMDT2-Core				

Samsung Exhibit 1025, Page 1568 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.13	LTE Rel-13: WI:	Yes	not pursued		R2-161196	Correction to RLF report	HTC Corporation	CR	37.320	13.0.0	0068	-	F		Rel-13	LTE_eMDT2-Core				
11.12.1	UTRA Rel-13: U	Yes	revised	late	R2-161197	UMTS REL-13 ASN.1 Review Issue list	Ericsson	discussion							Rel-13	TEI13		R2-161851		
11.12.1	UTRA Rel-13: U	Yes	available		R2-161198	Hyperlinked Tabular description	Ericsson	discussion							Rel-13	TEI13				
11.12.1	UTRA Rel-13: U	Yes	available		R2-161199	Hyperlinked ASN1	Ericsson	discussion							Rel-13	TEI13				
7.2.1	LTE Rel-13: WI:	Yes	agreed		R2-161200	Support of extended RLC AM SN for SCG	HTC Corporation	CR	36.331	13.0.0	2016	-	F		Rel-13	LTE_CA_enh_b5C-Core				
7.19.1	LTE Rel-13: LTE	Yes	revised		R2-161201	Miscellaneous changes resulting from review for ASN.1 freeze	Ericsson (Rapporteur)	CR	36.331	13.0.0	2002	1	F		Rel-13	TEI13	R2-161082	R2-161789		
7.19.1	LTE Rel-13: LTE	Yes	revised		R2-161202	Review issue list for ASN.1 freeze	Ericsson, Samsung	discussion							Rel-13	TEI13	R2-161083	R2-161790		
7.3	LTE Rel-13: WI:	Yes	revised		R2-161203	Clarification related to SC-MCCH Change Notification	Samsung Electronics Co., Ltd	CR	36.300	13.2.0	0825	-	F		Rel-13	LTE_SC_PTM-Core		R2-161864		CR number missed in CR coversheet
7.8	LTE Rel-13: WI:	Yes	revised		R2-161204	Clarification on Polling for last data	NTT DOCOMO INC.	CR	36.322	13.0.0	0116	-	F		Rel-13	LTE_dualC_enh-Core		R2-161862		
7.3	LTE Rel-13: WI:	Yes	revised		R2-161205	Miscellaneous correction for SC-PTM	Samsung Electronics Co., Ltd	CR	36.321	13.0.0	0824	-	F		Rel-13	LTE_SC_PTM-Core		R2-161866		
7.3	LTE Rel-13: WI:	Yes	revised		R2-161206	Miscellaneous corrections for SC-PTM	Samsung Electronics Co., Ltd	CR	36.331	13.0.0	2017	-	F		Rel-13	LTE_SC_PTM-Core		R2-161874		
6.2.1.2	LTE: Rel-12: WI	Yes	agreed		R2-161207	Clarification on Split bearer	NTT DOCOMO INC.	CR	36.300	12.8.0	0826	-	F		Rel-12	LTE_SC_enh_dualC-Core				
6.2.1.2	LTE: Rel-12: WI	Yes	agreed		R2-161208	Clarification on Split bearer	NTT DOCOMO INC.	CR	36.300	13.2.0	0827	-	A		Rel-13	LTE_SC_enh_dualC-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	revised		R2-161209	Maximum UL transmission timing reference in DC	NTT DOCOMO INC.	CR	36.300	12.8.0	0828	-	F	Related to R2-161020; Rel-13 CR is already agreed in R2-156163	Rel-12	LTE_SC_enh_dualC-Core		R2-161891	R2-161210	moved from 6.1.2 to 6.2.1.1
7.4.7	LTE Rel-13: WI:	Yes	available	late	R2-161210	Discussion on extension of RLC parameter for MTCe	NTT DOCOMO INC.	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.7	LTE Rel-13: WI:	Yes	available	late	R2-161211	Extension of RLC parameter for MTCe (Alt1)	NTT DOCOMO INC.	CR	36.331	13.0.0	2018	-	B	Related to R2-161210	Rel-13	LTE_MTCe2_L1-Core			R2-161210	
7.4.7	LTE Rel-13: WI:	Yes	available	late	R2-161212	Extension of RLC parameter for MTCe (Alt2)	NTT DOCOMO INC.	CR	36.331	13.0.0	2019	-	B	Related to R2-161210	Rel-13	LTE_MTCe2_L1-Core			R2-161210	
7.18	LTE Rel-13: LTE	Yes	noted		R2-161213	UE category and miximum data rate	Samsung Electronics Co., Ltd	discussion							Rel-13	TEI13				
7.18	LTE Rel-13: LTE	Yes	postponed		R2-161214	Clarification on UE category for UEs with fragmented spectrum	Samsung Electronics Co., Ltd	CR	36.306	13.0.0	0325	-	F		Rel-13	TEI13				
6.1.1	LTE: Rel-12 and	Yes	not pursued		R2-161215	Enabling 4-layer MIMO in TM3 and TM4	Samsung Electronics Co., Ltd	CR	36.306	10.15.0	0326	-	F		Rel-10	TEI10				CR number missed in CR coversheet
6.1.1	LTE: Rel-12 and	Yes	available		R2-161216	Enabling 4-layer MIMO in TM3 and TM4	Samsung Electronics Co., Ltd	CR	36.306	11.13.0	0327	-	A		Rel-11	TEI10				CR number missed in CR coversheet
6.1.1	LTE: Rel-12 and	Yes	available		R2-161217	Enabling 4-layer MIMO in TM3 and TM4	Samsung Electronics Co., Ltd	CR	36.306	12.7.0	0328	-	A		Rel-12	TEI10				CR number missed in CR coversheet
6.1.1	LTE: Rel-12 and	Yes	available		R2-161218	Enabling 4-layer MIMO in TM3 and TM4	Samsung Electronics Co., Ltd	CR	36.306	13.0.0	0329	-	A		Rel-13	TEI10				CR number missed in CR coversheet
7.12	LTE Rel-13: WI:	Yes	noted		R2-161219	Remaining issues on EBF/FD-MIMO parameters	Samsung Telecommunications	discussion							Rel-13	LTE_EBF_FDMIMO-Core				
7.12	LTE Rel-13: WI:	Yes	revised		R2-161220	EBF/FD-MIMO changes related to remaining issues	Samsung Telecommunications	CR	36.331	13.0.0	2020	-	F		Rel-13	LTE_EBF_FDMIMO-Core		R2-161870		
7.5.1	LTE Rel-13: WI:	Yes	noted	late	R2-161221	Remaining issues on eSL	Samsung Telecommunications	discussion							Rel-13	LTE_eD2D_Prox-Core				
7.5.1	LTE Rel-13: WI:	Yes	noted		R2-161222	eD2D relay: inter layer interaction regarding threshold checking	Samsung Telecommunications	discussion							Rel-13	LTE_eD2D_Prox-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161223	LWA DRB reconfiguration, RRC PDU and procedural aspects	Samsung Telecommunications	discussion							Rel-13	LTE_WLAN_radio-Core				
7.7	LTE Rel-13: WI:	Yes	revised		R2-161224	Idle mode load distribution	Samsung Telecommunications	CR	36.304	13.0.0	0290	-	F		Rel-13	LTE_MC_load-Core		R2-161954		
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161225	Some general LWA PDU specification aspects	Samsung Telecommunications	discussion							Rel-13	LTE_WLAN_radio-Core				
11.1.1	UTRA Rel-13: W	Yes	noted		R2-161226	Retrievable configurations in RRC signaling	Ericsson	discussion							Rel-13	UTRA_EDL_L23-Core				
11.1.1	UTRA Rel-13: W	Yes	not pursued		R2-161227	Correction of Retrievable configurations	Ericsson	CR	25.331	13.1.0	5830	-	F		Rel-13	UTRA_EDL_L23-Core				
11.1.1	UTRA Rel-13: W	Yes	noted		R2-161228	Physical channel features and retrievable configurations	Ericsson	discussion							Rel-13	UTRA_EDL_L23-Core				
11.1.1	UTRA Rel-13: W	Yes	available		R2-161229	Physical channel features in retrievable configurations	Ericsson	CR	25.331	13.1.0	5831	-	F		Rel-13	UTRA_EDL_L23-Core				
10.7	UTRA Rel-12: O	Yes	revised		R2-161230	Missing parameter values for access stratum release indication	Ericsson	CR	25.306	12.6.0	0500	-	F		Rel-12	TEI12		R2-161837		

Samsung Exhibit 1025, Page 1569 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Upl oad ed	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
10.7	UTRA Rel-12: O	Yes	revised		R2-161231	Missing parameter values for access stratum release indication	Ericsson	CR	25.306	13.0.0	0501	-	A		Rel-13	TEI12, TEI13		R2-161838		TEI13 should be removed in WI code for consistency with cat.F CR
11.11	UTRA Rel-13: U	Yes	noted		R2-161232	Simultaneous RAB Setup and Release	Ericsson	discussion							Rel-13	TEI13				
11.11	UTRA Rel-13: U	Yes	noted		R2-161233	Generic UPH measurement	Ericsson	discussion							Rel-13	TEI13				
7.16.2.1	LTE Rel-13: WI:	No	withdrawn	late	R2-161234	Re-use of RRC connection re-establishment procedure for RRC Resume signalling	BlackBerry UK Limited	discussion							Rel-13	NB_IOT-Core				
7.1.2	LTE Rel-13: WI:	Yes	noted		R2-161235	Discussion on IDC support in LAA	Intel Corporation, BlackBerry	discussion							Rel-13	LTE_LAA-Core				
7.1.2	LTE Rel-13: WI:	Yes	revised		R2-161236	IDC support in LAA	Intel Corporation, BlackBerry	CR	36.300	13.2.0	0829	-	F		Rel-13	LTE_LAA-Core		R2-161978		
7.18	LTE Rel-13: LTE	Yes	agreed		R2-161237	Miscellaneous corrections to TS 36.306	Intel Corporation	CR	36.306	13.0.0	0330	-	F		Rel-13	TEI13				
7.14	LTE Rel-13: WI:	Yes	merged	late	R2-161238	Corrections to RAT-independent positioning methods	Intel Corporation	CR	36.355	13.0.0	0139	-	F	merged into R2-161960	Rel-13	UTRA_LTE_iPos_enh-Core			R2-161960	
7.13	LTE Rel-13: WI:	Yes	noted		R2-161239	Discusion of remaining issues for eMDT	Intel Corporation	discussion							Rel-13	LTE_eMDT2-Core				
7.11	LTE Rel-13: SI:	Yes	available		R2-161240	Considerations and enhancements for V2X	Intel Corporation	discussion							Rel-14	FS_LTE_V2X				
7.6.3.1	LTE Rel-13: WI:	Yes	noted		R2-161241	Way forward on RCLWI	Intel Corporation, Qualcomm Incorporated, MediaTek Inc., InterDigital, Sony, LGE, China Telecom	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.1	LTE Rel-13: WI:	Yes	noted		R2-161242	LWA and RCLWI UE capabilities	Intel Corporation	discussion							Rel-13	LTE_WLAN_radio-Core				
7.11	LTE Rel-13: SI:	Yes	available		R2-161243	Uu for V2V and V2P	Qualcomm Incorporated	discussion							Rel-14	FS_LTE_V2X				
7.4.2	LTE Rel-13: WI:	Yes	available		R2-161244	SI scheduling without M-PDCCH in Rel-13 eMTC	Samsung	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.3	LTE Rel-13: WI:	Yes	available		R2-161245	On the PREAMBLE_TRANSMISSION_COUNTER in Rel-13 eMTC	Samsung	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.2	LTE Rel-13: WI:	Yes	noted		R2-161246	Handling value tags in Rel-13 low complexity MTC	Samsung	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.7	LTE Rel-13: WI:	Yes	available		R2-161247	Clarification to use Cat.0 LCID for Rel-13 eMTC	Samsung	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.7	LTE Rel-13: WI:	Yes	available		R2-161248	Open CP Issues in Rel-13 eMTC	Samsung	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.1.2	LTE Rel-13: WI:	Yes	noted		R2-161249	Discussion of LAA related issues (I.015, I.048)	Intel Corporation	discussion							Rel-13	LTE_LAA-Core				
7.4.4	LTE Rel-13: WI:	Yes	noted	late	R2-161250	Discussion of paging and other issues (I.027, I.049, I.055, I.057, I.008, N.129)	Intel Corporation	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.7	LTE Rel-13: WI:	Yes	noted		R2-161251	Capabilities for Release 13 low complexity UE category and coverage enhancement mode	Intel Corporation	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.7	LTE Rel-13: WI:	Yes	noted		R2-161252	Impacts on RRC and NAS timers for eMTC	Intel Corporation	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.16.2.2	LTE Rel-13: WI:	Yes	available		R2-161253	Access control mechanism for NB-IoT	Intel Corporation	draftCR	36.331	13.0.0	-	-	B		Rel-13	NB_IOT-Core				
7.16.2.2	LTE Rel-13: WI:	Yes	noted	late	R2-161254	Report of email discussion [NBAH#05][NBIOT/SI] System Information	Intel Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	Yes	available		R2-161255	On Positioning support for NB-IoT in Rel-13	Intel Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161256	RAN impacts to enable CIoT solutions	Intel Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI:	Yes	available		R2-161257	Further discussion on RLC-AM for NB-IOT	Intel Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.2.4	LTE Rel-13: WI:	Yes	noted		R2-161258	Remaining open aspects on NB-IOT Paging	Intel Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161259	The need of recovery procedure for RLF	Intel Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161260	Idle mode mobility and load balancing	Intel Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	Yes	available		R2-161261	Multiple NB-IoT carrier operations	Intel Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.3.2	LTE Rel-13: WI:	Yes	available		R2-161262	PDCP transparent mode for NB-IoT with CIoT CP solution	Intel Corporation	discussion							Rel-13	NB_IOT-Core				
7.18	LTE Rel-13: LTE	Yes	noted		R2-161263	General LTE RRC impacts to enable CIoT solutions	Intel Corporation	discussion							Rel-13	TEI13				
7.18	LTE Rel-13: LTE	Yes	available		R2-161264	LTE RAN impacts to enable CIoT CP solution	Intel Corporation	discussion							Rel-13	TEI13				
7.18	LTE Rel-13: LTE	Yes	available		R2-161265	PDCP transparent mode for LTE/eMTC with CIoT CP solution	Intel Corporation	discussion							Rel-13	TEI13				
7.18	LTE Rel-13: LTE	Yes	available		R2-161266	LTE RAN impacts to enable CIoT UP solution	Intel Corporation	discussion							Rel-13	TEI13				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161267	Bearer resumption issues for CIoT UP solution	Intel Corporation	discussion							Rel-13	NB_IOT-Core				

Samsung Exhibit 1025, Page 1570 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.18	LTE Rel-13: LTE	Yes	available		R2-161268	LTE message 3 considerations for support of CIoT solutions	Intel Corporation	discussion							Rel-13	TEI13				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161269	Considerations on message 3 for NB-IoT	Intel Corporation	discussion							Rel-13	NB_IOT-Core				
7.4.6	LTE Rel-13: WI:	Yes	noted		R2-161270	Open UP Issues in Rel-13 eMTC	Samsung	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.3	LTE Rel-13: WI:	Yes	available		R2-161271	RA-RNTI calculation in Rel-13 low complexity MTC	Samsung	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.7	LTE Rel-13: WI:	Yes	noted		R2-161272	UE capability on non-LC UE capable of EC operation	Samsung	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.6	LTE Rel-13: WI:	Yes	noted		R2-161273	Text proposal on PCH reception	Samsung	discussion							Rel-13	LTE_MTCe2_L1-Core				
6.2.9.1	LTE: Rel-12: LTE	Yes	revised		R2-161274	Correction on the RRC signalling configuration for 4Tx MIMO	Huawei, HiSilicon	CR	36.331	12.8.0	2021	-	F		Rel-12	LTE_eDL_MIMO_enh-Core		R2-161911		
6.2.9.1	LTE: Rel-12: LTE	Yes	revised		R2-161275	Correction on the RRC signalling configuration for 4Tx MIMO	Huawei, HiSilicon	CR	36.331	13.0.0	2022	-	A		Rel-13	LTE_eDL_MIMO_enh-Core		R2-161912		
6.2.9.1	LTE: Rel-12: LTE	No	withdrawn	late	R2-161276	Correction on the RRC signalling configuration for 4Tx MIMO	Huawei, HiSilicon	CR	36.331	13.0.0	2023	-	A		Rel-13	LTE_eDL_MIMO_enh-Core				
7.2.2	LTE Rel-13: WI:	Yes	revised		R2-161277	Power headroom reporting of carrier aggregation enhancement beyond 5 CCs	Huawei, HiSilicon, China Telecom	CR	36.321	13.0.0	0825	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161933		
10.1	UTRA Rel-12: W	Yes	revised		R2-161278	Correction on signalling transmission control due to access group blocking of DTCH	Huawei, HiSilicon, Nokia Networks, Ericsson	CR	25.300	12.4.0	0036	-	C		Rel-12	EDCH_enh-Core		R2-161827		cat.C CR is not allowed for closed WI
10.1	UTRA Rel-12: W	Yes	revised		R2-161279	Correction on signalling transmission control due to access group blocking of DTCH	Huawei, HiSilicon, Nokia Networks, Ericsson	CR	25.306	12.6.0	0502	-	C		Rel-12	EDCH_enh-Core		R2-161828		cat.C CR is not allowed for closed WI
10.1	UTRA Rel-12: W	Yes	revised		R2-161280	Correction on signalling transmission control due to access group blocking of DTCH	Huawei, HiSilicon, Nokia Networks, Ericsson	CR	25.331	12.8.0	5832	-	C		Rel-12	EDCH_enh-Core		R2-161829		cat.C CR is not allowed for closed WI
10.4	UTRA Rel-12: W	Yes	noted		R2-161281	Discussion on DCH enhancements configuration	Huawei, HiSilicon	discussion							Rel-12	UTRA_DCHenh-Core				
10.4	UTRA Rel-12: W	Yes	revised		R2-161282	Correction on DCH enhancements	Huawei, HiSilicon	CR	25.300	12.4.0	0037	-	F		Rel-12	UTRA_DCHenh-Core		R2-161833		
10.4	UTRA Rel-12: W	Yes	revised		R2-161283	Correction on DCH enhancements	Huawei, HiSilicon	CR	25.300	13.0.0	0038	-	A		Rel-13	UTRA_DCHenh-Core		R2-161834		
11.11	UTRA Rel-13: U	Yes	postponed		R2-161284	Correction on UE behaviours on handling E-RGCH configuration	Huawei, HiSilicon	CR	25.331	13.1.0	5833	-	F		Rel-13	EDCH-L23, TEI13				
11.1.6	UTRA Rel-13: W	Yes	revised		R2-161285	Introduction of the UE capabilities for L2 and L3 Downlink enhancements subfeatures	Huawei, HiSilicon	CR	25.306	13.0.0	0503	-	B		Rel-13	UTRA_EDL_L23-Core		R2-161850		CR cat.B is not allowed for closed WI
11.1.6	UTRA Rel-13: W	Yes	agreed		R2-161286	Introduction of the UE capabilities for L2 and L3 Downlink enhancements subfeatures	Huawei, HiSilicon	CR	25.331	13.1.0	5834	-	B		Rel-13	UTRA_EDL_L23-Core				CR cat.B is not allowed for closed WI
11.11	UTRA Rel-13: U	Yes	noted		R2-161287	Work plan for the WI of DTX and DRX enhancements in CELL_FACH	Huawei (Rapporteur)	discussion							Rel-14	FACH_DTXDRX-Core				
11.11	UTRA Rel-13: U	Yes	noted		R2-161288	Work plan for the SI of Multi-Carrier enhancements for UMTS	Huawei (Rapporteur)	discussion							Rel-14	FS_UTRA_MCe				
11.11	UTRA Rel-13: U	Yes	noted		R2-161289	General considerations on RRC optimization for UMTS	Huawei, HiSilicon	discussion							Rel-14	UTRA_RRCopt-Core				
7.5.5	LTE Rel-13: WI:	Yes	revised		R2-161290	Alignment with 36.331	LG Electronics France	CR	36.304	13.0.0	0291	-	F		Rel-13	LTE_eD2D_Prox-Core		R2-161808		
7.5.5	LTE Rel-13: WI:	Yes	not pursued		R2-161291	Clarification on informing upper layer of tx resources avaiability	LG Electronics France	CR	36.331	13.0.0	2024	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.5.3	LTE Rel-13: WI:	Yes	revised		R2-161292	Reporting of system information with T370	LG Electronics France	CR	36.331	13.0.0	2025	-	F		Rel-13	LTE_eD2D_Prox-Core		R2-161799		
7.11	LTE Rel-13: SI:	Yes	available		R2-161293	Discussion on UE Reporting Issues for V2X	Shenzhen Coolpad Technologies	discussion							Rel-14	FS_LTE_V2X				
7.9.1	LTE Rel-13: WI:	Yes	agreed		R2-161294	Paging occasion monitoring when eDRX is configured	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.300	13.2.0	0830	-	F		Rel-13	LTE_extDRX-Core				
7.3	LTE Rel-13: WI:	Yes	not pursued		R2-161295	Correction on cell reselection for SC-PTM	TD Tech Ltd	CR	36.304	13.0.0	0292	-	F		Rel-13	LTE_SC_PTM-Core				
7.9.1	LTE Rel-13: WI:	Yes	revised		R2-161296	PTW terminology alignment	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.304	13.0.0	0293	-	F		Rel-13	LTE_extDRX-Core		R2-161897		
7.3	LTE Rel-13: WI:	Yes	not pursued		R2-161297	Correction on cell reselection for SC-PTM	TD Tech Ltd	CR	36.331	13.0.0	2026	-	F		Rel-13	LTE_SC_PTM-Core				
7.6.2.1	LTE Rel-13: WI:	Yes	available		R2-161298	WLAN Activation/Deactivation during LTE-WLAN aggregation	SAMSUNG Electronics Co., Ltd.	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.3.1	LTE Rel-13: WI:	Yes	available		R2-161299	UE behaviour in RRC_IDLE during RCLWI	SAMSUNG Electronics Co., Ltd.	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.3.2	LTE Rel-13: WI:	Yes	available		R2-161300	How to signal the steering command in RCLWI	SAMSUNG Electronics Co., Ltd.	discussion							Rel-13	LTE_WLAN_radio-Core				

Samsung Exhibit 1025, Page 1571 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161301	Power Consumption of Cell Reselection in NB-IoT	III	discussion							Rel-13	NB_IOT-Core				
7.1.1	LTE Rel-13: WI:	Yes	available		R2-161302	Mapping of QCI to LBT priority class	China Mobile Com. Corporation	discussion	36.300						Rel-13	LTE_LAA-Core				
7.5.3	LTE Rel-13: WI:	Yes	not pursued		R2-161303	Clarification on UL HARQ operation due to sidelink gap	Innovative Technology Lab Co.	CR	36.321	13.0.0	0826	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.6.3.1	LTE Rel-13: WI:	Yes	available		R2-161304	Views on Idle Mode Behaviour in RAN Controlled WLAN Interworking	ITRI	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.3.1	LTE Rel-13: WI:	Yes	available		R2-161305	Design of Steering Command in RAN Controlled WLAN Interworking	ITRI	discussion							Rel-13	LTE_WLAN_radio-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161306	Access control for NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.2.3	LTE Rel-13: WI:	Yes	noted		R2-161307	Idle mode mobility in NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161308	Load balancing in NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	noted		R2-161309	Measurement reporting in NB-IoT	Ericsson, NTT DOCOMO INC, China Mobile Com. Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	withdrawn		R2-161310	Measurement reporting in NB-IoT	Ericsson	draftCR	36.331	13.0.0	-	-			Rel-13	NB_IOT-Core				
7.16.2.4	LTE Rel-13: WI:	Yes	noted		R2-161311	Paging and DRX in Idle mode in NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.2.4	LTE Rel-13: WI:	Yes	noted		R2-161312	Physical channels for paging in NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	Yes	available		R2-161313	Positioning support in NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161314	Release Assistance Indicator	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	Yes	available	late	R2-161315	Specification impact 36.306 for NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	Yes	withdrawn		R2-161316	Introduction of NB-IoT UE capabilities	Ericsson	draftCR	36.306	13.0.0	-	-			Rel-13	NB_IOT-Core				
7.7	LTE Rel-13: WI:	Yes	not pursued		R2-161317	Correction to E-UTRAN Inter-frequency Redistribution procedure_alt1	ITRI	CR	36.304	13.0.0	0294	-	F	Alt. 1 CR for Correction to E-UTRAN Inter-frequency Redistribution procedure	Rel-13	LTE_MC_load-Core				
7.7	LTE Rel-13: WI:	Yes	revised		R2-161318	Correction to E-UTRAN Inter-frequency Redistribution procedure_alt2	ITRI	CR	36.304	13.0.0	0295	-	F	Alt. 2 CR for Correction to E-UTRAN Inter-frequency Redistribution procedure	Rel-13	LTE_MC_load-Core		R2-161951		
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161319	Discussion on exception handling for RRC connection resumption in data transfer via DRB mode	ITRI	discussion							Rel-13	NB_IOT-Core				
7.11	LTE Rel-13: SI:	Yes	available		R2-161320	Discussion on the need of PC5 link measurement for V2X	ITRI	discussion							Rel-14	FS_LTE_V2X				
7.19.2	LTE Rel-13: LTE	Yes	noted		R2-161321	ASN.1 review – BetaOffset handling	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	other	36.331						Rel-13	LTE_CA_enh_b5C-Core				wrong Tdoc type used; Type should be discussion
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161322	Correction on the conditions for establishing RRC Connection for sidelink communication	ITRI	CR	36.331	13.0.0	2027	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available	late	R2-161323	Measurement reporting in NB-IoT	Ericsson	CR	36.331	13.0.0	2028	-	B		Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	Yes	postponed	late	R2-161324	Introduction of NB-IoT UE capabilities	Ericsson	CR	36.306	13.0.0	0331	-	B		Rel-13	NB_IOT-Core				uc
7.19.2	LTE Rel-13: LTE	Yes	noted		R2-161325	Draft LS on introduction of new TBS in Rel-12 (to: RAN1; cc: -; contact: Nokia Networks)	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	other							Rel-13	LTE_CA_enh_b5C-Core				wrong Tdoc type used; Type should be LS out
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161326	Correction on the conditions for establishing RRC Connection for sidelink discovery	ITRI	CR	36.331	13.0.0	2029	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161327	Correction on relay related sidelink discovery announcement	ITRI	CR	36.331	13.0.0	2030	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161328	Correction on AS-conditions discovery transmission for remote UE	ITRI	CR	36.331	13.0.0	2031	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.14	LTE Rel-13: WI:	Yes	revised	late	R2-161329	LPP clean-up	Qualcomm Incorporated	draftCR	36.355	13.0.0	-	-			Rel-13	TEI13		R2-161867		Tdoc type should be "CR", not "draftCR"; moved from 7.18 to 7.14
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161330	Clarifications to Resource Allocation for ProSe UE-to-Network Relay discovery	ITRI	discussion							Rel-13	LTE_eD2D_Prox-Core				
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161331	Separations of Resource Allocation for relay related/non-relay related Sidelink Discovery	ITRI	CR	36.300	13.2.0	0831	-	F	CR related to R2-161330	Rel-13	LTE_eD2D_Prox-Core			R2-161330	
7.16.3.1	LTE Rel-13: WI:	Yes	available		R2-161332	UP modelling for U-plane solution	NTT DOCOMO INC.	discussion						Update of R2-160526	Rel-13	NB_IOT-Core			R2-160526	
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161333	Discussion on how to capture NB-IOT in RLC	NTT DOCOMO INC.	discussion							Rel-13	NB_IOT-Core				

Samsung Exhibit 1025, Page 1572 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
7.2.1	LTE Rel-13: WI:	Yes	withdrawn		R2-161334	Corrections on eCA MAC specification	ZTE Corporation	CR	36.321	13.0.0	0827	-	F		Rel-13	LTE_CA_enh_b5C-Core					
7.11	LTE Rel-13: SI:	Yes	available		R2-161335	Discussion on resource allocation for PC5 based V2V	KT Corporation	discussion							Rel-14	FS_LTE_V2X					
7.2.1	LTE Rel-13: WI:	No	withdrawn	late	R2-161336	Corrections on eCA MAC specification	ZTE Corporation	CR	36.321	13.0.0	0828	-	F		Rel-13	LTE_CA_enh_b5C-Core					
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161337	The details of UE contexts keeping	China Unicom	discussion							Rel-13	NB_IOT-Core					
6.2.1.1	LTE: Rel-12: WI	Yes	available		R2-161338	UL suspension in DC	NTT DOCOMO INC.	CR	36.321	12.8.0	0829	-	F	Related to R2-161020	Rel-12	LTE_SC_enh_dualC-Core			R2-161020	moved from 6.2.1.2 to 6.2.1.1	
6.2.1.1	LTE: Rel-12: WI	Yes	available		R2-161339	UL suspension in DC	NTT DOCOMO INC.	CR	36.321	13.0.0	0830	-	A		Rel-13	LTE_SC_enh_dualC-Core				moved from 6.2.1.2 to 6.2.1.1	
7.4.3	LTE Rel-13: WI:	Yes	noted		R2-161340	Discussion on the start time of a RAR window	HTC Corporation	discussion							Rel-13	LTE_MTCe2_L1-Core					
7.5.5	LTE Rel-13: WI:	Yes	available		R2-161341	Clarification on Public Safety Sidelink discovery	China Unicom, Huawei, HiSilicon	discussion							Rel-13	LTE_eD2D_Prox-Core					
7.1.2	LTE Rel-13: WI:	Yes	revised		R2-161342	RSSI measurment duration periodicity and subframe offset	HTC Corporation	CR	36.331	13.0.0	2032	-	F		Rel-13	LTE_LAA-Core		R2-161902			
7.5.1	LTE Rel-13: WI:	Yes	noted		R2-161343	Clarification on the conditions for SidelinkUEInformation transmission and RRC connection establishment	Intel Corporation	discussion							Rel-13	LTE_eD2D_Prox-Core					
7.2.1	LTE Rel-13: WI:	Yes	withdrawn		R2-161344	Corrections on eCA MAC specification	ZTE Corporation	CR	36.321	13.0.0	0831	-	F		Rel-13	LTE_CA_enh_b5C-Core					
7.2.1	LTE Rel-13: WI:	Yes	available		R2-161345	Introduction of the extension of maxObjectId	ZTE Corporation	CR	36.331	13.0.0	2033	-	F		Rel-13	LTE_CA_enh_b5C-Core					
7.19.2	LTE Rel-13: LTE	Yes	noted		R2-161346	Clarifications on the use of spare values	ZTE Corporation	discussion							Rel-13						
7.2.1	LTE Rel-13: WI:	Yes	noted		R2-161347	corrections on eCA 36.331 CR	ZTE Corporation	discussion							Rel-13	LTE_CA_enh_b5C-Core					
7.2.1	LTE Rel-13: WI:	Yes	available		R2-161348	Discussion on backward compatible capability signaling forwarding	ZTE Corporation	discussion							Rel-13	LTE_CA_enh_b5C-Core					
7.8	LTE Rel-13: WI:	Yes	withdrawn		R2-161349	Using SCG-configuraiton at fullConfig	ZTE Corporation	CR	36.321	13.0.0	0832	-	C		Rel-13	LTE_dualC_ext-Core					
7.8	LTE Rel-13: WI:	Yes	not pursued		R2-161350	Using SCG-configuraiton at fullConfig	ZTE Corporation	CR	36.331	13.0.0	2034	-	C		Rel-13	LTE_dualC_ext-Core					
7.2.1	LTE Rel-13: WI:	Yes	not pursued		R2-161351	Corrections on eCA MAC specification	ZTE Corporation	CR	36.321	13.0.0	0833	-	F	second change will be reflected during CR implementation	Rel-13	LTE_CA_enh_b5C-Core					CR_impl.
7.6.3.1	LTE Rel-13: WI:	Yes	available		R2-161352	Further Consideration on RCLWI	ZTE Corporation	discussion							Rel-13	LTE_WLAN_radio-Core					
7.18	LTE Rel-13: LTE	Yes	postponed		R2-161353	Access Restriction for Unattended Data Traffic	Verizon, Alcatel-Lucent, Ericsson, Qualcomm Incorporated	draftCR	36.331	13.0.0	-	-	C		Rel-13	TEI13				Tdoc type should be "CR", not "draftCR"	
7.7	LTE Rel-13: WI:	Yes	withdrawn		R2-161354	The introduction of UE capability concerning extended E-UTRA frequency priorities	Nokia Networks	CR	36.331	13.0.0	2035	-	B		Rel-13	LTE_MC_load-Core				CR cat.B is not allowed for closed WI	
7.7	LTE Rel-13: WI:	Yes	withdrawn		R2-161355	The introduction of UE capability concerning extended E-UTRA frequency priorities	Nokia Networks	CR	36.306	13.0.0	0332	-	B		Rel-13	LTE_MC_load-Core				CR cat.B is not allowed for closed WI	
7.1.1	LTE Rel-13: WI:	Yes	available		R2-161356	Further Consideration on Mapping of LBT Priority Classes	ZTE Corporation	discussion							Rel-13	LTE_LAA-Core					
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161357	Correction for PC5 to Uu Mobility	PANASONIC R&D Center Germany	CR	36.331	13.0.0	2036	-	F		Rel-13	LTE_eD2D_Prox-Core					
7.1.2	LTE Rel-13: WI:	Yes	available		R2-161358	Initial Thoughts on LAA DL+UL Data Transmission	ZTE Corporation	discussion							Rel-13	LTE_LAA-Core					
7.16.2.1	LTE Rel-13: WI:	Yes	revised		R2-161359	36.331 Running CR to capture agreements on NB-IoT	Huawei	draftCR	36.331	13.0.0	-	-	B		Rel-13	NB_IOT-Core		R2-161760			
7.16.2.1	LTE Rel-13: WI:	Yes	noted		R2-161360	36.331 running CR implementation	Neul, Huawei, HiSilicon,	discussion							Rel-13	NB_IOT-Core					
7.16.1	LTE Rel-13: WI:	Yes	available		R2-161361	UE capabilities reporting	Neul, Huawei, HiSilicon,	discussion							Rel-13	NB_IOT-Core					
7.16.2.1	LTE Rel-13: WI:	Yes	noted		R2-161362	RRC procedures - stage 3 aspects	Neul, Huawei, HiSilicon,	discussion							Rel-13	NB_IOT-Core					
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161363	Data transfer procedures for rge C-Plane solution	Neul, Huawei, HiSilicon,	discussion							Rel-13	NB_IOT-Core					
7.16.3.1	LTE Rel-13: WI:	Yes	available		R2-161364	RLC AM Optimisations	Neul, Huawei, HiSilicon,	discussion							Rel-13	NB_IOT-Core					
6.1.1	LTE: Rel-12 and	Yes	noted		R2-161365	Handling of uplink spare values	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-12	TEI12					
6.1.1	LTE: Rel-12 and	Yes	noted		R2-161366	Clarification for setting the intra-band contiguous capabilities introduced in Rel-12	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-12	TEI12					

Samsung Exhibit 1025, Page 1573 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
7.2.1	LTE Rel-13: WI:	No	withdrawn	late	R2-161367	Clarifications to of enhanced CA capability signalling	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_CA_enh_b5C-Core					
7.6.2.1	LTE Rel-13: WI:	Yes	noted		R2-161368	On authentication procedure in LWA	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_WLAN_radio-Core					
7.6.2.2	LTE Rel-13: WI:	Yes	noted		R2-161369	Final details of RLM for LWA	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_WLAN_radio-Core					
7.6.2.1	LTE Rel-13: WI:	Yes	noted		R2-161370	UE capabilities for LWA	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_WLAN_radio-Core				moved from 7.6.2.2 to 7.6.2.1	
7.6.2.3	LTE Rel-13: WI:	Yes	noted		R2-161371	Value range of statusPDU-Periodicity for LWA	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_WLAN_radio-Core					
7.6.4	LTE Rel-13: WI:	Yes	available		R2-161372	Structure of LWA procedure	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_WLAN_radio-Core					
7.6.2.1	LTE Rel-13: WI:	Yes	withdrawn		R2-161373	Correction to switched bearer definition	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion	36.300	13.2.0					Rel-13	LTE_WLAN_radio-Core					
7.15.1	LTE Rel-13: WI:	Yes	available		R2-161374	Discussion on UE-AMBR enforcement in uplink	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_WLAN_radio_legacy					
7.16.1	LTE Rel-13: WI:	Yes	postponed		R2-161375	36.302 Running CR	Huawei	draftCR	36.302	13.0.0	-	-	B		Rel-13	NB_IOT-Core					uc
7.16.1	LTE Rel-13: WI:	Yes	noted		R2-161376	Impacts Overview of RAN2 Agreements on Specifications	Huawei, HiSilicon, Neul, China Telecom	discussion							Rel-13	NB_IOT-Core					
7.16.1	LTE Rel-13: WI:	Yes	available		R2-161377	Discussion on Positioning in Release 13	Huawei, HiSilicon, Neul, China Telecom	discussion							Rel-13	NB_IOT-Core					
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161378	Discussion on Msg3 Size	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161379	Access Control Enabled Indication	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161380	Radio Link Failure	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.16.2.2	LTE Rel-13: WI:	Yes	noted		R2-161381	System Information Update Notification	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.16.2.2	LTE Rel-13: WI:	Yes	noted		R2-161382	Contents of MIB from RAN2	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161383	Inter-frequency Load Balancing	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.16.2.3	LTE Rel-13: WI:	Yes	noted		R2-161384	Idle Mode Mobility	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161385	Cell Reserved for Future Use Flag and IFRI	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.16.2.4	LTE Rel-13: WI:	Yes	noted		R2-161386	Paging Stage 3 Analysis	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161387	Random Access Procedure	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161388	HARQ in MAC Layer	Huawei, HiSilicon, Neul	discussion							Rel-13	NB_IOT-Core					
7.18	LTE Rel-13: LTE	Yes	available		R2-161389	Consideration for cIoT optimization in non NB-IoT	ZTE Corporation	discussion							Rel-13	TEI13					
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161390	Consideration for CPUP indicator in NB-IoT	ZTE Corporation	discussion							Rel-13	NB_IOT-Core					
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161391	Analysis on preamble transmission related issues in NB-IoT	ZTE Corporation	discussion							Rel-13	NB_IOT-Core					
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161392	Consideration for Msg3 in NBIOT	ZTE Corporation	discussion							Rel-13	NB_IOT-Core					
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161393	Further discussion on UP solution	ZTE Corporation	discussion							Rel-13	NB_IOT-Core					
7.16.1	LTE Rel-13: WI:	Yes	available		R2-161394	Multiple NB-IoT carriers operation	ZTE Corporation	discussion							Rel-13	NB_IOT-Core					
7.1.1	LTE Rel-13: WI:	Yes	available		R2-161395	Mapping of QCI to LBT priority class in LAA	ETRI	discussion							Rel-13	LTE_LAA-Core					
7.7	LTE Rel-13: WI:	Yes	available		R2-161396	Correction on MCLD trigger	ZTE Corporation	CR	36.304	13.0.0	0296	-	F		Rel-13	LTE_MC_load-Core					
7.7	LTE Rel-13: WI:	Yes	not pursued		R2-161397	Introduction of T360 in RRC	ZTE Corporation	CR	36.300	13.2.0	0832	-	F		Rel-13	LTE_MC_load-Core				it is actually a CR to 36.331	

Samsung Exhibit 1025, Page 1574 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Upload ed	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.13	LTE Rel-13: WI:	Yes	revised		R2-161398	Introduction of Rel-13 MDT enhancements	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.306	13.0.0	0333	-	B		Rel-13	eMDT_UMTSLTE-Core		R2-161958		CR cat.B is not allowed for closed WI
6.1.1	LTE: Rel-12 and	Yes	noted		R2-161399	Applicability of longCodeState1XRTT	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-12	TEI12				
11.1.1	UTRA Rel-13: W	Yes	available		R2-161400	Adding the retrievable configuration info in RRC Connection Setup	Ericsson	CR	25.331	13.1.0	5835	-	F		Rel-13	UTRA_EDL_L23-Core				
7.5	LTE Rel-13: WI:	Yes	agreed		R2-161401	Correction for KD-sess Identity in 36.323	ZTE Corporation	CR	36.323	13.0.0	0155	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.11	LTE Rel-13: SI:	No	withdrawn	late	R2-161402	Discussion on Multi-PLMN for V2X	GM - OnStar Europe	discussion							Rel-14	FS_LTE_V2X				
7.5	LTE Rel-13: WI:	Yes	revised		R2-161403	Miscellaneous corrections for sidelink in 36.331	ZTE Corporation	CR	36.331	13.0.0	2037	-	F		Rel-13	LTE_eD2D_Prox-Core		R2-161932		
6.1.1	LTE: Rel-12 and	Yes	revised		R2-161404	Applicability of longCodeState1XRTT	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	12.8.0	2038	-	F		Rel-12	LTE-L23		R2-161904		TEI12 should be added in WI code
6.1.1	LTE: Rel-12 and	Yes	revised		R2-161405	Applicability of longCodeState1XRTT	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2039	-	A		Rel-13	LTE-L23		R2-161905		TEI12 should be added in WI code
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161406	E-Mail Discussion and companies view on the need for MAC BI	Vodafone GmbH	report							Rel-13	NB_IOT-Core				
7.16.2.2	LTE Rel-13: WI:	Yes	available		R2-161407	System Information for In-band NB-IoT	Samsung Electronics	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI:	Yes	available		R2-161408	Discussions on MAC functionalities for NB-IoT	Samsung Electronics	discussion							Rel-13	NB_IOT-Core				
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161409	Discussion on Cell Selection and Reselection for NB-IoT	Samsung Electronics	discussion							Rel-13	NB_IOT-Core				
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161410	Inter-frequency Load Distribution for NB-IoT	Samsung Electronics	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161411	Specifying solution 2 in the AS specification	Samsung Electronics	discussion							Rel-13	NB_IOT-Core				
7.15.1	LTE Rel-13: WI:	Yes	noted		R2-161412	UE-AMBR enforcement when UL is over WLAN	BlackBerry UK Limited	discussion							Rel-13	LTE_WLAN_radio, LTE_WLAN_radio_legacy				moved from 7.6.3.1 to 7.15.1
7.16.2.3	LTE Rel-13: WI:	Yes	noted		R2-161413	E-Mail Discussion and companies view on Inter Frequency Load Balancing	Vodafone GmbH	report							Rel-13	NB_IOT-Core				
7.19.2	LTE Rel-13: LTE	Yes	noted		R2-161414	[N.162] UL PDCP delay reporting	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13					
7.16.1	LTE Rel-13: WI:	Yes	withdrawn		R2-161415	E-Mail discussion and companies view on NB-IOT Positioning	Vodafone GmbH	report							Rel-13	NB_IOT-Core				
7.19.2	LTE Rel-13: LTE	Yes	revised		R2-161416	UL PDCP delay measurement configuration and reporting handling	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2040	-	F		Rel-13	LTE_eMDT2-Core		R2-161918		
7.19.2	LTE Rel-13: LTE	Yes	withdrawn		R2-161417	UL PDCP delay measurement configuration and reporting handling	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2041	-	F		Rel-13	LTE_eMDT2-Core				
7.5	LTE Rel-13: WI:	Yes	not pursued		R2-161418	Corrections for sidelink discovery gap in 36.321	ZTE Corporation	CR	36.321	13.0.0	0834	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.5	LTE Rel-13: WI:	Yes	merged		R2-161419	Miscellaneous corrections for sidelink in 36.321	ZTE Corporation	CR	36.321	13.0.0	0835	-	F	merged into R2-161804	Rel-13	LTE_eD2D_Prox-Core			R2-161804	
7.5	LTE Rel-13: WI:	Yes	merged		R2-161420	Miscellaneous corrections for sidelink in 36.300	ZTE Corporation	CR	36.300	13.2.0	0833	-	F	merged in R2-161797	Rel-13	LTE_eD2D_Prox-Core			R2-161797	
7.5.3	LTE Rel-13: WI:	Yes	noted		R2-161421	Clarification on the sidelink discovery gap	ZTE Corporation	discussion							Rel-13	LTE_eD2D_Prox-Core				
7.6.2.3	LTE Rel-13: WI:	Yes	merged		R2-161422	Extending the scope of PDCP reordering function to LWA	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.323	13.0.0	0156	-	B	merged into PDCP CR	Rel-13	LTE_WLAN_radio-Core				souce companies not matched with CR coversheet
7.2.1	LTE Rel-13: WI:	Yes	available		R2-161423	Remaining issues for capability of B5C	Huawei, HiSilicon, China Telecom	discussion							Rel-13	LTE_CA_enh_b5C-Core				
7.2.1	LTE Rel-13: WI:	Yes	revised		R2-161424	Capbility for CA enhancement	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2042	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161934		

Samsung Exhibit 1025, Page 1575 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.2.1	LTE Rel-13: WI:	Yes	revised		R2-161425	Some corrections on CA enhancement	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2043	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161936		wrong CR number used in CR coversheet
7.2.1	LTE Rel-13: WI:	Yes	revised		R2-161426	The extension of measObjectId	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2044	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161794		
7.2.1	LTE Rel-13: WI:	Yes	revised		R2-161427	Correction on CA enhancement	Huawei, HiSilicon, China Telecom	CR	36.302	13.0.0	0065	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161937		
7.4.5	LTE Rel-13: WI:	Yes	noted		R2-161428	How to prioritise NC cells over EC cells	Huawei, HiSilicon	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.1	LTE Rel-13: WI:	Yes	revised		R2-161429	The introduction of eMTC features	Huawei, HiSilicon	CR	36.302	13.0.0	0066	-	B		Rel-13	LTE_MTCe2_L1-Core		R2-161778		
7.11	LTE Rel-13: SI:	Yes	available		R2-161430	Discussion on the eMBMS based V2X broadcast	ZTE Corporation	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI:	Yes	available		R2-161431	Some considerations on multi-carrier and multi-operator support for V2V scenarios	ZTE Corporation	discussion							Rel-14	FS_LTE_V2X				
6.1.1	LTE: Rel-12 and	No	withdrawn	late	R2-161432	Handling of RRC Establishment spare cause	KDDI Corporation	discussion							Rel-12					
7.15.1	LTE Rel-13: WI:	Yes	noted		R2-161433	Discussion on feedback and conclusion on Working Assumption regarding LTE DRB when traffic is routed via IPsec tunnel	Alcatel-Lucent Deutschland AG	discussion							Rel-13	LTE_eD2D_Prox-Core				moved from 7.5.1 to 7.15.1
11.11	UTRA Rel-13: U	Yes	noted		R2-161434	On optimized handling of dedicated RNTIs	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	TEI13				
7.15.1	LTE Rel-13: WI:	Yes	available		R2-161435	Stage-2 text updates based on conclusion on Working Assumption regarding LTE DRB	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry	CR	36.300	13.2.0	0834	-	C		Rel-13	LTE_WLAN_radio_legacy-Core				wrong CR number used in CR coversheet
7.11	LTE Rel-13: SI:	Yes	available		R2-161436	Discussion on Latency for Uu-based V2V transport	Huawei, HiSilicon	discussion							Rel-14	FS_LTE_V2X				
11.7	UTRA Rel-13: W	Yes	revised		R2-161437	Correction of Application specific Congestion control for Data Communication (ACDC) in UTRAN	Ericsson	CR	25.331	13.1.0	5836	-	F		Rel-13	ACDC-RAN-Core		R2-161842		
11.1.1	UTRA Rel-13: W	Yes	noted		R2-161438	Adding the retrievable configuration info in RRC Connection Setup	Ericsson	discussion							Rel-13	UTRA_EDL_L23-Core				
7.5.3	LTE Rel-13: WI:	Yes	noted		R2-161439	MAC Impacts of Sidelink Discovery Gap	CATT	discussion							Rel-13	LTE_eD2D_Prox-Core				
7.5.5	LTE Rel-13: WI:	Yes	merged		R2-161440	Corrections on sidelink related description in TS36.300	CATT	CR	36.300	13.2.0	0835	-	F	merged in R2-161797	Rel-13	LTE_eD2D_Prox-Core			R2-161797	
7.5.2	LTE Rel-13: WI:	Yes	available		R2-161441	Corrections on sidelink related description in TS36.302	CATT	CR	36.302	13.0.0	0067	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.5.3	LTE Rel-13: WI:	Yes	available		R2-161442	MAC impacts of Sidelink Discovery Gap	CATT	CR	36.321	13.0.0	0836	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161443	Corrections on description of commTxAllowRelayCommon	CATT	CR	36.331	13.0.0	2045	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.5.5	LTE Rel-13: WI:	Yes	available		R2-161444	Correction on the conditions for sidelink operation	CATT	CR	36.331	13.0.0	2046	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.5.1	LTE Rel-13: WI:	Yes	merged		R2-161445	Miscellaneous corrections to 36.331	CATT	CR	36.331	13.0.0	2047	-	F	merged in R2-161798	Rel-13	LTE_eD2D_Prox-Core			R2-161798	
7.7	LTE Rel-13: WI:	Yes	revised		R2-161446	The introduction of UE capability concerning extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2048	-	B		Rel-13	LTE_MC_load_Core		R2-161953		CR cat.B is not allowed for closed WI
7.5.3	LTE Rel-13: WI:	Yes	not pursued		R2-161447	Clarification of discovery announcement and monitoring	CATT	CR	36.331	13.0.0	2049	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.7	LTE Rel-13: WI:	Yes	revised		R2-161448	The introduction of UE capability concerning extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.306	13.0.0	0334	-	B		Rel-13	LTE_MC_load_Core		R2-161952		CR cat.B is not allowed for closed WI
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161449	RRC Connection Release for CP solution	Sequans Communications	discussion							Rel-13	NB_IOT-Core				
7.4.2	LTE Rel-13: WI:	Yes	noted		R2-161450	SI Acquisition for eMTC	Huawei, HiSilicon	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.2	LTE Rel-13: WI:	Yes	available		R2-161451	Corrections on SI repetition occasions indication for eMTC	Huawei, HiSilicon	CR	36.331	13.0.0	2050	-	F		Rel-13	LTE_MTCe2_L1-Core				
7.4.2	LTE Rel-13: WI:	Yes	available		R2-161452	SI Change	Huawei, HiSilicon	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.4	LTE Rel-13: WI:	Yes	available		R2-161453	MTC Paging Transmission	Huawei, HiSilicon	discussion							Rel-13	LTE_MTCe2_L1-Core				

Samsung Exhibit 1025, Page 1576 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.4.4	LTE Rel-13: WI:	Yes	available		R2-161454	Corrections on paging narrowband selection and nB extension	Huawei, HiSilicon	CR	36.304	13.0.0	0297	-	F		Rel-13	LTE_MTCe2_L1-Core				
7.4.4	LTE Rel-13: WI:	Yes	noted	late	R2-161455	Email discussion report on [92#40][LTE/MTC] Remaining paging issues	Huawei	report						result of email discussion [92#40]	Rel-13	LTE_MTCe2_L1-Core				
7.4.6	LTE Rel-13: WI:	Yes	available		R2-161456	User Plane Remaining Issues for eMTC	Huawei, HiSilicon	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.16.2.2	LTE Rel-13: WI:	Yes	noted		R2-161457	System Information Contents	Huawei, HiSilicon, Neul Ltd.	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161458	Early RRC Connection Release for UP solution	Sequans Communications	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161459	Autonomous RRC Connection Release	Sequans Communications	discussion							Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	Yes	available		R2-161460	L1 multi-carrier operation	MediaTek Inc.	discussion							Rel-13	NB_IOT-Core				
7.16.2.4	LTE Rel-13: WI:	Yes	noted		R2-161461	Paging enhancements	MediaTek Inc.	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI:	Yes	available		R2-161462	RLC-AM enhancements	MediaTek Inc.	discussion							Rel-13	NB_IOT-Core				
7.6.3.1	LTE Rel-13: WI:	Yes	noted		R2-161463	RAN controlled LTE WLAN Interworking	Huawei, HiSilicon, Ericsson, China Telecom, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion						result of email discussion [91bis#18][LTE/WiFi]	Rel-13	LTE_WLAN_radio-Core				
4.1	Joint UMTS/LTE	Yes	available		R2-161464	Clarification for UE behaviour upon reception of requested E-UTRA frequency band list	Nokia Networks, Qualcomm Incorp., Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	25.331	10.19.0	5837	-	F		Rel-10	TEI10				cat.A CR for REL-11/12/13 missed?
7.6.2.1	LTE Rel-13: WI:	Yes	available		R2-161465	Correction to switched bearer definition	Nokia Networks	CR	36.300	13.2.0	0836	-	F		Rel-13	LTE_WLAN_radio-Core				
7.6.3.2	LTE Rel-13: WI:	Yes	revised		R2-161466	Introduction of RAN controlled LTE-WLAN interworking	Huawei, HiSilicon, Ericsson, China Telecom, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2051	-	B		Rel-13	LTE_WLAN_radio-Core		R2-161783		
7.6.2.3	LTE Rel-13: WI:	No	withdrawn	late	R2-161467	Introduction of RAN controlled LTE-WLAN interworking	Huawei, HiSilicon, Ericsson, China Telecom, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.304	13.0.0	0298	-	B		Rel-13	LTE_WLAN_radio-Core				
7.11	LTE Rel-13: SI:	Yes	available	late	R2-161468	V2X Scenario 2 capacity analysis	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-14	FS_LTE_V2X				
7.5.3	LTE Rel-13: WI:	Yes	available		R2-161469	Prioritization of Discovery and Communication in the presence of gaps	Ericsson	discussion							Rel-13	LTE_eD2D_Prox-Core				
7.5.3	LTE Rel-13: WI:	Yes	merged		R2-161470	Correction of prioritization during sidelink discovery gaps	Ericsson	CR	36.300	13.2.0	0837	-	F	merged into R2-161797	Rel-13	LTE_eD2D_Prox-Core			R2-161797	
7.5.3	LTE Rel-13: WI:	Yes	revised		R2-161471	Correction of prioritization during sidelink discovery gaps	Ericsson	CR	36.321	13.0.0	0837	-	F		Rel-13	LTE_eD2D_Prox-Core		R2-161804		
7.5.4	LTE Rel-13: WI:	Yes	available		R2-161472	Correction on Sidelink LCP	Ericsson	CR	36.321	13.0.0	0838	-	F		Rel-13	LTE_eD2D_Prox-Core				
6.2.3.1	LTE: Rel-12: WI	Yes	agreed		R2-161473	Correction to SL-DiscConfig	Ericsson	CR	36.331	12.8.0	2052	-	F	No Cat A CR needed as this is address in R13 by the ASN.1 review CR	Rel-12	LTE_D2D_Prox-Core				
7.19.2	LTE Rel-13: LTE	Yes	noted		R2-161474	Sidelink discovery gaps at the end of SFN period	Ericsson	discussion							Rel-13	LTE_eD2D_Prox-Core				
7.19.2	LTE Rel-13: LTE	Yes	merged		R2-161475	Correction to SL-GapConfig	Ericsson	draftCR	36.331	13.0.0	-	-		merged in R2-161798	Rel-13	LTE_eD2D_Prox-Core			R2-161798	Tdoc type should be "CR", not "draftCR"
7.19.2	LTE Rel-13: LTE	Yes	merged		R2-161476	Correction related to E.289	Ericsson	draftCR	36.331	13.0.0	-	-		merged in R2-161798	Rel-13	LTE_eD2D_Prox-Core			R2-161798	Tdoc type should be "CR", not "draftCR"
7.19.2	LTE Rel-13: LTE	Yes	merged		R2-161477	Correction related to E.102	Ericsson	draftCR	36.331	13.0.0	-	-		merged in R2-161798	Rel-13	LTE_eD2D_Prox-Core			R2-161798	Tdoc type should be "CR", not "draftCR"
7.19.2	LTE Rel-13: LTE	Yes	available		R2-161478	MBMSInterestIndication signalling in Rel-13 (Issues #E.341, #H.052 and #N.028 in ASN.1 review)	Ericsson	discussion							Rel-13					

Samsung Exhibit 1025, Page 1577 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.2.1	LTE Rel-13: WI:	Yes	noted		R2-161479	ASN.1 review – aperiodic CSI issues	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_CA_enh_b5C-Core				
7.2.1	LTE Rel-13: WI:	Yes	noted		R2-161480	SCell addition and release related ASN.1 issues (Z.043)	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_CA_enh_b5C-Core				
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161481	Ranking-based Load Balancing for NB-IoT	CATR	discussion							Rel-13	NB_IOT-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161482	User preference for LWA/LWI (related to SA2 LS)	NEC	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161483	Serving WLAN reporting in LWA	NEC Telecom MODUS Ltd.	discussion							Rel-13	LTE_WLAN_radio-Core				
7.15.1	LTE Rel-13: WI:	Yes	noted		R2-161484	Discussion on bearer Identification within IPsec Tunnel	Alcatel-Lucent Deutschland AG	discussion							Rel-13	LTE_WLAN_radio_legacy-Core				
7.15.1	LTE Rel-13: WI:	Yes	withdrawn		R2-161485	Stage-2 text updates for bearer Identification within IPsec Tunnel	Alcatel-Lucent Deutschland AG	CR	36.300	13.2.0	0838	-	B		Rel-13	LTE_WLAN_radio_legacy-Core				
7.6.2.1	LTE Rel-13: WI:	Yes	available		R2-161486	Estimated UE throughput reporting	NEC Telecom MODUS Ltd.	discussion							Rel-13	LTE_WLAN_radio-Core				moved from 7.6.2.3 to 7.6.2.1
7.15.1	LTE Rel-13: WI:	Yes	revised		R2-161487	Stage-2 text for LWIP Tunnel Clarifications	Alcatel-Lucent Deutschland AG	CR	36.300	13.2.0	0839	-	B		Rel-13	LTE_WLAN_radio_legacy-Core		R2-161924		
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161488	Remaining issues on RRM measurements	Huawei, HiSilicon	discussion							Rel-13	LTE_WLAN_radio-Core				
7.16.3.2	LTE Rel-13: WI:	Yes	noted		R2-161489	Introduction of NB-IoT functionality to PDCP protocol	QUALCOMM INCORPORATED	draftCR	36.323	13.0.0	-	-	B		Rel-13	NB_IOT-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161490	Proposed corrections on WLAN radio link monitoring	Huawei, HiSilicon	discussion							Rel-13	LTE_WLAN_radio-Core				
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161491	NB-IoT cell load management	QUALCOMM INCORPORATED	discussion							Rel-13	NB_IOT-Core				
7.15.2	LTE Rel-13: WI:	Yes	available		R2-161492	Stage-3 text endorsed Running CR for LWIP	Alcatel-Lucent Deutschland AG	CR	36.331	13.0.0	2053	-	B	result of email discussion [92#43][LTE/WLAN legacy AP]	Rel-13	LTE_WLAN_radio_legacy-Core				wrong Tdoc number & CR number used in CR coversheet
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161493	Stage-3 text updates for bearer Identification within IPsec Tunnel and IPsec establishment parameters	Alcatel-Lucent Deutschland AG	CR	36.331	13.0.0	2054	-	B		Rel-13	LTE_WLAN_radio_legacy-Core		R2-161923		wrong CR number used in CR coversheet
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161494	36.306 UE Capabilities for LWIP	Alcatel-Lucent Deutschland AG	CR	36.306	13.0.0	0335	-	B		Rel-13	LTE_WLAN_radio_legacy-Core		R2-161929		CR number missed in CR coversheet
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161495	36.331 UE Capabilities for LWIP	Alcatel-Lucent Deutschland AG	CR	36.331	13.0.0	2055	-	B		Rel-13	LTE_WLAN_radio_legacy-Core		R2-161930		CR number missed in CR coversheet
7.15.2	LTE Rel-13: WI:	Yes	withdrawn		R2-161496	Mobility set handling for LWIP	Alcatel-Lucent Deutschland AG	CR	36.331	13.0.0	2056	-	B		Rel-13	LTE_WLAN_radio_legacy-Core				wrong Tdoc type used
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161497	Remaining Open Issues for LWA Control Plane	QUALCOMM CDMA Technologies	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.1	LTE Rel-13: WI:	Yes	available		R2-161498	Co-existence between ANDSF and LWA	QUALCOMM CDMA Technologies	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.3	LTE Rel-13: WI:	Yes	available		R2-161499	Total L2 buffer size for LWA capable UE	Huawei, HiSilicon	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.1	LTE Rel-13: WI:	Yes	available		R2-161500	Total Layer2 buffer size for LWA capable UE	Huawei, HiSilicon	CR	36.306	13.0.0	0336	-	C		Rel-13	LTE_WLAN_radio-Core				
7.18	LTE Rel-13: LTE	Yes	available		R2-161501	Early RRC Connection Release for CIoT traffic support	Sequans Communications	discussion							Rel-13	TEI13				
7.6.2.1	LTE Rel-13: WI:	Yes	revised		R2-161502	Introducing LWA and RCLWI UE capabilities	Intel Corporation	CR	36.306	13.0.0	0337	-	B		Rel-13	LTE_WLAN_radio-Core		R2-161980		moved from 7.6.2.2 to 7.6.2.1
7.6.2.1	LTE Rel-13: WI:	Yes	not pursued		R2-161503	Introducing LWA and RCLWI UE capabilities	Intel Corporation	CR	36.331	13.0.0	2057	-	B		Rel-13	LTE_WLAN_radio-Core				moved from 7.6.2.2 to 7.6.2.1
7.6.2.3	LTE Rel-13: WI:	Yes	noted		R2-161504	Analysis of LWA status reporting	Intel Corporation	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.3	LTE Rel-13: WI:	Yes	available		R2-161505	Optimized LWA status report	Intel Corporation	CR	36.323	13.0.0	0157	-	B		Rel-13	LTE_WLAN_radio-Core				
7.6.2.3	LTE Rel-13: WI:	Yes	revised		R2-161506	Introduction of LWA PDCP status report	Intel Corporation	CR	36.323	13.0.0	0158	-	B	result of e-mail discussion [92#41][LTE/WLAN]; endorsed for further update	Rel-13	LTE_WLAN_radio-Core		R2-161981		
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161507	Remaining LWA stage-3 issues	Intel Corporation	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161508	Miscellaneous stage-3 TS 36.331 corrections for LWA	Intel Corporation	CR	36.331	13.0.0	2058	-	B		Rel-13	LTE_WLAN_radio-Core				
7.6.2.1	LTE Rel-13: WI:	Yes	noted		R2-161509	Remaining LWA stage-2 issues	Intel Corporation	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.1	LTE Rel-13: WI:	Yes	revised		R2-161510	TS 36.300 Stage-2 CR correction for LWA	Intel Corporation	CR	36.300	13.2.0	0840	-	F		Rel-13	LTE_WLAN_radio-Core		R2-161786		

Samsung Exhibit 1025, Page 1578 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.18	LTE Rel-13: LTE	Yes	available		R2-161511	Introduction of RRC Connection Release Request	Sequans Communications	CR	36.331	13.0.0	2059	-	B	Related to R2-161501	Rel-13	TEI13			R2-161501	
7.6.2.2	LTE Rel-13: WI	Yes	available		R2-161512	Remaining issue on WLAN Status Reporting	Kyocera	discussion							Rel-13	LTE_WLAN_radio-Core				
7.5.1	LTE Rel-13: WI	Yes	revised		R2-161513	Clean up and corrections for eD2D	Interdigital Asia LLC	CR	36.300	13.2.0	0841	-	F		Rel-13	LTE_eD2D_Prox-Core		R2-161797		
7.6.3.1	LTE Rel-13: WI	Yes	available		R2-161514	Traffic steering failure in interworking enhancements	Kyocera	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.3.1	LTE Rel-13: WI	Yes	available		R2-161515	UE behaviour for LTE-WLAN interworking enhancements	Kyocera	discussion							Rel-13	LTE_WLAN_radio-Core				
7.13	LTE Rel-13: WI	Yes	noted		R2-161516	Reporting of UL PDCP delay measurements	Kyocera	discussion							Rel-13	LTE_eMDT2-Core				
7.13	LTE Rel-13: WI	Yes	agreed		R2-161517	Reporting of UL PDCP delay measurements for FeMDT	Kyocera	CR	37.320	13.0.0	0069	-	F		Rel-13	LTE_eMDT2-Core				R2 as a source WG added in CR coversheet when sumitted to RAN#71
7.13	LTE Rel-13: WI	Yes	agreed		R2-161518	Reporting of UL PDCP delay measurements for FeMDT	Kyocera	CR	36.314	13.0.0	0036	-	F		Rel-13	LTE_eMDT2-Core				R2 as a source WG added in CR coversheet when sumitted to RAN#71
7.5.3	LTE Rel-13: WI	Yes	not pursued		R2-161519	Corrections to gaps for discovery for inter-carrier and inter-PLMN	Interdigital Asia LLC	CR	36.321	13.0.0	0839	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.6.2.2	LTE Rel-13: WI	Yes	available		R2-161520	Coexistence of LWA, RCLWI, and LWIP with User Preference and ANDSF	MediaTek Inc.	discussion							Rel-13	LTE_WLAN_radio-Core				
7.4.2	LTE Rel-13: WI	Yes	noted		R2-161521	ASN.1 proposals for SIB scheduling for Rel-13 low complexity and coverage enhanced UEs	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.16.2.1	LTE Rel-13: WI	Yes	available		R2-161522	NB-IoT – Further details on RRC suspend and resume	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	NB_IOT-Core				
7.16.2.4	LTE Rel-13: WI	Yes	noted		R2-161523	Paging procedure for NB-IoT	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	NB_IOT-Core				
7.5.4	LTE Rel-13: WI	Yes	not pursued		R2-161524	Corrections to group priorities	Interdigital Asia LLC	CR	36.321	13.0.0	0840	-	F		Rel-13	LTE_eD2D_Prox-Core				
11.11	UTRA Rel-13: U	Yes	postponed		R2-161525	Reduction of codebook subset restriction signalling overhead in 4Tx_HSDPA	Ericsson	CR	25.331	13.1.0	5838	-	C		Rel-13	4Tx_HSDPA-Core				4Tx_HSDPA-Core was a REL-11 WI code so TEI13 needed
7.16.3.1	LTE Rel-13: WI	Yes	available		R2-161526	Random Access procedure for NB-IoT	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI	Yes	available		R2-161527	Discussion on RRC open issues	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	NB_IOT-Core				
7.16.2.3	LTE Rel-13: WI	Yes	available		R2-161528	NB-IoT implementation in 3GPP TS 36.304	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	NB_IOT-Core				
7.16.2.3	LTE Rel-13: WI	Yes	postponed		R2-161529	36.304 running CR to capture agreements on NB-IoT	Nokia Networks	draftCR	36.304	13.0.0	-	-			Rel-13	NB_IOT-Core				uc
7.16.2.1	LTE Rel-13: WI	Yes	noted		R2-161530	Establishment Cause for NB-IoT UE	NTT DOCOMO INC., KDDI Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI	Yes	available	late	R2-161531	The necessity of NB-IoT UE Measurement Reporting	NTT DOCOMO INC.	discussion							Rel-13	NB_IOT-Core				
11.2	UTRA Rel-13: W	Yes	agreed		R2-161532	Clarification for extended DRX in Idle mode	Ericsson	CR	25.331	13.1.0	5839	-	F		Rel-13	UTRA_SDATA_POWSAV-Core				
7.9.1	LTE Rel-13: WI	Yes	revised		R2-161533	Miscelanous corrections to TS 36.331 related to eDRX	QUALCOMM CDMA Technologies	draftCR	36.331	13.0.0	-	-	F		Rel-13	LTE_extDRX-Core		R2-161898		Tdoc type should be "CR", not "draftCR"
7.13	LTE Rel-13: WI	Yes	noted		R2-161534	Logging suspension due to IDC	Kyocera	discussion							Rel-13	LTE_eMDT2-Core				
7.13	LTE Rel-13: WI	Yes	merged		R2-161535	Clarification of logging suspension due to IDC	Kyocera	CR	36.331	13.0.0	2060	-	F	merged into ASN.1 Review CR	Rel-13	LTE_eMDT2-Core				
7.6.3.1	LTE Rel-13: WI	Yes	available		R2-161536	Blind offloading in LWI	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI	Yes	noted		R2-161537	Remaining issues for WLAN measurements	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core			R2-161985	
7.6.2.2	LTE Rel-13: WI	Yes	available		R2-161538	Remaining issues for WLAN measurements (Text Proposal)	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.1	LTE Rel-13: WI	Yes	noted		R2-161539	Capabilities for WLAN measurements	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				

Samsung Exhibit 1025, Page 1579 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.6.2.1	LTE Rel-13: WI:	Yes	available		R2-161540	Capabilities for WLAN measurements (Text Proposal for 36.306)	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.1	LTE Rel-13: WI:	Yes	available		R2-161541	Capabilities for WLAN measurements (Text Proposal for 36.331)	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	noted		R2-161542	Remaining issues for WLANConnectionStatusReport	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161543	Remaining issues for WLANConnectionStatusReport (Text Proposal)	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161544	IDC for WLAN integration	Ericsson, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161545	IDC for WLAN integration (Text Proposal)	Ericsson, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	noted		R2-161546	Minor issues regarding the mobility set	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161547	LWA bearer reconfiguration procedures	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				
7.1.1	LTE Rel-13: WI:	Yes	noted		R2-161548	Mapping between Channel Access Priority Classes and QCI values	Ericsson, Huawei, HiSilicon, Qualcomm Incorporated	discussion							Rel-13	LTE_LAA-Core				
7.1.1	LTE Rel-13: WI:	Yes	revised		R2-161549	Mapping between Channel Access Priority Classes and QCI values	Ericsson, Huawei, HiSilicon, Qualcomm Incorporated	CR	36.300	13.2.0	0842	-	F		Rel-13	LTE_LAA-Core		R2-161921		
7.1.1	LTE Rel-13: WI:	Yes	noted		R2-161550	Multiplexing of data in LAA	Ericsson, Huawei, HiSilicon, Qualcomm Incorporated	discussion							Rel-13	LTE_LAA-Core				
7.1.1	LTE Rel-13: WI:	Yes	revised		R2-161551	Multiplexing of data in LAA	Ericsson, Huawei, HiSilicon, Qualcomm Incorporated	CR	36.300	13.2.0	0843	-	F		Rel-13	LTE_LAA-Core		R2-161920		
7.1.2	LTE Rel-13: WI:	Yes	available		R2-161552	Leftover UE capabilities for LAA	Ericsson	discussion							Rel-13	LTE_LAA-Core				
7.1.2	LTE Rel-13: WI:	Yes	email discussion		R2-161553	Leftover UE capabilities for LAA	Ericsson	CR	36.306	13.0.0	0338	-	F		Rel-13	LTE_LAA-Core				[93#04][LTE/LAA]
7.1.2	LTE Rel-13: WI:	Yes	email discussion		R2-161554	Leftover UE capabilities for LAA	Ericsson	CR	36.331	13.0.0	2061	-	F		Rel-13	LTE_LAA-Core				[93#04][LTE/LAA]
7.2.1	LTE Rel-13: WI:	Yes	revised		R2-161555	Minor corrections for CA enhancements	Ericsson	CR	36.306	13.0.0	0339	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161939		
7.2.1	LTE Rel-13: WI:	Yes	revised		R2-161556	Minor corrections for CA enhancements	Ericsson	CR	36.331	13.0.0	2062	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161938		
6.2.1.1	LTE: Rel-12: WI	Yes	noted		R2-161557	Maximum UL timing difference for DC	Ericsson	discussion							Rel-12	LTE_SC_enh_dualC-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	available		R2-161558	Maximum UL timing difference for DC (Alt1)	Ericsson	CR	36.331	12.8.0	2063	-	F		Rel-12	LTE_SC_enh_dualC-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	revised		R2-161559	Maximum UL timing difference for DC (Alt2)	Ericsson	CR	36.331	12.8.0	2064	-	F		Rel-12	LTE_SC_enh_dualC-Core		R2-161892		
6.2.1.1	LTE: Rel-12: WI	Yes	available		R2-161560	Maximum UL timing difference for DC (Alt1)	Ericsson	CR	36.331	13.0.0	2065	-	A		Rel-13	LTE_SC_enh_dualC-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	revised		R2-161561	Maximum UL timing difference for DC (Alt2)	Ericsson	CR	36.331	13.0.0	2066	-	A		Rel-13	LTE_SC_enh_dualC-Core		R2-161893		
6.1.1	LTE: Rel-12 and	Yes	not pursued		R2-161562	Reference errors for inter-RAT capabilities	Ericsson	CR	36.306	12.7.0	0340	-	F		Rel-12	LTE-L23, TEI12				
6.1.1	LTE: Rel-12 and	Yes	revised		R2-161563	Reference errors for inter-RAT capabilities	Ericsson	CR	36.306	13.0.0	0341	-	A		Rel-13	LTE-L23, TEI12		R2-161906		
6.2.6	LTE: Rel-12: WI	Yes	revised		R2-161564	T321 for Category 0 UE	Ericsson	CR	36.331	12.8.0	2067	-	F		Rel-12	LC_MTC_LTE-Core		R2-161999		
7.11	LTE Rel-13: SI: (	Yes	available		R2-161565	Discussion on Uu Enhancements for V2X	Ericsson	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI: (	Yes	available		R2-161566	Sidelink Resource Allocation in V2X	Ericsson	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI: (	Yes	available		R2-161567	Traffic Management in V2X	Ericsson	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI: (	Yes	available		R2-161568	V2X Scenarios	Ericsson	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI: (	Yes	available		R2-161569	DRAFT LS on V2X Subscriber Classification	Ericsson	LS out							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI: (	Yes	available		R2-161570	On the Role of the RSU	Ericsson	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI: (	Yes	noted		R2-161571	Overview of V2X Enhancements for Further RAN2 Work	Ericsson	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI: (	Yes	available		R2-161572	Layer- 2 Protocol Stack for PC5-based V2X	Ericsson	discussion							Rel-14	FS_LTE_V2X				
6.2.6	LTE: Rel-12: WI	Yes	revised		R2-161573	T321 for Category 0 UE	Ericsson	CR	36.331	13.0.0	2068	-	A		Rel-13	LC_MTC_LTE-Core		R2-162000		

Samsung Exhibit 1025, Page 1580 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
11.9	UTRA Rel-13: W	Yes	noted	late	R2-161574	Remaining open issues for the TPC enhancements	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	UTRA_EDL_TPC				
11.12.2	UTRA Rel-13: U	Yes	noted	late	R2-161575	RRC level optimizations	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	TEI13				
7.4.4	LTE Rel-13: WI:	Yes	noted		R2-161576	Enhanced coverage information in S1AP signalling	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.4	LTE Rel-13: WI:	Yes	revised		R2-161577	DRAFT LS Inter-node RRC message for coverage information at paging (to: RAN3; cc: -; contact: Ericsson)	Ericsson	other							Rel-13	LTE_MTCe2_L1-Core		R2-161780		wrong Tdoc type used; Type should be LS out
7.4.4	LTE Rel-13: WI:	Yes	available		R2-161578	Narrowband selection at paging	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.1	LTE Rel-13: WI:	Yes	revised		R2-161579	Addition of low complexity UEs and coverage enhancement features	Ericsson	CR	36.331	13.0.0	2069	-	B	endorsed for further update	Rel-13	LTE_MTCe2_L1-Core		R2-161973		
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161580	LWA configuration handling upon handover	Huawei, HiSilicon	discussion							Rel-13	LTE_WLAN_radio-Core				
7.4.1	LTE Rel-13: WI:	Yes	agreed		R2-161581	UE capabilities for LC and CE	Ericsson	CR	36.306	13.0.0	0342	-	B	endorsed for further update	Rel-13	LTE_MTCe2_L1-Core				CR digit error corrected when submitted to RAN#71
7.19.2	LTE Rel-13: LTE	Yes	revised		R2-161582	eMTC - Review issue list for ASN.1 freeze with chair notes	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core		R2-161919		
7.2.1	LTE Rel-13: WI:	Yes	noted		R2-161583	Compatibility aspects for Rel-13 band combination capability signaling	Ericsson	discussion							Rel-13	LTE_CA_enh_b5C-Core				
7.2.1	LTE Rel-13: WI:	Yes	available		R2-161584	Parameters controlling band combination capability signalling (E.208)	Ericsson	discussion							Rel-13	LTE_CA_enh_b5C-Core				
7.1.1	LTE Rel-13: WI:	Yes	noted		R2-161585	eNB procedures for multiple channel access priority classes	BlackBerry UK Limited	discussion							Rel-13	LTE_LAA-Core				
7.1.1	LTE Rel-13: WI:	Yes	available		R2-161586	QCI mapping to Downlink Channel Access Priority Classes	BlackBerry UK Limited	discussion							Rel-13	LTE_LAA-Core				
7.5	LTE Rel-13: WI:	Yes	revised		R2-161587	eD2D Capability	Qualcomm Incorporated	CR	36.331	13.0.0	2070	-	C		Rel-13	LTE_eD2D_Prox-Core		R2-161806		
7.5	LTE Rel-13: WI:	Yes	revised		R2-161588	Introdusction of eD2D Capability	Qualcomm Incorporated	CR	36.306	13.0.0	0343	-	C		Rel-13	LTE_eD2D_Prox-Core		R2-161807		
7.5.3	LTE Rel-13: WI:	Yes	merged		R2-161589	Miscelaneous eD2D corrections	Qualcomm Incorporated	CR	36.331	13.0.0	2071	-	F	merged into R2-161798	Rel-13	LTE_eD2D_Prox-Core		R2-161798		moved from 7.5 to 7.5.3
7.6.2.3	LTE Rel-13: WI:	Yes	noted		R2-161590	On new PDCP status report for UE based flow control	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.3	LTE Rel-13: WI:	Yes	available		R2-161591	LWA L2 buffer sizes	Ericsson	discussion							Rel-13	LTE_WLAN_radio-Core				
7.15.1	LTE Rel-13: WI:	Yes	noted		R2-161592	LWIP UL bearer ID	Ericsson	discussion							Rel-13	LTE_WLAN_radio_legacy-Core				
7.15.1	LTE Rel-13: WI:	Yes	noted		R2-161593	Stage two for LWIP	Ericsson	discussion							Rel-13	LTE_WLAN_radio_legacy-Core				
7.12	LTE Rel-13: WI:	Yes	available		R2-161594	Interference measurement restriction for FD-MIMO	Ericsson	discussion							Rel-13	LTE_EBF_FDMIMO-Core				moved from 7.15.1 to 7.12
7.12	LTE Rel-13: WI:	Yes	revised		R2-161595	Support of FD-MIMO in 36.331	Ericsson	discussion							Rel-13	LTE_EBF_FDMIMO-Core		R2-161868		
7.12	LTE Rel-13: WI:	Yes	available		R2-161596	Correction to FD-MIMO	Ericsson	draftCR	36.331	13.0.0	-	-			Rel-13	LTE_EBF_FDMIMO-Core				Tdoc type should be "CR", not "draftCR"
7.5	LTE Rel-13: WI:	Yes	noted		R2-161597	eD2D Capability aspects	Qualcomm Incorporated	discussion							Rel-13	LTE_eD2D_Prox-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161598	Solving inconsistencies in LWA procedure calls	Huawei, HiSilicon	discussion							Rel-13	LTE_WLAN_radio-Core				moved from 7.6.2.3 to 7.6.2.2
7.6.3.1	LTE Rel-13: WI:	Yes	noted		R2-161599	Summary of email discussion: [91bis#18][LTE/WiFi] LTE/WLAN Interworking enhancements	Huawei	discussion							Rel-13	LTE_WLAN_radio-Core				
7.19.1	LTE Rel-13: LTE	Yes	noted		R2-161600	Review issue list for ASN.1 freeze (SC-PTM issues)	Huawei	discussion							Rel-13	LTE_SC_PTM-Core				
7.19.1	LTE Rel-13: LTE	Yes	revised		R2-161601	SC-PTM corrections following ASN.1 review	Huawei	CR	36.331	13.0.0	2072	-	F		Rel-13	LTE_SC_PTM-Core		R2-161977		
7.15.1	LTE Rel-13: WI:	Yes	revised		R2-161602	User preferred WLAN in LTE-WLAN Radio Level Integration	TCL Communication Ltd.	discussion	36.300						Rel-13	LTE_WLAN_radio_legacy-Core		R2-161901		
7.18	LTE Rel-13: LTE	Yes	available		R2-161603	Bearer resumption issues for CIoT UP solution for LTE	Intel Corporation	discussion							Rel-13	TEI13				
7.16.1	LTE Rel-13: WI:	Yes	postponed	late	R2-161604	Introduction of NB-IoT	Huawei (Rapporteur)	CR	36.300	13.2.0	0844	-	B		Rel-13	NB_IOT-Core				uc
7.3	LTE Rel-13: WI:	Yes	available		R2-161605	Inadequacy of Release 13 SC-PTM service continuity for public safety use	Motorola Solutions Danmark A/S	discussion							Rel-13	LTE_SC_PTM-Core				
7.18	LTE Rel-13: LTE	Yes	available		R2-161606	Introduction of Release Indication PDCP Control PDU	Sequans Communications	CR	36.323	13.0.0	0159	-	B	Related to R2-161501	Rel-13	TEI13			R2-161501	
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161607	Further discussion on NB-IoT resume failure	HTC Corporation	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI:	Yes	available		R2-161608	Restricting RLC Status Report transmission in NB-IOT	LG Electronics Inc.	discussion								NB_IOT-Core				
7.16.3.2	LTE Rel-13: WI:	Yes	available		R2-161609	Need for PDCP TM in NB-IOT	LG Electronics Inc.	discussion							Rel-13	NB_IOT-Core				

Samsung Exhibit 1025, Page 1581 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.4.2	LTE Rel-13: WI:	Yes	available		R2-161610	Further discussion on system information handling in enhanced coverage	HTC Corporation	discussion	36.331						Rel-13	LTE_MTCe2_L1-Core				
6.2.9.2	LTE: Rel-12: LTE	Yes	noted		R2-161611	MCH MAC PDU for unscheduled or suspended MTCH	LG Electronics Inc.	discussion							Rel-12	TEI12				
7.4.2	LTE Rel-13: WI:	Yes	noted		R2-161612	Further discussion on system information valid timer in EC	HTC Corporation	discussion	36.331						Rel-13	LTE_MTCe2_L1-Core				
6.2.9.2	LTE: Rel-12: LTE	Yes	available		R2-161613	Proposed CR to 36.321 on MCH MAC PDU for unscheduled or suspended MTCH	LG Electronics Inc.	CR	36.321	13.0.0	0841	-	A		Rel-13	TEI12				
6.2.9.2	LTE: Rel-12: LTE	Yes	not pursued		R2-161614	Proposed CR to 36.321 on MCH MAC PDU for unscheduled or suspended MTCH	LG Electronics Inc.	CR	36.321	12.8.0	0842	-	F		Rel-12	TEI12				
7.2.2	LTE Rel-13: WI:	Yes	not pursued		R2-161615	Correction to L field in MAC PDU	Sequans Communications	CR	36.321	13.0.0	0843	-	F		Rel-13	LTE_CA_enh_b5C-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	noted		R2-161616	PSCell change involving PSCell release	NTT DOCOMO, INC., Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-12	LTE_SC_enh_dualC-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	revised		R2-161617	Procedural clarification on PSCell change involving PSCell release	NTT DOCOMO INC, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	12.8.0	2073	-	F		Rel-12	LTE_SC_enh_dualC-Core		R2-161909		
6.2.1.1	LTE: Rel-12: WI	Yes	revised		R2-161618	Procedural clarification on PSCell change involving PSCell release	NTT DOCOMO INC, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2074	-	A		Rel-13	LTE_SC_enh_dualC-Core		R2-161910		
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161619	Re-use of RRC connection re-establishment procedure for RRC Resume signalling	BlackBerry UK Limited	discussion							Rel-13	NB_IOT-Core				
6.1.1	LTE: Rel-12 and	Yes	noted		R2-161620	Continuing discussion on intra-band non-contiguous CA capability	NTT DOCOMO, INC.	discussion						related to LSin R2-161018	Rel-11	LTE_CA-Core, TEI11			R2-161018	
7.6.2.2	LTE Rel-13: WI:	Yes	available		R2-161621	Further discussion on WLAN connection status reporting	LG Electronics Inc.	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.2.2	LTE Rel-13: WI:	Yes	noted		R2-161622	Multiple trigger quantities for WLAN measurement reporting	LG Electronics Inc.	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.3.2	LTE Rel-13: WI:	Yes	available		R2-161623	Steering command for RCLWI based on LWA configuration	LG Electronics Inc.	discussion							Rel-13	LTE_WLAN_radio-Core				
7.6.3.1	LTE Rel-13: WI:	Yes	available		R2-161624	Clarification on RCLWI command	LG Electronics Inc.	discussion							Rel-13	LTE_WLAN_radio-Core				moved from 7.6.3.2 to 7.6.3.1 by author's request
6.1.1	LTE: Rel-12 and	Yes	revised		R2-161625	Modification of network requested CA band combination retrieval for intra-band non-contiguous CA	NTT DOCOMO, INC.	CR	36.331	11.14.0	2075	-	C	related to LSin R2-161018	Rel-11	LTE_CA-Core, TEI11		R2-161784	R2-161018	cat.A CRs missed
6.1.1	LTE: Rel-12 and	Yes	revised		R2-161626	Modification of network requested CA band combination retrieval for intra-band non-contiguous CA	NTT DOCOMO, INC.	CR	36.306	11.13.0	0344	-	C	related to LSin R2-161018	Rel-11	LTE_CA-Core, TEI11		R2-161785	R2-161018	cat.A CRs missed
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161627	Resumption procedure for data and signalling	LG Electronics Inc.	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161628	The detailed procedure of solution 18	LG Electronics France	discussion							Rel-13	NB_IOT-Core				
7.2.1	LTE Rel-13: WI:	Yes	noted		R2-161629	[D.012][D.013][H.040][E.228] Class 4 issues on enhanced CA band combination retrieval	NTT DOCOMO, INC.	discussion							Rel-13	LTE_CA_enh_b5C-Core				
7.4.2	LTE Rel-13: WI:	Yes	available		R2-161630	Allowing different frequency bands between eMTC/NB-IoT UEs and legacy UEs	NTT DOCOMO, INC.	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.2	LTE Rel-13: WI:	Yes	available		R2-161631	[DRAFT] LS on Frequency band setting in eMTC/NB-IoT SIB	NTT DOCOMO, INC.	LS out							Rel-13	LTE_MTCe2_L1-Core, NB_IOT-Core				
7.16.2.2	LTE Rel-13: WI:	Yes	noted		R2-161632	Allowing different frequency bands between eMTC/NB-IoT UEs and legacy UEs	NTT DOCOMO, INC.	discussion							Rel-13	NB_IOT-Core				
7.1.2	LTE Rel-13: WI:	Yes	revised		R2-161633	Clarification on initial RSSI measurement reporting	CATT	draftCR	36.331	13.0.0	-	-			Rel-13	LTE_LAA-Core		R2-161915		Tdoc type should be "CR", not "draftCR"
7.3	LTE Rel-13: WI:	Yes	available		R2-161634	Use PCI as cell identify in SC-PTM neighbour cell list	Qualcomm Incorporated	CR	36.331	13.0.0	2076	-	F		Rel-13	LTE_SC_PTM-Core				
7.11	LTE Rel-13: SI: (	Yes	withdrawn		R2-161635	Some consideration of RSU	Potevio Company Limited	discussion							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI: (	Yes	available		R2-161636	Resource allocation mechanism for PC5 interface of V2X	Potevio Company Limited	discussion							Rel-14	FS_LTE_V2X				
7.16.2.2	LTE Rel-13: WI:	Yes	available		R2-161637	System Information Update for NB-IOT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161638	NBAH#06 - NB-IoT- DRX dormancy - email report	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161639	Use of RA back-off indicator	Ericsson	discussion							Rel-13	NB_IOT-Core				

Samsung Exhibit 1025, Page 1582 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.16.3.1	LTE Rel-13: WI:	Yes	available		R2-161640	Delay triggering SR in NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161641	Connected Mode DRX for NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161642	Scheduling and HARQ principles for NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161643	RLC AM considerations for NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.3.1	LTE Rel-13: WI:	Yes	revised	late	R2-161644	36.321 running CR to capture agreements on NB-IoT	Ericsson	draftCR	36.321	13.0.0	-	-	B		Rel-13	NB_IOT-Core		R2-161875		
6.1.1	LTE: Rel-12 and	Yes	noted		R2-161645	Throughput measurement for Carrier Aggregation	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-12	LTE_CA_enh-Core				
6.1.1	LTE: Rel-12 and	Yes	available		R2-161646	Adaptation of Throughput measurement for Carrier Aggregation	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.314	12.0.0	0037	-	C		Rel-12	LTE_CA_enh-Core				
6.1.1	LTE: Rel-12 and	Yes	available		R2-161647	Adaptation of Throughput measurement for Carrier Aggregation	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.314	13.0.0	0038	-	A		Rel-13	LTE_CA_enh-Core				
7.11	LTE Rel-13: SI:	Yes	available		R2-161648	Some consideration of RSU	Potevio Company Limited	response							Rel-14					wrong Tdoc type used; Type should be "discussion"
7.16.2.2	LTE Rel-13: WI:	Yes	available		R2-161649	System Information Change and Paging Mechanisms	INTERDIGITAL COMMUNICATIONS	discussion							Rel-13	NB_IOT				
7.16.1	LTE Rel-13: WI:	Yes	available		R2-161650	RAN2 aspects of multiple NB-IoT carrier operation	NTT DOCOMO, INC.	discussion							Rel-13	NB_IOT-Core				
7.9.1	LTE Rel-13: WI:	Yes	merged		R2-161651	Clarification for application of systemInfoModification	LG Electronics Inc.	CR	36.331	13.0.0	2077	-	F	merged into R2-161898	Rel-13	LTE_extDRX-Core		R2-161898		
7.4.3	LTE Rel-13: WI:	Yes	noted		R2-161652	PRACH power ramping and power calculation	INTERDIGITAL COMMUNICATIONS	discussion							Rel-13	LTE_MTCe2_L1-Core				moved from 7.4.6 to 7.4.3
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161653	RRC Connection Resume at different eNB	NTT DOCOMO, INC.	discussion							Rel-13	NB_IOT-Core				
7.4.7	LTE Rel-13: WI:	Yes	noted		R2-161654	UE capability signalling for eMTC UEs	NTT DOCOMO, INC.	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.5.3	LTE Rel-13: WI:	Yes	noted		R2-161655	Reporting of system information with T370	LG Electronics France	discussion								LTE_eD2D_Prox-Core				
7.11	LTE Rel-13: SI:	Yes	available		R2-161656	UL and DL resource utilization for Uu-based V2V service	Intel Corporation	discussion							Rel-14	FS_LTE_V2X				
7.18	LTE Rel-13: LTE	Yes	revised		R2-161657	Introduction of sf60 DRX cycle	Apple, MediaTek Inc, Broadcom, Qualcomm Inc, Intel Corporation	draftCR	36.331	13.0.0	-	-	B		Rel-13	TEI13		R2-161967		Tdoc type should be "CR", not "draftCR"
7.11	LTE Rel-13: SI:	Yes	revised	late	R2-161658	Summary of email discussion on [92#45][LTE/V2X] Capacity Analysis	LG Electronics	discussion						result fo email discussion on [92#45][LTE/V2X]	Rel-14	FS_LTE_V2X		R2-161800		
7.11	LTE Rel-13: SI:	Yes	revised		R2-161659	Challenges and potential enhancements for Uu based V2V	LG Electronics	discussion							Rel-14	FS_LTE_V2X		R2-161795		
7.18	LTE Rel-13: LTE	Yes	withdrawn		R2-161660	Draft CR to 36.321 on correction to Pcmax and PH field in PHR MAC CE	LG Electronics Inc.	draftCR	36.321	13.0.0	-	-			Rel-13	TEI13				
7.18	LTE Rel-13: LTE	Yes	withdrawn		R2-161661	draft CR to 36.331 on cross-carrier scheduling with 32CCs	LG Electronics Inc.	draftCR	36.331	13.0.0	-	-			Rel-13	TEI13				
7.2.1	LTE Rel-13: WI:	Yes	noted		R2-161662	Uplink Power Control configuration for PUCCH format 4/5	NEC	discussion							Rel-13	LTE_CA_enh_b5C-Core				
7.2.1	LTE Rel-13: WI:	Yes	revised		R2-161663	Correction to uplink power control configuration for PUCCH format 4/5	NEC	pCR	36.331	13.0.0	-	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161940		wrong Tdoc Type used; Type should be "CR"
7.16.2.1	LTE Rel-13: WI:	Yes	noted		R2-161664	Remaining issues related to CT1/SA2 questions	NEC	discussion						related to LS from SA2 in S2-160906	Rel-13	NB_IOT-Core			S2-160906	
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161665	Differentiation of Solution 2 and 18 in RRC Connection Establishment	NEC	discussion						related to LS from SA2 in R2-161042	Rel-13	NB_IOT-Core			R2-161042	
7.18	LTE Rel-13: LTE	Yes	available		R2-161666	Extension of NB-IoT signalling optimizations to LTE UEs	NEC	discussion						related to LS from RANP in R2-160402	Rel-13	TEI13			R2-161042	
7.4.5	LTE Rel-13: WI:	Yes	noted		R2-161667	Cell reselection for Enhanced Coverage	LG Electronics France	discussion							Rel-13	LTE_MTCe2_L1-Core				
11.8	UTRA Rel-13: W	Yes	revised		R2-161668	Indoor Positioning RRC corrections	NextNav	CR	25.331	13.1.0	5840	-	F		Rel-13	UTRA_LTE_iPos_enh-core		R2-161841		
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161669	Measurement rules for cell reselection in NB-IoT	LG Electronics France	discussion							Rel-13	NB_IOT-Core				
7.11	LTE Rel-13: SI:	Yes	available		R2-161670	Further discussion on V2X scenarios	LG Electronics	discussion							Rel-14	FS_LTE_V2X				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161671	Data volume indicator for NB-IOT	LG Electronics Inc.	discussion							Rel-13	NB_IOT-Core				
7.14	LTE Rel-13: WI:	Yes	revised		R2-161672	r13 Information Element correction	NextNav	CR	36.355	13.0.0	0140	-	F		Rel-13	UTRA_LTE_iPos_enh-core		R2-161961		

Samsung Exhibit 1025, Page 1583 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.16.2.3	LTE Rel-13: WI:	Yes	available		R2-161673	Inter-frequency Load Distribution in NB-IoT	LG Electronics France	discussion							Rel-13	NB_IOT-Core				
7.14	LTE Rel-13: WI:	Yes	agreed		R2-161674	WLAN AP Identifier correction	NextNav	CR	36.355	13.0.0	0141	-	F		Rel-13	UTRA_LTE_iPos_enh-core				
7.4.3	LTE Rel-13: WI:	Yes	noted		R2-161675	Consideration on RA-RNTI for eMTC	LG Electronics Inc.	discussion								LTE_MTCe2_L1-Core				moved from 7.4.6 to 7.4.3
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161676	DRX enhancement for NB-IOT	LG Electronics Inc.	discussion								NB_IOT-Core				
7.11	LTE Rel-13: SI: (	No	withdrawn	late	R2-161677	Proposed LS on Uu based V2X	LG Electronics	LS out							Rel-14	FS_LTE_V2X				
7.11	LTE Rel-13: SI: (	Yes	noted	late	R2-161678	Proposed TP update for V2X	LG Electronics	discussion							Rel-14	FS_LTE_V2X				
7.2.1	LTE Rel-13: WI:	Yes	merged		R2-161679	Proposed CR to 36.331 on cross-carrier scheduling with 32CCs	LG Electronics Inc.	CR	36.331	13.0.0	2078	-	F	merged into ASN.1 Review CR	Rel-13	TEI13				moved from 7.18 to 7.2.1
7.2.2	LTE Rel-13: WI:	Yes	agreed		R2-161680	Proposed CR to 36.321 on Correction to Pcmax and PH field in PHR MAC CE	LG Electronics Inc.	CR	36.321	13.0.0	0844	-	F		Rel-13	LTE-L23, TEI13				moved from 7.18 to 7.2.2
7.9.1	LTE Rel-13: WI:	Yes	noted		R2-161681	Text Proposal on System Information Update for eDRX	LG Electronics Inc.	discussion	36.331						Rel-13	LTE_extDRX-Core				TP for a spec under change control is not allowed and it should be proposed by a CR; this Tdoc will be assumed as discussion paper
7.16.2.2	LTE Rel-13: WI:	Yes	available		R2-161682	System Information Update Notification in NB-IoT	LG Electronics Inc.	discussion							Rel-13	NB_IOT-Core				
6.2.9.1	LTE: Rel-12: LTE	Yes	noted		R2-161683	Opportunistically using 60ms C-DRX Cycle for VoLTE	QUALCOMM	discussion	36.331						Rel-12	TEI12				
7.16.2.2	LTE Rel-13: WI:	Yes	available		R2-161684	System information change in NB-IoT	LG Electronics Inc.	discussion							Rel-13	NB_IOT-Core				
6.2.9.1	LTE: Rel-12: LTE	Yes	available		R2-161685	Opportunistically using 60ms C-DRX Cycle for VoLTE	QUALCOMM	CR	36.331	12.8.0	2079	-	C		Rel-12	TEI12				cat.A CR for REL-13 missed?
6.2.5	LTE: Rel-12: WI	Yes	available		R2-161686	Clarification on NAICS subset capability	QUALCOMM	CR	36.331	12.8.0	2080	-	F		Rel-12	LTE_NAICS-Core				cat.A CR for REL-13 missed?
6.2.5	LTE: Rel-12: WI	Yes	noted		R2-161687	Clarification on NAICS subset capability	QUALCOMM	discussion							Rel-12	LTE_NAICS-Core				
7.4.7	LTE Rel-13: WI:	Yes	noted		R2-161688	Discussion on the remaining CP timers	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.6	LTE Rel-13: WI:	Yes	noted		R2-161689	MAC impacts of asynchronous HARQ for BL UEs and UEs in EC	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.7	LTE Rel-13: WI:	Yes	available		R2-161690	Mode A and B impact on Random Access, Paging, and cell selection	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.6	LTE Rel-13: WI:	Yes	noted		R2-161691	Remaining DRX issues for BL UEs and UEs in EC	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.4	LTE Rel-13: WI:	Yes	noted		R2-161692	Remaining paging issues for BL UEs and UEs in EC	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.3	LTE Rel-13: WI:	Yes	available		R2-161693	Remaining random access issues for BL UEs and UEs in EC	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.2	LTE Rel-13: WI:	Yes	noted		R2-161694	Scheduling parameters for SIBs other than SIB1-BR	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.6	LTE Rel-13: WI:	Yes	revised	late	R2-161695	Introduction of low complexity UE and enhanced coverage features	Ericsson	CR	36.321	13.0.0	0845	-	B		Rel-13	LTE_MTCe2_L1-Core		R2-161777		moved from 7.4.1 to 7.4.6
7.4.1	LTE Rel-13: WI:	Yes	not pursued		R2-161696	Introduction of low complexity UE and enhanced coverage features	Ericsson	CR	36.302	13.0.0	0068	-	B		Rel-13	LTE_MTCe2_L1-Core				
7.4.3	LTE Rel-13: WI:	Yes	merged		R2-161697	RAR 12 bit UL grant size for mode B	Ericsson	CR	36.321	13.0.0	0846	-	B		Rel-13	LTE_MTCe2_L1-Core			R2-161777	moved from 7.4.1 to 7.4.3
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161698	Leaving RRC_CONNECTED	LG Electronics Inc.	discussion							Rel-13	NB_IOT-Core				
7.5.5	LTE Rel-13: WI:	Yes	not pursued		R2-161699	Conditions for establishing RRC connection for sidelink operation	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2081	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.5.5	LTE Rel-13: WI:	Yes	available		R2-161700	Updates to sidelink introduction section	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2082	-	F		Rel-13	LTE_eD2D_Prox-Core				
6.1.1	LTE: Rel-12 and	Yes	revised		R2-161701	In-Device Coexistence for UL CA change of victim system	QUALCOMM	CR	36.331	11.14.0	2083	-	F	cat.A CR for REL-12 and REL-13 provided in R2-161907 and R2-161908	Rel-11	SPIA_IDC_LTE-Core		R2-161871		
6.2.1.1	LTE: Rel-12: WI	Yes	available		R2-161702	Maximum UL Transmission timing difference in dual connectivity	Huawei, HiSilicon, China Telecom	discussion							Rel-12	LTE_SC_enh_dualC-Core				
7.5.5	LTE Rel-13: WI:	Yes	available		R2-161703	Sidelink synchronisation Information transmission procedure	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2084	-	F		Rel-13	LTE_eD2D_Prox-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	available		R2-161704	Maximum UL Transmission timing difference in dual connectivity	Huawei, HiSilicon, China Telecom	CR	36.300	12.8.0	0845	-	F		Rel-12	LTE_SC_enh_dualC-Core				cat.A CR for REL-13 missed?

Samsung Exhibit 1025, Page 1584 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.5.5	LTE Rel-13: WI:	Yes	not pursued		R2-161705	Sidelink UE Information procedure	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2085	-	F		Rel-13	LTE_eD2D_Prox-Core				
7.5.5	LTE Rel-13: WI:	Yes	available		R2-161706	General clarifications to 36.300 for sidelink operation	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.300	13.2.0	0846	-	F		Rel-13	LTE_eD2D_Prox-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	revised		R2-161707	Maximum UL Transmission timing difference in dual connectivity	Huawei, HiSilicon, China Telecom	CR	36.321	12.8.0	0847	-	F	Related to R4-158409	Rel-12	LTE_SC_enh_dualC-Core		R2-161894	R4-158409	cat.A CR for REL-13 missed?
7.3	LTE Rel-13: WI:	Yes	noted		R2-161708	Reporting of MBMS frequencies of interest for SC-PTM	Nokia Networks	discussion							Rel-13	LTE_SC_PTM-Core				
8	UTRA Release 1	Yes	not pursued		R2-161709	Clarification for the presence of Period of BMC scheduling	Huawei, HiSilicon	CR	25.331	8.25.0	5841	-	F		Rel-8	TEI8				
6.2.9.2	LTE: Rel-12: LTE	Yes	postponed	late	R2-161710	TA timer behaviour	QUALCOMM	discussion								TEI12				
8	UTRA Release 1	Yes	available		R2-161711	Clarification for the presence of Period of BMC scheduling	Huawei, HiSilicon	CR	25.331	9.19.0	5842	-	A		Rel-9	TEI8				
8	UTRA Release 1	Yes	available		R2-161712	Clarification for the presence of Period of BMC scheduling	Huawei, HiSilicon	CR	25.331	10.19.0	5843	-	A		Rel-10	TEI8				
6.2.9.2	LTE: Rel-12: LTE	Yes	postponed	late	R2-161713	TA timer behaviour	QUALCOMM	CR	36.321	12.8.0	0848	-	F		Rel-12	TEI12				cat.A CR for REL-13 missed?
8	UTRA Release 1	Yes	available		R2-161714	Clarification for the presence of Period of BMC scheduling	Huawei, HiSilicon	CR	25.331	11.15.0	5844	-	A		Rel-11	TEI8				
8	UTRA Release 1	Yes	available		R2-161715	Clarification for the presence of Period of BMC scheduling	Huawei, HiSilicon	CR	25.331	12.8.0	5845	-	A		Rel-12	TEI8				
8	UTRA Release 1	Yes	revised		R2-161716	Clarification for the presence of Period of BMC scheduling	Huawei, HiSilicon	CR	25.331	13.1.0	5846	-	A		Rel-13	TEI8		R2-161826		
6.2.1.1	LTE: Rel-12: WI	Yes	revised		R2-161717	Correction on capability phy-TDD-ReConfig-FDD(TDD)-Pcell	Huawei, HiSilicon, China Telecom	CR	36.306	12.7.0	0345	-	F		Rel-12	LTE_TDD_eIMTA-Core		R2-161899		
6.2.1.1	LTE: Rel-12: WI	Yes	revised		R2-161718	Correction on capability phy-TDD-ReConfig-FDD(TDD)-Pcell	Huawei, HiSilicon, China Telecom	CR	36.306	13.0.0	0346	-	A		Rel-13	LTE_TDD_eIMTA-Core		R2-161900		
7.18	LTE Rel-13: LTE	Yes	available		R2-161719	RRC protocol extension for non-NB-IoT UEs supporting U-plane based solution with AS information stored in RAN	NTT DOCOMO, INC.	CR	36.331	13.0.0	2086	-	B		Rel-13	TEI13				
7.18	LTE Rel-13: LTE	Yes	revised		R2-161720	ANR in case of MFBI	Huawei, HiSilicon, China Telecom	CR	36.306	13.0.0	0347	-	F		Rel-13	TEI13		R2-161913		
7.18	LTE Rel-13: LTE	Yes	revised		R2-161721	ANR in case of MFBI	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2087	-	F		Rel-13	TEI13		R2-161914		
7.18	LTE Rel-13: LTE	Yes	withdrawn		R2-161722	ANR in case of MFBI	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2088	-	F		Rel-13	TEI13				
7.18	LTE Rel-13: LTE	Yes	available		R2-161723	LCID assignment for non-NB-IoT UEs to indicate support of S1-based architecture enhancements	NTT DOCOMO, INC.	CR	36.321	13.0.0	0849	-	B		Rel-13	TEI13				
11.9	UTRA Rel-13: W	Yes	noted		R2-161724	Discussion on remaining possible open issues for Downlink TPC enhancements for UMTS	Huawei, HiSilicon	discussion							Rel-13	UTRA_EDL_TPC-Core				
11.9	UTRA Rel-13: W	Yes	revised		R2-161725	Clarification of downlink TPC enhancements	Huawei, HiSilicon	CR	25.331	13.1.0	5847	-	F		Rel-13	UTRA_EDL_TPC-Core		R2-161843		
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161726	Clarification on the leftmost bit for the supportedCellGrouping	Huawei, HiSilicon, China Telecom	CR	36.331	12.8.0	2089	-	F		Rel-12	LTE_SC_enh_dualC-Core				
7.18	LTE Rel-13: LTE	Yes	available		R2-161727	Non-NB-IoT UE specific aspects of U-plane based solution with AS information stored in RAN	NTT DOCOMO, INC.	discussion							Rel-13	TEI13				
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161728	Clarification on the leftmost bit for the supportedCellGrouping	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2090	-	A		Rel-13	LTE_SC_enh_dualC-Core				
6.2.9.1	LTE: Rel-12: LTE	Yes	noted		R2-161729	Handling of UE configuration in Handover procedure	Huawei, HiSilicon, China Telecom	discussion							Rel-12	TEI12				
6.2.9.1	LTE: Rel-12: LTE	Yes	available		R2-161730	Handling of UE configuration in Handover procedure	Huawei, HiSilicon, China Telecom	CR	36.331	12.8.0	2091	-	F		Rel-12	TEI12				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161731	Remaining issues of U-plane based solution with AS information stored in RAN	NTT DOCOMO, INC.	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161732	RRC protocol extension for NB-IoT UEs supporting U-plane based solution with AS information stored in RAN	NTT DOCOMO, INC.	CR	36.331	13.0.0	2092	-	B		Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161733	LCID assignment for NB-IoT UEs to indicate support of S1-based architecture enhancements	NTT DOCOMO, INC.	CR	36.321	13.0.0	0850	-	B		Rel-13	NB_IOT-Core				
7.4.6	LTE Rel-13: WI:	Yes	noted	late	R2-161734	Email discussion report on 92#44 LTE - MTC MAC Open Items	Ericsson France S.A.S	discussion						result of email discussion [92#44]	Rel-13	LTE_MTCe2_L1				

Samsung Exhibit 1025, Page 1585 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161735	NAS Recovery for NB-IoT UE	NTT DOCOMO INC.	discussion							Rel-13	NB_IOT-Core				
11.11	UTRA Rel-13: U	Yes	noted		R2-161736	Latency reduction for uplink signalling traffic	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	TEI13				moved from 5.3 to 11.11 by author's request
6.2.1.1	LTE: Rel-12: WI	Yes	noted		R2-161737	Clarification on the value range of guaranteed power for the MeNB and SeNB	Huawei, HiSilicon, China Telecom	discussion							Rel-12	LTE_SC_enh_dualC-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161738	Clarification on the value range of guaranteed power for the MeNB and SeNB	Huawei, HiSilicon, China Telecom	CR	36.331	12.8.0	2093	-	F		Rel-12	LTE_SC_enh_dualC-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161739	Clarification on the value range of guaranteed power for the MeNB and SeNB	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2094	-	A		Rel-13	LTE_SC_enh_dualC-Core				
6.2.1.1	LTE: Rel-12: WI	Yes	available		R2-161740	draft LS on the value range of guaranteed power for the MeNB and SeNB	Huawei	LS out							Rel-12	LTE_SC_enh_dualC-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161741	RRC Resume fallback	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	Yes	noted		R2-161742	Security aspects of NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	noted		R2-161743	Resume ID	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available	late	R2-161744	draft CR for RRC Connection Suspend and Resume	Ericsson	draftCR	36.331	13.0.0	-	-			Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	Yes	noted	late	R2-161745	Email discussion report on Message 3 size for NB-IoT	Ericsson (Rapporteur)	report						result of email discussion [NBAH#03]	Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	No	withdrawn	late	R2-161746	Further considerations on Message 3 size	Ericsson	discussion						related to email discussion [NBAH#03]	Rel-13	NB_IOT-Core				
7.18	LTE Rel-13: LTE	Yes	noted		R2-161747	Discussion on uplink data compression	CMCC	discussion							Rel-13	TEI13				
7.4.5	LTE Rel-13: WI:	Yes	noted		R2-161748	Open issues for mobility in Rel.13 eMTC	QUALCOMM CDMA Technologies	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.4.4	LTE Rel-13: WI:	Yes	noted		R2-161749	Paging narrowband determination for eMTC	QUALCOMM CDMA Technologies	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.18	LTE Rel-13: LTE	Yes	available		R2-161750	S1 signalling optimization solution (Sol18) for non-NB-IoT UEs	Ericsson	discussion							Rel-13	TEI13				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161751	RRC Resume signalling flow and RRC actions	Ericsson	discussion							Rel-13	NB_IOT-Core				
7.5.5	LTE Rel-13: WI:	Yes	noted		R2-161752	Index to combined destinationInfoList and destinationInfoListUC	Nokia Networks	discussion							Rel-13	LTE_eD2D_Prox-Core				
7.4.2	LTE Rel-13: WI:	Yes	noted	late	R2-161753	Providing SI parameters in connected mode	Ericsson France S.A.S	discussion							Rel-13	LTE_MTCe2_L1-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161754	Resumption procedure for data and signalling	LG Electronics France	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161755	The detailed procedure of solution 18	LG Electronics France	discussion							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161756	Leaving RRC_CONNECTED	LG Electronics France	discussion							Rel-13	NB_IOT-Core				
7.16.1	LTE Rel-13: WI:	Yes	noted		R2-161757	E-Mail discussion and companies view on NB-IOT Positioning	Vodafone GmbH	report							Rel-13	NB_IOT-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	available	late	R2-161758	CR for NB-IoT UE measurement configuration and reporting	NTT DOCOMO, INC.	CR	36.331	13.0.0	2095	-	B		Rel-13	NB_IOT-Core				
7.1.1	LBT related aspe	Yes	available	late	R2-161759	LAA LBT classes and data multiplexing	BlackBerry UK Limited	CR	36.321	13.0.0	0851	-	F		Rel-13	LTE_LAA-Core				
7.16.2.1	LTE Rel-13: WI:	Yes	postponed		R2-161760	36.331 Running CR to capture agreements on NB-IoT	Huawei	draftCR	36.331	13.0.0	-	-	B	result of email discussion [NBAH#02][NBIOT/36.331]	Rel-13	NB_IOT-Core	R2-161359			uc
7.15.2	LTE Rel-13: WI:	Yes	noted		R2-161761	Mobility set handling for LWIP	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry	discussion							Rel-13	LTE_WLAN_radio_legacy-Core				
7.2.1	LTE Rel-13: WI:	Yes	available		R2-161762	Introduction of extended number of measurement object identies	HTC Corporation	CR	36.331	13.0.0	2013	1	B	RAN2 agreement on increasing the maximum number of MeasObjectId to 64 in RAN2#90 was missed to be introduced when WI was closed	Rel-13	LTE_CA_enh_b5C-Core	R2-161191			CR cat.B is not allowed for closed WI
7.18	LTE Rel-13: LTE	Yes	available	late	R2-161763	ID for non-NB-IoT UEs	Ericsson	discussion						related with R2-161743	Rel-13	TEI13				
7.17	LTE Rel-13: Oth	Yes	agreed		R2-161764	36.331 CR on TM10 CRS-IM UE capability report signalling introduction	Intel Corporation	CR	36.331	13.0.0	2096	-	B		Rel-13	LTE_CRSIM-Perf			R2-161049	
7.17	LTE Rel-13: Oth	Yes	agreed		R2-161765	36.306 CR on TM10 CRS-IM UE capability report signalling introduction	Intel Corporation	CR	36.306	13.0.0	0348	-	B		Rel-13	LTE_CRSIM-Perf			R2-161049	Tdoc number error in CR coverpage corrected when submitted to RAN#71

Samsung Exhibit 1025, Page 1586 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
3.2	LSin: LTE releva	Yes	revised		R2-161766	Draft reply LS to S2-160906 = R2-161050 on questions on CIoT (to: SA2; cc: -, contact: Vodafone)	Vodafone GmbH	LS out							Rel-13	NB_IOT-Core		R2-162022			
4.1	Joint UMTS/LTE	Yes	agreed		R2-161767	Correction to GLONASS IOD value range	Intel Corporation	CR	36.355	13.0.0	0138	1	F		Rel-13	LCS_LTE, TEI13	R2-161084				
4.1	Joint UMTS/LTE	Yes	agreed		R2-161768	Correction to GLONASS IOD value range	Intel Corporation	CR	25.331	13.1.0	5826	1	F		Rel-13	RANimp-ANSS, TEI13	R2-161085				
7.4.1	LTE Rel-13: WI:	Yes	revised	late	R2-161769	The introduction of the Idle procedure for eMTC UE	Huawei, HiSilicon	CR	36.304	13.0.0	0299	-	B	endorsed for further update	Rel-13	LTE_MTCe2_L1-Core		R2-161979			
7.4.2	LTE Rel-13: WI:	Yes	revised	late	R2-161770	Draft LS (to RAN1) on TBS ranges for SIB1-BR and paging for eMTC	Ericsson	LS out							Rel-13	LTE_MTCe2_L1-Core		R2-161779		Tdoc also related with 7.4.4 paging	
13.1.1	Comebacks: LTE	Yes	approved		R2-161771	Report from Legacy LTE UP Session (legacy LTE UP)	LG Electronics (session chair)	Report													
13.1.2	Comebacks: LTE	Yes	revised		R2-161772	Report from LTE Break-Out Session (ProSe and V2X)	(Interdigital Vice-Chirman)	Report										R2-161810			
13.1.3	Comebacks: LTE	No	withdrawn		R2-161773	Report from LTE Break-Out Session (MCLD, MDT and SC-PTM)	CMCC (Vice-Chairman)	Report						This session treated in RAN2 main session. No separate report needed							
13.1.4	Comebacks: LTE	Yes	approved		R2-161774	Report from LTE Break-Out Session (NB-IoT)	Media Tek (session chair)	Report													
7.18	LTE Rel-13: LTE	Yes	agreed		R2-161775	Clarification on MBMS	ZTE Corporation, ZTE Trunking Technology Corporation	CR	36.300	13.0.0	0847	-	F		Rel-13	TEI13			R2-161117		
7.4.6	LTE Rel-13: WI:	Yes	noted		R2-161776	RA-RNTI for eMTC	Ericsson	discussion						Agreed to include TP in R2-161975	Rel-13	LTE_MTCe2_L1-Core			R2-161975		
7.4.6	LTE Rel-13: WI:	Yes	revised		R2-161777	Introduction of low complexity UE and enhanced coverage features	Ericsson	CR	36.321	13.0.0	0845	1	B		Rel-13	LTE_MTCe2_L1-Core	R2-161695	R2-161975			CBF-UP
7.4.1	LTE Rel-13: WI:	Yes	email discussion		R2-161778	The introduction of eMTC features	Huawei, HiSilicon	CR	36.302	13.0.0	0066	1	B		Rel-13	LTE_MTCe2_L1-Core	R2-161429				CBF-UP [93#08][LTE/MTC]
7.4.2	LTE Rel-13: WI:	Yes	approved		R2-161779	LS on TBS ranges for SIB1-BR and paging for Rel-13 eMTC (to: RAN1; cc: -; contact: Ericsson)	RAN2	LS out							Rel-13	LTE_MTCe2_L1-Core	R2-161770				
7.4.4	LTE Rel-13: WI:	Yes	revised		R2-161780	Draft Response LS on Paging for MTC (to: RAN3; cc: CT1, SA2, RAN1; contact: Ericsson)	Ericsson	LS out						reply to R3-151311 = R2-153015	Rel-13	LTE_MTCe2_L1-Core	R2-161577	R2-161788			
7.4.7	LTE Rel-13: WI:	Yes	revised		R2-161781	Response LS to C1-160739 = R2-160404 to CT1 on Extended coverage impact on NAS timers (to: CT1; cc:-; contact: Intel)	Intel Corporation	LS out							Rel-13	LTE_MTCe2_L1-Core		R2-162008			
7.6.3.1	LTE Rel-13: WI:	Yes	revised		R2-161782	Stage 2 CR on LTE-WLAN Radio Level Integration	Intel Corporation	CR	36.300	13.0.0	0849	-	B		Rel-13	LTE_WLAN_radio-Core		R2-161990			
7.6.3.2	LTE Rel-13: WI:	Yes	email discussion		R2-161783	Introduction of RAN controlled LTE-WLAN interworking	Huawei, HiSilicon, Ericsson, China Telecom, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2051	1	B		Rel-13	LTE_WLAN_radio-Core	R2-161466				[93#14][LTE/WLAN]
6.1.1	LTE: Rel-12 and	Yes	email discussion		R2-161784	Modification of network requested CA band combination retrieval for intra-band non-contiguous CA	NTT DOCOMO, INC.	CR	36.331	13.0.0	2075	1	C	related to LSin R2-161018	Rel-13	LTE_CA-Core, TEI13	R2-161625				[93#01][LTE/ Intra band contiguous CA]
6.1.1	LTE: Rel-12 and	Yes	email discussion		R2-161785	Modification of network requested CA band combination retrieval for intra-band non-contiguous CA	NTT DOCOMO, INC.	CR	36.306	13.0.0	0344	1	C	related to LSin R2-161018	Rel-13	LTE_CA-Core, TEI13	R2-161626				[93#01][LTE/ Intra band contiguous CA]
7.6.2.1	LTE Rel-13: WI:	Yes	revised		R2-161786	TS 36.300 Stage-2 CR correction for LWA	Intel Corporation	CR	36.300	13.2.0	0840	1	F		Rel-13	LTE_WLAN_radio-Core	R2-161510	R2-162011			
7.6.2.3	LTE Rel-13: WI:	Yes	revised		R2-161787	TS 36.360 v0.0.1 on LTE-WLAN Aggregation Adaptation Protocol (LWAAP)	LG Electronics Inc.	draft TS	36.360	0.0.1					Rel-13	LTE_WLAN_radio-Core	R2-161087	R2-161986			
7.4.4	LTE Rel-13: WI:	Yes	approved		R2-161788	Response LS on Paging for MTC (to: RAN3; cc: CT1, SA2, RAN1; contact: Ericsson)	RAN2	LS out						reply to R3-151311 = R2-153015	Rel-13	LTE_MTCe2_L1-Core	R2-161780			LS sent out on 17.02.2016 during the meeting	
7.19.1	LTE Rel-13: LTE	No	email discussion		R2-161789	Miscellaneous changes resulting from review for ASN.1 freeze	Ericsson (Rapporteur)	CR	36.331	13.0.0	2002	2	F		Rel-13	TEI13	R2-161201				[93#17][LTE/ASN.1]
7.19.1	LTE Rel-13: LTE	No	reserved		R2-161790	Review issue list for ASN.1 freeze	Ericsson, Samsung	discussion							Rel-13	TEI13	R2-161202				
7.18	LTE Rel-13: LTE	Yes	agreed	late	R2-161791	Introduction of capability on PDSCH collision with PSS/SSS/PBCH	Huawei, HiSilicon	CR	36.331	13.0.0	2102	-	F	related with LS R1-161276 = R2-161058	Rel-13	TEI13			R2-161058		
7.18	LTE Rel-13: LTE	Yes	agreed	late	R2-161792	Introduction of capability on PDSCH collision with PSS/SSS/PBCH	Huawei, HiSilicon	CR	36.306	13.0.0	0349	-	F	related with LS R1-161276 = R2-161058	Rel-13	TEI13			R2-161058		
6.2.1.1	LTE: Rel-12: WI	Yes	revised	late	R2-161793	Draft response LS on maximum UL Transmission timing difference in dual connectivity (to: RAN4; cc: RAN1; contact: Huawei)	Huawei	LS out						reply to R4-158409 = R2-161020	Rel-12	LTE_SC_enh_dualC-Core		R2-161998	R2-161020		

Samsung Exhibit 1025, Page 1587 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
7.2.1	LTE Rel-13: WI:	Yes	merged		R2-161794	The extension of measObjectId	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2044	1	F	Merged into R2-161976	Rel-13	LTE_CA_enh_b5C-Core	R2-161426		R2-161976		
7.11	LTE Rel-13: SI:	Yes	noted		R2-161795	Challenges and potential enhancements for Uu based V2V	LG Electronics	discussion							Rel-14	FS_LTE_V2X	R2-161659				
7.5.5	LTE Rel-13: WI:	Yes	noted		R2-161796	Review issue list for ASN.1 freeze	Ericsson, Samsung	discussion							Rel-13	LTE_eD2D_Prox-Core					
7.5.1	LTE Rel-13: WI:	Yes	revised		R2-161797	Clean up and corrections for eD2D	Interdigital Asia LLC	CR	36.300	13.2.0	0841	1	F		Rel-13	LTE_eD2D_Prox-Core	R2-161513	R2-161805			
7.5.5	LTE Rel-13: WI:	No	email discussion		R2-161798	eSL changes resulting from review for ASN.1 freeze	Samsung Telecommunications	CR	36.331	13.0.0	2001	2	F		Rel-13	LTE_eD2D_Prox-Core	R2-161177				[93#22][LTE/eD2D]
7.5.3	LTE Rel-13: WI:	Yes	merged		R2-161799	Reporting of system information with T370	LG Electronics France	CR	36.331	13.0.0	2025	1	F	merged into R2-161798	Rel-13	LTE_eD2D_Prox-Core	R2-161292		R2-161798		
7.11	LTE Rel-13: SI:	Yes	noted		R2-161800	Summary of email discussion on [92#45][LTE/V2X] Capacity Analysis	LG Electronics	discussion						result fo email discussion on [92#45][LTE/V2X]	Rel-14	FS_LTE_V2X	R2-161658				
7.11	LTE Rel-13: SI:	Yes	approved		R2-161801	Reply LS on RSU Scenarios (to: RAN1; cc: SA1, RAN3; contact: CATT)	RAN2	LS out						reply to R1-157821 = R2-161012	Rel-14	FS_LTE_V2X	R2-161185			LS was sent out on 17.02.2016 during the meeting	
7.5.1	LTE Rel-13: WI:	Yes	available		R2-161802	Corrections for sidelink remote UEs	Huawei, HiSilicon	CR	36.300	13.1.0					Rel-13	LTE_eD2D_Prox-Core					
7.5.1	LTE Rel-13: WI:	Yes	noted		R2-161803	TP on Relay eMBMS service	Huawei, HiSilicon	discussion							Rel-13	LTE_eD2D_Prox-Core	R2-161080				
7.5.3	LTE Rel-13: WI:	No	email discussion		R2-161804	Correction of sidelink	Ericsson	CR	36.321	13.0.0	0837	1	F		Rel-13	LTE_eD2D_Prox-Core	R2-161471				[93#20][LTE/eD2D]
7.5.1	LTE Rel-13: WI:	No	reserved		R2-161805	Corrections for eD2D	Interdigital Asia LLC	CR	36.300	13.2.0	0841	2	F		Rel-13	LTE_eD2D_Prox-Core	R2-161797				[93#21][LTE/eD2D]
7.5	LTE Rel-13: WI:	Yes	email discussion		R2-161806	eD2D Capability	Qualcomm Incorporated	CR	36.331	13.0.0	2070	1	C		Rel-13	LTE_eD2D_Prox-Core	R2-161587				[93#19][LTE/eD2D]
7.5	LTE Rel-13: WI:	No	email discussion		R2-161807	Introdusction of eD2D Capability	Qualcomm Incorporated	CR	36.306	13.0.0	0343	1	C		Rel-13	LTE_eD2D_Prox-Core	R2-161588				[93#19][LTE/eD2D]
7.5.5	LTE Rel-13: WI:	Yes	agreed		R2-161808	Alignment with 36.331	LG Electronics France	CR	36.304	13.0.0	0291	1	F		Rel-13	LTE_eD2D_Prox-Core	R2-161290				
7.5	LTE Rel-13: WI:	Yes	revised		R2-161809	Corrections of TS 36.331 for Relay eMBMS service	Huawei	CR	36.331	13.0.0	2107	-	F		Rel-13	LTE_eD2D_Prox-Core		R2-161983			
13.1.2	Comebacks: LTE	Yes	approved		R2-161810	Report from LTE Break-Out Session (ProSe and V2X)	(Interdigital Vice-Chirman)	Report									R2-161772				
		No	reserved		R2-161811	reserved for email discussion results	MCC	other													
		No	reserved		R2-161812	reserved for email discussion results	MCC	other													
11.11	UTRA Rel-13: U	Yes	approved		R2-161813	LS on Rel-13 sub-features and UE capabilities (to: RAN; cc: -; contact: Qualcomm)	RAN2	LS out							Rel-13	TEI13			R2-161160, R2-161835		
8	UTRA Release 1	Yes	revised		R2-161814	Draft LS on Applicability of FGI3/4 for UMTS test cases for Absolute Priority Reselection in CELL_FACH (to: RAN5; cc: -; contact: Qualcomm)	Qualcomm	LS out						reply to R5-155780 = R2-161037	Rel-8		R2-161825	R2-161818	R5-155780, R2-161037, R2-161825	moved from 3.3 to 8	
11.7	UTRA Rel-13: W	Yes	agreed		R2-161815	Correction of Application specific Congestion control for Data Communication (ACDC) in UTRAN	Ericsson	CR	25.331	13.1.0	5836	2	F		Rel-13	ACDC-RAN-Core	R2-161842				
10.7	UTRA Rel-12: O	Yes	agreed		R2-161816	Missing parameter values for access stratum release indication	Ericsson	CR	25.306	13.0.0	0501	2	F		Rel-13	TEI13	R2-161838				
8	UTRA Release 1	Yes	agreed		R2-161817	Clarification for the presence of Period of BMC scheduling	Huawei, HiSilicon	CR	25.331	13.1.0	5846	2	F		Rel-13	TEI8	R2-161826				
8	UTRA Release 1	Yes	approved		R2-161818	LS on Applicability of FGI3/4 for UMTS test cases for Absolute Priority Reselection in CELL_FACH (to: RAN5; cc: -; contact: Qualcomm)	RAN2	LS out						reply to R5-155780 = R2-161037	Rel-8		R2-161814		R5-155780, R2-161037, R2-161825, R2-161814	moved from 3.3 to 8	m
11.1.1	UTRA Rel-13: W	Yes	agreed		R2-161819	Corrections to retriavable configuration	Ericsson	CR	25.331	13.1.0	5849	1	F		Rel-13	UTRA_EDL_L23-Core	R2-161848				
11.9	UTRA Rel-13: W	Yes	agreed		R2-161820	CR to 25.306 on updating the capability name for supporting power control algorithm 3d for UTRA session	Huawei, HiSilicon	CR	25.306	13.0.0	0504	1	F		Rel-13	UTRA_EDL_TPC-Core	R2-161844				
		No	reserved		R2-161821	reserved for email discussion results	MCC	other													
		No	reserved		R2-161822	reserved for email discussion results	MCC	other													
		No	reserved		R2-161823	reserved for email discussion results	MCC	other													
		No	reserved		R2-161824	reserved for email discussion results	MCC	other													
8	UTRA Release 1	Yes	revised		R2-161825	Draft LS on Applicability of FGI3/4 for UMTS test cases for Absolute Priority Reselection in CELL_FACH (to: RAN5; cc: -; contact: Qualcomm)	Qualcomm	LS out						to: RAN5	Rel-8			R2-161814	R5-155780, R2-161037	moved from 3.3 to 8	
8	UTRA Release 1	Yes	revised		R2-161826	Clarification for the presence of Period of BMC scheduling	Huawei, HiSilicon	CR	25.331	13.1.0	5846	1	F		Rel-13	TEI8	R2-161716	R2-161817			

Samsung Exhibit 1025, Page 1588 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
10.1	UTRA Rel-12: W	Yes	email discussion		R2-161827	Correction on signalling transmission control due to access group blocking of DTCH	Huawei, HiSilicon, Nokia Networks, Alcatel Lucent, Alcatel Lucent Shanghai Bell, Ericsson	CR	25.300	12.4.0	0036	1	C		Rel-12	EDCH_enh-Core	R2-161278			cat.C CR is not allowed for closed WI	[93#26][UMTS/Access group blocking]
10.1	UTRA Rel-12: W	Yes	email discussion		R2-161828	Correction on signalling transmission control due to access group blocking of DTCH	Huawei, HiSilicon, Nokia Networks, Ericsson	CR	25.306	12.6.0	0502	1	C		Rel-12	EDCH_enh-Core	R2-161279			cat.C CR is not allowed for closed WI	[93#26][UMTS/Access group blocking]
10.1	UTRA Rel-12: W	Yes	email discussion		R2-161829	Correction on signalling transmission control due to access group blocking of DTCH	Huawei, HiSilicon, Nokia Networks, Ericsson	CR	25.331	12.8.0	5832	1	C		Rel-12	EDCH_enh-Core	R2-161280			cat.C CR is not allowed for closed WI	[93#26][UMTS/Access group blocking]
11.11	UTRA Rel-13: U	Yes	email discussion		R2-161830	Correction on signalling transmission control due to access group blocking of DTCH	Ericsson, Huawei, HiSilicon, Nokia Networks	CR	25.300	13.0.0	0035	1	C		Rel-13	TEI13, EDCH_enh-Core	R2-161169				[93#26][UMTS/Access group blocking]
11.11	UTRA Rel-13: U	Yes	email discussion		R2-161831	Correction on signalling transmission control due to access group blocking of DTCH	Ericsson, Huawei, HiSilicon, Nokia Networks	CR	25.306	13.0.0	0499	1	C		Rel-13	TEI13, EDCH_enh-Core	R2-161170				[93#26][UMTS/Access group blocking]
11.11	UTRA Rel-13: U	Yes	email discussion		R2-161832	Correction on signalling transmission control due to access group blocking of DTCH	Ericsson, Huawei, HiSilicon, Nokia Networks	CR	25.331	13.1.0	5828	1	C		Rel-13	TEI13, EDCH_enh-Core	R2-161171				[93#26][UMTS/Access group blocking]
10.4	UTRA Rel-12: W	Yes	postponed		R2-161833	Correction on DCH enhancements	Huawei, HiSilicon	CR	25.300	12.4.0	0037	1	F		Rel-12	UTRA_DCHenh-Core	R2-161282				
10.4	UTRA Rel-12: W	Yes	postponed		R2-161834	Correction on DCH enhancements	Huawei, HiSilicon	CR	25.300	13.0.0	0038	1	A		Rel-13	UTRA_DCHenh-Core	R2-161283				
11.11	UTRA Rel-13: U	Yes	revised		R2-161835	Draft LS to RAN On Rel-13 sub-features and UE capabilities	Qualcomm Incorporated	LS out						related with R2-161160	Rel-13	TEI13		R2-161813	R2-161160		
11.11	UTRA Rel-13: U	Yes	revised		R2-161836	Introduction of capability for extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	25.331	13.1.0	5827	1	B		Rel-13	LTE_MC_load-Core	R2-161129	R2-161854			
10.7	UTRA Rel-12: O	Yes	agreed		R2-161837	Missing parameter values for access stratum release indication	Ericsson	CR	25.306	12.6.0	0500	1	F		Rel-12	TEI12	R2-161230				
10.7	UTRA Rel-12: O	Yes	revised		R2-161838	Missing parameter values for access stratum release indication	Ericsson	CR	25.306	13.0.0	0501	1	F		Rel-13	TEI12, TEI13	R2-161231	R2-161816		TEI13 should be removed in WI code for consistency with cat.F CR	
11.12.1	UTRA Rel-13: U	Yes	revised		R2-161839	UMTS ASN.1 correction for Rel-13	Ericsson	CR	25.331	13.1.0	5848	-	F		Rel-13	TEI13		R2-161853			
11.11	UTRA Rel-13: U	Yes	revised		R2-161840	Introduction of capability for extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	25.306	13.0.0	0498	1	B		Rel-13	LTE_MC_load-Core	R2-161128	R2-161965			
11.8	UTRA Rel-13: W	Yes	agreed		R2-161841	Indoor Positioning RRC corrections	NextNav	CR	25.331	13.1.0	5840	1	F		Rel-13	UTRA_LTE_iPos_enh-core	R2-161668				
11.7	UTRA Rel-13: W	Yes	revised		R2-161842	Correction of Application specific Congestion control for Data Communication (ACDC) in UTRAN	Ericsson	CR	25.331	13.1.0	5836	1	F		Rel-13	ACDC-RAN-Core	R2-161437	R2-161815	R2-161965		
11.9	UTRA Rel-13: W	Yes	agreed		R2-161843	Clarification of downlink TPC enhancements	Huawei, HiSilicon	CR	25.331	13.1.0	5847	1	F		Rel-13	UTRA_EDL_TPC-Core	R2-161725				
11.9	UTRA Rel-13: W	Yes	revised		R2-161844	CR to 25.306 on updating the capability name for supporting power control algorithm 3d for UTRA session	Huawei, HiSilicon	CR	25.306	13.0.0	0504		F		Rel-13	UTRA_EDL_TPC-Core		R2-161820			
9	UTRA Release 1	Yes	email discussion		R2-161845	CR to 25.331 on adding Extended E-UTRA Frequency Band in RRC connection release for CCCH in ASN.1	Huawei, HiSilicon	CR	25.331	11.15.0	5850	-	F		Rel-11	TEI11					[93#27][UMTS/Extended E-UTRA freq band]
9	UTRA Release 1	Yes	email discussion		R2-161846	CR to 25.331 on adding Extended E-UTRA Frequency Band in RRC connection release for CCCH in ASN.1	Huawei, HiSilicon	CR	25.331	12.8.0	5851	-	A		Rel-12	TEI11					[93#27][UMTS/Extended E-UTRA freq band]
9	UTRA Release 1	Yes	email discussion		R2-161847	CR to 25.331 on adding Extended E-UTRA Frequency Band in RRC connection release for CCCH in ASN.1	Huawei, HiSilicon	CR	25.331	13.1.0	5852	-	A		Rel-13	TEI11					[93#27][UMTS/Extended E-UTRA freq band]
11.1.1	UTRA Rel-13: W	Yes	revised		R2-161848	Corrections to retriavable configuration	Ericsson	CR	25.331	13.1.0	5849	-	F		Rel-13	UTRA_EDL_L23-Core		R2-161819			
11.1.2	UTRA Rel-13: W	Yes	postponed		R2-161849	Corrections and clarifications to URA_PCH with seamless transition to CELL_FACH state functionality.	Ericsson	CR	25.331	13.1.0	5829	1	F		Rel-13	UTRA_EDL_L23-Core	R2-161181				

Samsung Exhibit 1025, Page 1589 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
11.1.6	UTRA Rel-13: W	Yes	agreed		R2-161850	Introduction of the UE capabilities for L2 and L3 Downlink enhancements subfeatures	Huawei, HiSilicon	CR	25.306	13.0.0	0503	1	B		Rel-13	UTRA_EDL_L23-Core	R2-161285				
11.12.1	UTRA Rel-13: U	Yes	revised		R2-161851	UMTS REL-13 ASN.1 Review Issue list	Ericsson	discussion							Rel-13	TEI13	R2-161197	R2-161852			
11.12.1	UTRA Rel-13: U	Yes	noted		R2-161852	UMTS REL-13 ASN.1 Review Issue list	Ericsson	discussion							Rel-13	TEI13	R2-161851				
11.12.1	UTRA Rel-13: U	No	email discussion		R2-161853	UMTS ASN.1 correction for Rel-13	Ericsson	CR	25.331	13.1.0	5848	1	F		Rel-13	TEI13	R2-161839		R2-161839		[93#25][UMTS/ASN.1]
11.11	UTRA Rel-13: U	Yes	revised		R2-161854	Introduction of capability for extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	25.331	13.1.0	5827	2	B		Rel-13	LTE_MC_load-Core	R2-161836	R2-161966			
7.13	LTE Rel-13: WI:	Yes	revised	late	R2-161855	Draft LS on Rel-13 MDT enhancements	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	LS out							Rel-13	LTE_eMDT2-Core		R2-161959			
7.2.1	LTE Rel-13: WI:	Yes	revised		R2-161856	Introduction of the extension of measObjectId range	Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, China Telecom, Ericsson, HTC, Samsung, Xinwei, ZTE Corporation	CR	36.331	13.0.0	2103	-	F		Rel-13	LTE_CA_enh_b5C-Core		R2-161976			
7.18	LTE Rel-13: LTE	Yes	noted	late	R2-161857	Options for handling unattended data traffic	Huawei, ZTE	discussion							Rel-13	TEI13					
7.3	LTE Rel-13: WI:	Yes	noted	late	R2-161858	Clarifications on SC-PTM	Huawei, HiSilicon	discussion							Rel-13	LTE_SC_PTM-Core					
7.2.1	LTE Rel-13: WI:	Yes	agreed		R2-161859	Corrections and missing agreement on the eCA	Beijing Xinwei Telecom Techn.	CR	36.331	13.0.0	2005	1	F		Rel-13	LTE_CA_enh_b5C-Core	R2-161154				
7.2.1	LTE Rel-13: WI:	Yes	agreed		R2-161860	Capture the UE capability for the extension of the MeasObjectId to 64	Beijing Xinwei Telecom Techn.	CR	36.306	13.0.0	0323	1	F		Rel-13	LTE_CA_enh_b5C-Core	R2-161157				
7.8	LTE Rel-13: WI:	Yes	revised		R2-161861	The correction on the description of 5.5.4.1	CATT	CR	36.331	13.0.0	2105	-	F		Rel-13	LTE_dualC_enh-Core	R2-161095	R2-161988			
7.8	LTE Rel-13: WI:	Yes	agreed		R2-161862	Clarification on Polling for last data	NTT DOCOMO INC.	CR	36.322	13.0.0	0116	1	F		Rel-13	LTE_dualC_enh-Core	R2-161204				
7.3	LTE Rel-13: WI:	Yes	agreed		R2-161863	Clarification on SC-PTM	HTC Corporation	CR	36.300	13.2.0	0824	1	F		Rel-13	LTE_SC_PTM-Core	R2-161194				
7.3	LTE Rel-13: WI:	Yes	agreed		R2-161864	Clarification related to SC-MCCH Change Notification	Samsung Electronics Co., Ltd	CR	36.300	13.2.0	0825	1	F		Rel-13	LTE_SC_PTM-Core	R2-161203				
7.3	LTE Rel-13: WI:	Yes	revised		R2-161865	Corrections on SC-PTM MAC specification	ZTE Corporation, ZTE Trunking Technology Corporation	CR	36.321	13.0.0	0853	-	F		Rel-13	LTE_SC_PTM-Core	R2-161119	R2-162004			
7.3	LTE Rel-13: WI:	Yes	email discussion		R2-161866	Miscellaneous correction for SC-PTM	Samsung Electronics Co., Ltd	CR	36.321	13.0.0	0824	1	F		Rel-13	LTE_SC_PTM-Core	R2-161205				[93#06][LTE/SC-PTM]
7.14	LTE Rel-13: WI:	Yes	revised		R2-161867	LPP clean-up	Qualcomm Incorporated	CR	36.355	13.0.0	0142	-	F		Rel-13	TEI13	R2-161329	R2-161960			
7.12	LTE Rel-13: WI:	Yes	noted		R2-161868	Support of FD-MIMO in 36.331	Ericsson	discussion							Rel-13	LTE_EBF_FDMIMO-Core	R2-161595				
7.10	SI: Study on Lat	Yes	revised		R2-161869	TR 36.881 v0.5.1 for Study on Latency reduction techniques for LTE	Ericsson	draft TR	36.881	0.5.1				related with RAN1 LS R2-161063	Rel-14	FS_LTE_LATRED		R2-161963	R2-161063		
7.12	LTE Rel-13: WI:	No	email discussion		R2-161870	EBF/FD-MIMO changes related to remaining issues	Samsung Telecommunications	CR	36.331	13.0.0	2020	1	F		Rel-13	LTE_EBF_FDMIMO-Core	R2-161220				[93#15][LTE/MIMO]
6.1.1	LTE: Rel-12 and	Yes	agreed		R2-161871	In-Device Coexistence for UL CA change of victim system	QUALCOMM	CR	36.331	11.14.0	2083	1	F	cat.A CR for REL-12 and REL-13 provided in R2-161907 and R2-161908	Rel-11	SPIA_IDC_LTE-Core	R2-161701				
7.3	LTE Rel-13: WI:	Yes	revised		R2-161872	Corrections on SC-PTM	Huawei, HiSilicon	CR	36.331	13.0.0	2010	1	F		Rel-13	LTE_SC_PTM-Core	R2-161168	R2-162005			
7.3	LTE Rel-13: WI:	Yes	revised		R2-161873	Corrections on SC-PTM	Huawei, HiSilicon	CR	36.306	13.0.0	0350	-	F		Rel-13	LTE_SC_PTM-Core		R2-162006			
7.3	LTE Rel-13: WI:	Yes	agreed		R2-161874	Miscellaneous corrections for SC-PTM	Samsung Electronics Co., Ltd	CR	36.331	13.0.0	2017	1	F		Rel-13	LTE_SC_PTM-Core	R2-161206				
7.16.3.1	LTE Rel-13: WI:	Yes	postponed		R2-161875	36.321 running CR to capture agreements on NB-IoT	Ericsson	draftCR	36.321	13.0.0	-	-	B		Rel-13	NB_IOT-Core	R2-161644				uc
7.16.2.1	LTE Rel-13: WI:	Yes	available		R2-161876	Access control for NB-IoT	Ericsson	discussion							Rel-13	NB_IOT-Core	R2-161306				
7.16.2.1	LTE Rel-13: WI:	Yes	noted	late	R2-161877	ASN.1 handling for NB-IoT	Neul, Huawei, HiSilicon	discussion							Rel-13	NB_IOT-Core					
7.16.1	LTE Rel-13: WI:	Yes	available		R2-161878	Multi-PRB support for NB-IoT	Ericsson, AT&T	discussion							Rel-13	NB-IoT-Core					
7.16.1	LTE Rel-13: WI: Narrc	postponed			R2-161879	Draft Reply LS on CIOT optimization	Samsung Electronics	LS out						Reply to R2-161017							
7.16.1	LTE Rel-13: WI:	Yes	revised		R2-161880	DRAFT Reply LS on Clarifications on RRC Resume Request	Nokia Networks	LS out						to SA3	Rel-13	NB-IoT-Core		R2-161944			

Samsung Exhibit 1025, Page 1590 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
7.16.1	LTE Rel-13: WI:	Yes	revised		R2-161881	DRAFT LS on updates for TS 36.300 (contact: Huawei)	Huawei	LS out						to: RAN1, RAN3	Rel-13	NB-IoT-Core		R2-161885			
7.16.2.4	LTE Rel-13: WI:	Yes	revised		R2-161882	Draft LS on available subframes for paging	Huawei	LS out							Rel-13	NB-IoT-Core		R2-161943			
7.16.2.4	LTE Rel-13: WI:	Yes	revised		R2-161883	DRAFT LS on Paging in NB-IoT	Ericsson	LS out							Rel-13	NB-IoT-Core		R2-161948			
7.16.2.3	LTE Rel-13: WI:	Yes	revised		R2-161884	DRAFT LS on extension of search for higher priority PLMN cycle beyond 8 hours	Deutsche Telecom	LS out							Rel-13	NB-IoT-Core		R2-161945			
7.16.1	LTE Rel-13: WI:	Yes	approved		R2-161885	LS on updates for TS 36.300 (to: RAN1, RAN3; cc: -; contact: Huawei)	RAN2	LS out							Rel-13	NB-IoT-Core	R2-161881			LS sent out on 17.02.2016 during the meeting	
7.16.2.1	LTE Rel-13: WI:	Yes	revised		R2-161886	Draft LS on RRC connection resume procedure	Ericsson	LS out							Rel-13	NB-IoT-Core		R2-162021			
7.16.3.1	LTE Rel-13: WI:	Yes	postponed		R2-161887	CR for 36.322	NTT Docomo	draftCR	36.322	13.0.0	-	-	B		Rel-13	NB-IoT-Core					uc
7.16.1	LTE Rel-13: WI:	Yes	noted		R2-161888	Way forward on RAN2 aspects of multiple PRB operations	NTT DOCOMO, INC., Ericsson, Vodafone, Qualcomm, ZTE, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Intel	discussion							Rel-13	NB-IoT-Core					
13.1.4	Comebacks: LTE	Yes	email discussion		R2-161889	Changes to include paging in RRC for NB-IoT	Huawei, HiSilicon, Neul	draftCR	36.331	13.0.0	-	-			Rel-13	NB-IoT-Core					[93#41][NB-IOT]
13.1.4	Comebacks: LTE	Yes	email discussion		R2-161890	Changes to include paging in 36.304 for NB-IoT	Huawei, HiSilicon, Neul	draftCR	36.304	13.0.0	-	-			Rel-13	NB-IoT-Core					[93#41][NB-IOT]
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161891	Maximum UL transmission timing reference in DC	NTT DOCOMO INC.	CR	36.300	12.8.0	0828	1	F	Related to R2-161020; Rel-13 CR is already agreed in R2-156163; cat.A CR provided in R2-161917	Rel-12	LTE_SC_enh_dualC-Core	R2-161209		R2-161917		
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161892	Maximum UL timing difference for DC	Ericsson	CR	36.331	12.8.0	2064	1	F		Rel-12	LTE_SC_enh_dualC-Core	R2-161559				
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161893	Maximum UL timing difference for DC (Alt2)	Ericsson	CR	36.331	13.0.0	2066	1	A		Rel-13	LTE_SC_enh_dualC-Core	R2-161561				
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161894	Maximum UL Transmission timing difference in dual connectivity	Huawei, HiSilicon, China Telecom	CR	36.321	12.8.0	0847	1	F	Related to R4-158409	Rel-12	LTE_SC_enh_dualC-Core	R2-161707				
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161895	Maximum UL Transmission timing difference in dual connectivity	Huawei, HiSilicon, China Telecom	CR	36.321	12.8.0	0852	-	A	Related to R4-158409	Rel-12	LTE_SC_enh_dualC-Core					
7.9.1	LTE Rel-13: WI:	Yes	agreed		R2-161896	Correction on PO monitoring during paing window in eDRX	FUJITSU LIMITED	CR	36.304	13.0.0	0289	1	F		Rel-13	LTE_extDRX-Core	R2-161173				
7.9.1	LTE Rel-13: WI:	Yes	agreed		R2-161897	PTW terminology alignment	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.304	13.0.0	0293	1	F		Rel-13	LTE_extDRX-Core	R2-161296				
7.9.1	LTE Rel-13: WI:	Yes	revised		R2-161898	Miscelanous corrections to TS 36.331 related to eDRX	QUALCOMM CDMA Technologies	CR	36.331	13.0.0	2097	-	F		Rel-13	LTE_extDRX-Core	R2-161533	R2-162001			
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161899	Correction on capability phy-TDD-ReConfig-FDD(TDD)-Pcell	Huawei, HiSilicon, China Telecom	CR	36.306	12.7.0	0345	1	F		Rel-12	LTE_TDD_eIMTA-Core	R2-161717				
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161900	Correction on capability phy-TDD-ReConfig-FDD(TDD)-Pcell	Huawei, HiSilicon, China Telecom	CR	36.306	13.0.0	0346	1	A		Rel-13	LTE_TDD_eIMTA-Core	R2-161718				
7.15.1	LTE Rel-13: WI:	Yes	available		R2-161901	User preferred WLAN in LTE-WLAN Radio Level Integration	TCL Communication Ltd.	discussion	36.300						Rel-13	LTE_WLAN_radio_legacy-Core	R2-161602				
7.1.2	LTE Rel-13: WI:	Yes	not pursued		R2-161902	RSSI measurment duration periodicity and subframe offset	HTC Corporation	CR	36.331	13.0.0	2032	1	F		Rel-13	LTE_LAA-Core	R2-161342				
6.1.1	LTE: Rel-12 and	Yes	agreed		R2-161903	Guideline on handling of uplink spare values	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2098	-	F		Rel-13	TEI13			R2-161365	Tdoc number error in CR coverpage corrected when submitted to RAN#71	
6.1.1	LTE: Rel-12 and	Yes	agreed		R2-161904	Applicability of longCodeState1XRTT	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	12.8.0	2038	1	F		Rel-12	LTE-L23, TEI12	R2-161404				
6.1.1	LTE: Rel-12 and	Yes	agreed		R2-161905	Applicability of longCodeState1XRTT	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2039	1	A		Rel-13	LTE-L23, TEI12	R2-161405				
6.1.1	LTE: Rel-12 and	Yes	agreed		R2-161906	Reference errors for inter-RAT capabilities	Ericsson	CR	36.306	13.0.0	0341	1	F		Rel-13	LTE-L23, TEI13	R2-161563				
6.1.1	LTE: Rel-12 and	Yes	agreed		R2-161907	In-Device Coexistence for UL CA change of victim system	QUALCOMM	CR	36.331	12.8.0	2099	-	A		Rel-12	SPIA_IDC_LTE-Core					
6.1.1	LTE: Rel-12 and	Yes	agreed		R2-161908	In-Device Coexistence for UL CA change of victim system	QUALCOMM	CR	36.331	13.0.0	2100	-	A		Rel-13	SPIA_IDC_LTE-Core					

Samsung Exhibit 1025, Page 1591 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161909	Procedural clarification on PSCell change involving PSCell release	NTT DOCOMO INC, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	12.8.0	2073	1	F		Rel-12	LTE_SC_enh_dualC-Core	R2-161617				
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161910	Procedural clarification on PSCell change involving PSCell release	NTT DOCOMO INC, Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2074	1	A		Rel-13	LTE_SC_enh_dualC-Core	R2-161618				
6.2.9.1	LTE: Rel-12: LTE	Yes	agreed		R2-161911	Correction on the RRC signalling configuration for 4Tx MIMO	Huawei, HiSilicon	CR	36.331	12.8.0	2021	1	F		Rel-12	LTE_eDL_MIMO_enh-Core	R2-161274				
6.2.9.1	LTE: Rel-12: LTE	Yes	agreed		R2-161912	Correction on the RRC signalling configuration for 4Tx MIMO	Huawei, HiSilicon	CR	36.331	13.0.0	2022	1	A		Rel-13	LTE_eDL_MIMO_enh-Core	R2-161275				
7.18	LTE Rel-13: LTE	Yes	agreed		R2-161913	ANR in case of MFBI	Huawei, HiSilicon, China Telecom	CR	36.306	13.0.0	0347	1	C		Rel-13	TEI13	R2-161720				
7.18	LTE Rel-13: LTE	Yes	agreed		R2-161914	ANR in case of MFBI	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2087	1	C		Rel-13	TEI13	R2-161721				
7.1.2	LTE Rel-13: WI:	Yes	agreed		R2-161915	Clarification on initial RSSI measurement reporting	CATT	CR	36.331	13.0.0	2101	-	F		Rel-13	LTE_LAA-Core	R2-161633				
7.1.2	LTE Rel-13: WI:	Yes	revised		R2-161916	corrections on RSSI measurment	Beijing Xinwei Telecom Techn.	CR	36.331	13.0.0	2006	1	F		Rel-13	LTE_LAA-Core	R2-161158	R2-162003			
6.2.1.1	LTE: Rel-12: WI	Yes	agreed		R2-161917	Maximum UL transmission timing reference in DC	NTT DOCOMO INC.	CR	36.300	13.2.0	0848	-	A		Rel-13	LTE_SC_enh_dualC-Core			R2-161891		
7.19.2	LTE Rel-13: LTE	No	email discussion		R2-161918	UL PDCP delay measurement configuration and reporting handling	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2040	1	F		Rel-13	LTE_eMDT2-Core	R2-161416				[93#18][LTE/MDT]
7.19.2	LTE Rel-13: LTE	Yes	available		R2-161919	eMTC - Review issue list for ASN.1 freeze with chair notes	Ericsson	discussion							Rel-13	LTE_MTCe2_L1-Core	R2-161582				
7.1.1	LTE Rel-13: WI:	Yes	revised		R2-161920	Multiplexing of data in LAA	Ericsson, Huawei, HiSilicon, Qualcomm Incorporated	CR	36.300	13.2.0	0843	1	F		Rel-13	LTE_LAA-Core	R2-161551	R2-161922			
7.1.1	LTE Rel-13: WI:	Yes	agreed		R2-161921	Mapping between Channel Access Priority Classes and QCI values	Ericsson, Huawei, HiSilicon, Qualcomm Incorporated	CR	36.300	13.2.0	0842	1	F		Rel-13	LTE_LAA-Core	R2-161549				
7.1.1	LTE Rel-13: WI:	Yes	agreed		R2-161922	Multiplexing of data in LAA	Ericsson, Huawei, HiSilicon, Qualcomm Incorporated	CR	36.300	13.2.0	0843	2	F		Rel-13	LTE_LAA-Core	R2-161920				
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161923	Stage-3 text updates for bearer Identification within IPsec Tunnel and IPsec establishment parameters	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom	CR	36.331	13.0.0	2054	1	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161493	R2-161928		wrong CR number used in CR coversheet	
7.15.1	LTE Rel-13: WI:	Yes	revised		R2-161924	Stage-2 text for LWIP Tunnel Clarifications	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom	CR	36.300	13.2.0	0839	1	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161487	R2-161927		wrong CR number used in CR coversheet	
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161925	Introducing a Specification for Encapsulating Header for UL DRB	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom	discussion							Rel-13	LTE_WLAN_radio_legacy-Core		R2-161926			
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161926	Introducing a Specification for Encapsulating Header for UL DRB	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom	discussion							Rel-13	LTE_WLAN_radio_legacy-Core	R2-161925	R2-161974			
7.15.1	LTE Rel-13: WI:	Yes	revised		R2-161927	Stage-2 text for LWIP Tunnel Clarifications	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry, AT&T, Sony	CR	36.300	13.2.0	0839	2	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161924	R2-161991			

Samsung Exhibit 1025, Page 1592 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161928	Stage-3 text updates for bearer Identification within IPsec Tunnel and IPsec establishment parameters	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom	CR	36.331	13.0.0	2054	2	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161923	R2-161982			
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161929	Introduction of LWIP UE capabilities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry	CR	36.306	13.0.0	0335	1	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161494	R2-162016			
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161930	Introduction of LWIP UE capabilities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry	CR	36.331	13.0.0	2055	1	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161495	R2-161993			
7.19.2	LTE Rel-13: LTE	Yes	revised		R2-161931	ASN.1 review – Grouping issues	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_CA_enh_b5C-Core		R2-161935			
7.5	LTE Rel-13: WI:	Yes	not pursued		R2-161932	Miscellaneous corrections for sidelink in 36.331	ZTE Corporation	CR	36.331	13.0.0	2037	1	F		Rel-13	LTE_eD2D_Prox-Core	R2-161403				
7.2.2	LTE Rel-13: WI:	Yes	agreed		R2-161933	Power headroom reporting of carrier aggregation enhancement beyond 5 CCs	Huawei, HiSilicon, China Telecom	CR	36.321	13.0.0	0825	1	F		Rel-13	LTE_CA_enh_b5C-Core	R2-161277				
7.2.1	LTE Rel-13: WI:	Yes	email discussion		R2-161934	Capbility for CA enhancement	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2042	1	F		Rel-13	LTE_CA_enh_b5C-Core	R2-161424				[93#05][LTE/eCA]
7.19.2	LTE Rel-13: LTE	Yes	noted		R2-161935	ASN.1 review – Grouping issues	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	discussion							Rel-13	LTE_CA_enh_b5C-Core	R2-161931				
7.2.1	LTE Rel-13: WI:	Yes	agreed		R2-161936	Some corrections on CA enhancement	Huawei, HiSilicon, China Telecom	CR	36.331	13.0.0	2043	1	F		Rel-13	LTE_CA_enh_b5C-Core	R2-161425				
7.2.1	LTE Rel-13: WI:	Yes	agreed		R2-161937	Correction on CA enhancement	Huawei, HiSilicon, China Telecom	CR	36.302	13.0.0	0065	1	F		Rel-13	LTE_CA_enh_b5C-Core	R2-161427				
7.2.1	LTE Rel-13: WI:	Yes	agreed		R2-161938	Minor corrections for CA enhancements	Ericsson	CR	36.331	13.0.0	2062	1	F		Rel-13	LTE_CA_enh_b5C-Core	R2-161556				
7.2.1	LTE Rel-13: WI:	Yes	agreed		R2-161939	Minor corrections for CA enhancements	Ericsson	CR	36.306	13.0.0	0339	1	F		Rel-13	LTE_CA_enh_b5C-Core	R2-161555				
7.2.1	LTE Rel-13: WI:	No	withdrawn		R2-161940	Correction to uplink power control configuration for PUCCH format 4/5	NEC	CR	36.331	13.0.0	2104	-	F		Rel-13	LTE_CA_enh_b5C-Core	R2-161663			withdrawn since Tdoc is not available after the meeting	
7.16.3.1	LTE Rel-13: WI:	Yes	noted		R2-161941	RAN1-RAN2 sync on Scheduling and HARQ design for NB-IoT	Ericsson	discussion													
3.2	LSin: LTE relevai	Yes	revised		R2-161942	Draft Response to LS on NB-IoT work progress in RAN2	NTT Docomo	LS out						reply to R2-161060	Rel-13	NB_IOT-Core	R2-161060	R2-162020			
7.16.2.4	LTE Rel-13: WI:	Yes	approved		R2-161943	LS on available subframes for paging (to: RAN1; cc: -; contact: Huawei)	RAN2	LS out							Rel-13	NB_IOT-Core	R2-161882				
7.16.1	LTE Rel-13: WI:	Yes	revised		R2-161944	DRAFT Reply LS on Clarifications on RRC Resume Request	Nokia Networks	LS out						to SA3	Rel-13	NB_IOT-Core	R2-161880	R2-161995			
7.16.2.3	LTE Rel-13: WI:	Yes	approved		R2-161945	LS on extension of search for higher priority PLMN cycle beyond 8 hours (to: SA1, CT1; cc: -; contact: Deutsche Telecom)	RAN2	LS out							Rel-13	NB_IOT-Core	R2-161884				
7.16.2.1	LTE Rel-13: WI:	Yes	available	late	R2-161946	Resume ID	Ericsson, Intel, AT&T, Vodafone, Verizon Wireless, Qualcomm	discussion							Rel-13	NB_IOT-Core					
		No	reserved		R2-161947	reserved for email discussion results	MCC	other													
7.16.2.4	LTE Rel-13: WI:	Yes	approved		R2-161948	LS on Paging in NB-IoT (to: RAN3, SA2, CT1; cc: -; contact: Ericsson)	RAN2	LS out							Rel-13	NB_IOT-Core	R2-161883				
		No	reserved		R2-161949	reserved for email discussion results	MCC	other													
		No	reserved		R2-161950	reserved for email discussion results	MCC	other													
7.7	LTE Rel-13: WI:	Yes	agreed		R2-161951	Correction to E-UTRAN Inter-frequency Redistribution procedure_alt2	ITRI	CR	36.304	13.0.0	0295	1	F		Rel-13	LTE_MC_load-Core	R2-161318				

Samsung Exhibit 1025, Page 1593 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
7.7	LTE Rel-13: WI:	Yes	agreed		R2-161952	The introduction of UE capability concerning extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.306	13.0.0	0334	1	F		Rel-13	LTE_MC_load_Core	R2-161448				
7.7	LTE Rel-13: WI:	Yes	agreed		R2-161953	The introduction of UE capability concerning extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.331	13.0.0	2048	1	F		Rel-13	LTE_MC_load_Core	R2-161446				
7.7	LTE Rel-13: WI:	Yes	agreed		R2-161954	Idle mode load distribution	Samsung Telecommunications	CR	36.304	13.0.0	0290	1	F		Rel-13	LTE_MC_load-Core	R2-161224				
7.6.2.2	LTE Rel-13: WI:	Yes	revised		R2-161955	LWA Miscellaneous Corrections	QUALCOMM CDMA Technologies	CR	36.331	13.0.0	2008	1	B		Rel-13	LTE_WLAN_radio-Core	R2-161162	R2-161984			
7.4.4	LTE Rel-13: WI:	Yes	revised		R2-161956	Draft LS on Paging Narrowband for eMTC (to: RAN3; cc: -; contact: Qualcomm)	QUALCOMM CDMA Technologies	LS out							Rel-13	LTE_MTCe2_L1-Core		R2-161968			
7.4.4	LTE Rel-13: WI:	Yes	noted		R2-161957	Discussion and Text Proposal on paging narrowband determination for eMTC	QUALCOMM CDMA Technologies	discussion							Rel-13	LTE_MTCe2_L1-Core					
7.13	LTE Rel-13: WI:	Yes	agreed		R2-161958	Introduction of Rel-13 MDT enhancements	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	36.306	13.0.0	0333	1	F		Rel-13	eMDT_UMTSLTE-Core	R2-161398				
7.13	LTE Rel-13: WI:	Yes	approved		R2-161959	LS on Rel-13 MDT enhancements (to: SA5; cc: RAN3; contact: Nokia Networks)	RAN2	LS out							Rel-13	LTE_eMDT2-Core	R2-161855				
7.14	LTE Rel-13: WI:	Yes	agreed		R2-161960	LPP clean-up	Qualcomm Incorporated	CR	36.355	13.0.0	0142	1	F		Rel-13	UTRA_LTE_iPos_enh-core	R2-161867				
7.14	LTE Rel-13: WI:	Yes	agreed		R2-161961	r13 Information Element correction	NextNav	CR	36.355	13.0.0	0140	1	F		Rel-13	UTRA_LTE_iPos_enh-core	R2-161672				
6.1.1	LTE: Rel-12 and	Yes	revised		R2-161962	[DRAFT] Reply LS on distinction of intra-band non-contiguous CA types (to: RAN4; cc: -; contact: NTT DOCOMO)	NTT DOCOMO, INC.	LS out						related with RAN4 LS R2-161018	Rel-13	LTE_CA-Core, TEI13		R2-162025	R2-161018		
7.10	SI: Study on Lat	Yes	revised		R2-161963	TR 36.881 v0.5.2 for Study on Latency reduction techniques for LTE	Ericsson	draft TR	36.881	0.5.2				related with RAN1 LS R2-161063	Rel-14	FS_LTE_LATRED	R2-161869	R2-161964			
7.10	SI: Study on Lat	Yes	agreed		R2-161964	TR 36.881 v0.6.0 for Study on Latency reduction techniques for LTE	Ericsson	draft TR	36.881	0.6.0				related with RAN1 LS R2-161063	Rel-14	FS_LTE_LATRED	R2-161963				
11.11	UTRA Rel-13: U	Yes	agreed		R2-161965	Introduction of capability for extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	25.306	13.0.0	0498	2	F		Rel-13	LTE_MC_load-Core	R2-161840				
11.11	UTRA Rel-13: U	Yes	agreed		R2-161966	Introduction of capability for extended E-UTRA frequency priorities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell	CR	25.331	13.1.0	5827	3	F		Rel-13	LTE_MC_load-Core	R2-161854				m
7.18	LTE Rel-13: LTE	Yes	agreed		R2-161967	Introduction of sf60 DRX cycle	Apple, MediaTek Inc, Broadcom, Qualcomm Inc, Intel Corporation	CR	36.331	13.0.0	2106	-	B		Rel-13	TEI13	R2-161657				m
7.4.4	LTE Rel-13: WI:	Yes	approved		R2-161968	LS on Paging Narrowband for eMTC (to: RAN3; cc: -; contact: Qualcomm)	RAN2	LS out							Rel-13	LTE_MTCe2_L1-Core	R2-161956			LS was sent out on 19.02.2016 during the meeting	
7.6.2.1	LTE Rel-13: WI:	Yes	noted		R2-161969	Summary of Offline Discussion on UE capability for LWA	Qualcomm Incorporated	discussion							Rel-13	LTE_WLAN_radio-Core					
7.4.4	LTE Rel-13: WI:	Yes	noted		R2-161970	Direct Indication Information	Ericsson	discussion						related with RAN LS R2-161028	Rel-13	LTE_MTCe2_L1-Core				Tdoc also related with AI 7.9	
7.4.4	LTE Rel-13: WI:	Yes	noted		R2-161971	Encoding of coverage information in inter-node RRC message	Ericsson	discussion						related with R2-161576	Rel-13	LTE_MTCe2_L1-Core					
7.6.2.2	LTE Rel-13: WI:	Yes	agreed		R2-161972	Introduction of WLAN RSSI measurements	Intel Corporation	CR	36.304	13.0.0	0300	-	C		Rel-13	LTE_WLAN_radio-Core					
7.4.1	LTE Rel-13: WI:	Yes	email discussion		R2-161973	Addition of low complexity UEs and coverage enhancement features	Ericsson	CR	36.331	13.0.0	2069	1	B		Rel-13	LTE_MTCe2_L1-Core	R2-161579				[93#07][LTE/MTC]
7.15.2	LTE Rel-13: WI:	Yes	noted		R2-161974	Introducing a Specification for Encapsulating Header for UL DRB	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom	discussion							Rel-13	LTE_WLAN_radio_legacy-Core	R2-161926				
7.4.6	LTE Rel-13: WI:	Yes	agreed		R2-161975	Introduction of low complexity UE and enhanced coverage features	Ericsson	CR	36.321	13.0.0	0845	2	B		Rel-13	LTE_MTCe2_L1-Core	R2-161777				

Samsung Exhibit 1025, Page 1594 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment
7.2.1	LTE Rel-13: WI:	Yes	agreed		R2-161976	Introduction of the extension of measObjectId range	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, China Telecom, Ericsson, HiSilicon, HTC, Huawei, NTT Docomo, Samsung, Xinwei, ZTE Corporation	CR	36.331	13.0.0	2103	1	F		Rel-13	LTE_CA_enh_b5C-Core	R2-161856			
7.19.1	LTE Rel-13: LTE	Yes	agreed		R2-161977	SC-PTM corrections following ASN.1 review	Huawei	CR	36.331	13.0.0	2072	1	F		Rel-13	LTE_SC_PTM-Core	R2-161601			
7.1.2	LTE Rel-13: WI:	Yes	email discussion		R2-161978	IDC support in LAA	Intel Corporation, BlackBerry, Samsung	CR	36.300	13.2.0	0829	1	F		Rel-13	LTE_LAA-Core	R2-161236			[93#03][LTE/LAA]
7.4.1	LTE Rel-13: WI:	Yes	revised		R2-161979	The introduction of the Idle procedure for eMTC UE	Huawei, HiSilicon	CR	36.304	13.0.0	0299	1	B	endorsed for further update	Rel-13	LTE_MTCe2_L1-Core	R2-161769	R2-161994		
7.6.2.1	LTE Rel-13: WI:	Yes	revised		R2-161980	Introducing LWA and RCLWI UE capabilities	Intel Corporation	CR	36.306	13.0.0	0337	1	B		Rel-13	LTE_WLAN_radio-Core	R2-161502	R2-162012		
7.6.2.3	LTE Rel-13: WI:	Yes	revised		R2-161981	Introduction of LWA PDCP status report	Intel Corporation	CR	36.323	13.0.0	0158	1	B		Rel-13	LTE_WLAN_radio-Core	R2-161506	R2-161987		
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161982	Stage-3 text updates for bearer Identification within IPsec Tunnel and IPsec establishment parameters	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom	CR	36.331	13.0.0	2054	3	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161928	R2-161992		
7.5	LTE Rel-13: WI:	Yes	merged		R2-161983	Corrections of TS 36.331 for Relay eMBMS service	Huawei	CR	36.331	13.0.0	2107	1	F	To be merged into the ProSe RRC CR in R2-161798	Rel-13	LTE_eD2D_Prox-Core	R2-161809			
7.6.2.2	LTE Rel-13: WI:	Yes	email discussion		R2-161984	LWA Miscellaneous Corrections	QUALCOMM CDMA Technologies	CR	36.331	13.0.0	2008	2	B		Rel-13	LTE_WLAN_radio-Core	R2-161955			[93#11][LTE/WLAN]
7.6.2.2	LTE Rel-13: WI:	Yes	noted		R2-161985	Measurements for connected WLAN	Ericsson, LG Electronics Inc., Sony, NEC, TeliaSonera, MediaTek, NTT DOCOMO INC., Kyocera	discussion						related with R2-161537	Rel-13	LTE_WLAN_radio-Core			R2-161537	
7.6.2.3	LTE Rel-13: WI:	Yes	revised		R2-161986	TS 36.360 v0.0.2 on LTE-WLAN Aggregation Adaptation Protocol (LWAAP)	LG Electronics Inc.	draft TS	36.360	0.0.2					Rel-13	LTE_WLAN_radio-Core	R2-161787	R2-162023		
7.6.2.3	LTE Rel-13: WI:	Yes	revised		R2-161987	Introduction of LWA PDCP status report	Intel Corporation	CR	36.323	13.0.0	0158	2	B		Rel-13	LTE_WLAN_radio-Core	R2-161981	R2-162014		
7.8	LTE Rel-13: WI:	Yes	agreed		R2-161988	The correction on the description of 5.5.4.1	CATT	CR	36.331	13.0.0	2105	1	F		Rel-13	LTE_dualC_enh-Core	R2-161861			
3.2	LSin: LTE releva	Yes	noted	late	R2-161989	LS reply to R2-156978 on capability to distinguish UE between with or without HTF (R4-161343; contact: NTT DOCOMO)	RAN4	LS in						to: RAN2; no reply answer	Rel-13	LTE_CA-Core, TEI13			R4-161343	
7.6.3.1	LTE Rel-13: WI:	Yes	email discussion		R2-161990	Stage 2 CR on LTE-WLAN Radio Level Integration	Intel Corporation	CR	36.300	13.0.0	0849	1	B		Rel-13	LTE_WLAN_radio-Core	R2-161782			[93#13][LTE/WLAN]
7.15.1	LTE Rel-13: WI:	Yes	revised		R2-161991	Stage-2 text for LWIP Tunnel Clarifications	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry, AT&T, Sony	CR	36.300	13.2.0	0839	3	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161927	R2-162013		
7.15.2	LTE Rel-13: WI:	No	email discussion		R2-161992	Stage-3 text updates for bearer Identification within IPsec Tunnel and IPsec establishment parameters	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Broadcom	CR	36.331	13.0.0	2054	4	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161982			[93#16][LTE/LWIP]
7.15.2	LTE Rel-13: WI:	Yes	revised		R2-161993	Introduction of LWIP UE capabilities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry	CR	36.331	13.0.0	2055	2	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161930	R2-162007		
7.4.1	LTE Rel-13: WI:	Yes	email discussion		R2-161994	The introduction of the Idle procedure for eMTC UE	Huawei, HiSilicon	CR	36.304	13.0.0	0299	2	B		Rel-13	LTE_MTCe2_L1-Core	R2-161979			[93#09][LTE/MTC]
7.16.1	LTE Rel-13: WI:	Yes	revised		R2-161995	DRAFT Reply LS on Clarifications on RRC Resume Request	Nokia Networks	LS out						to SA3	Rel-13	NB_IOT-Core	R2-161944	R2-162019		

Samsung Exhibit 1025, Page 1595 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
7.11	LTE Rel-13: SI: I	No	withdrawn	late	R2-161996	Observations on CAM Message Periodicity and Payload	Ericsson	discussion						related with R2-161571	Rel-14	FS_LTE_V2X			R2-161571	withdrawn since Tdoc is not available after the meeting	
7.3	LTE Rel-13: WI:	Yes	agreed	late	R2-161997	Correction on SC-MCCH change notification	Huawei, HiSilicon	CR	36.300	13.2.0	0852	-	F		Rel-13	LTE_SC_PTM-Core					
6.2.1.1	LTE: Rel-12: WI	Yes	approved		R2-161998	Response LS on maximum UL Transmission timing difference in dual connectivity (to: RAN4; cc: RAN1; contact: Huawei)	RAN2	LS out						reply to R4-158409 = R2-161020	Rel-12	LTE_SC_enh_dualC-Core	R2-161793				
6.2.6	LTE: Rel-12: WI	Yes	agreed		R2-161999	T321 for Category 0 UE	Ericsson	CR	36.331	12.8.0	2067	1	F		Rel-12	LC_MTC_LTE-Core	R2-161564				
6.2.6	LTE: Rel-12: WI	Yes	agreed		R2-162000	T321 for Category 0 UE	Ericsson	CR	36.331	13.0.0	2068	1	A		Rel-13	LC_MTC_LTE-Core	R2-161573				
7.9.1	LTE Rel-13: WI:	Yes	revised		R2-162001	Miscelanous corrections to TS 36.331 related to eDRX	QUALCOMM CDMA Technologies	CR	36.331	13.0.0	2097	1	F		Rel-13	LTE_extDRX-Core	R2-161898	R2-162015			
7.3	LTE Rel-13: WI:	Yes	available	late	R2-162002	Corrections to MBMSInterestIndication	Huawei, HiSilicon	CR	36.331	13.0.0	2108	-	F	related with R2-161708, R2-161858 and R2-161478	Rel-13	LTE_SC_PTM-Core					
7.1.2	LTE Rel-13: WI:	Yes	agreed		R2-162003	corrections on RSSI measurment	Beijing Xinwei Telecom Techn.	CR	36.331	13.0.0	2006	2	F		Rel-13	LTE_LAA-Core	R2-161916				
7.3	LTE Rel-13: WI:	Yes	agreed		R2-162004	Corrections on SC-PTM MAC specification	ZTE Corporation, ZTE Trunking Technology Corporation	CR	36.321	13.0.0	0853	1	F		Rel-13	LTE_SC_PTM-Core	R2-161865				
7.3	LTE Rel-13: WI:	Yes	agreed		R2-162005	Corrections on SC-PTM	Huawei, HiSilicon	CR	36.331	13.0.0	2010	2	F		Rel-13	LTE_SC_PTM-Core	R2-161872				
7.3	LTE Rel-13: WI:	Yes	agreed		R2-162006	Corrections on SC-PTM	Huawei, HiSilicon	CR	36.306	13.0.0	0350	1	F		Rel-13	LTE_SC_PTM-Core	R2-161873				
7.15.2	LTE Rel-13: WI:	Yes	agreed		R2-162007	Introduction of LWIP UE capabilities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry	CR	36.331	13.0.0	2055	3	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161993				c
7.4.7	LTE Rel-13: WI:	Yes	approved		R2-162008	Response LS to C1-160739 = R2-160404 to CT1 on Extended coverage impact on NAS timers (to: CT1; cc: SA2; contact: Intel)	RAN2	LS out						reply to C1-160739 = R2-160404	Rel-13	LTE_MTCe2_L1-Core	R2-161781				
7.6.2.3	LTE Rel-13: WI:	Yes	noted		R2-162009	Introduce an LWAAP specification	LG Electronics Inc.	discussion							Rel-13	LTE_WLAN_radio-Core					
7.19.1	LTE Rel-13: LTE	Yes	revised		R2-162010	LS on CIoT optimization for non-NB-IoT Ues	Intel	LS out							Rel-13	TEI13, CIoT		R2-162018			
7.6.2.1	LTE Rel-13: WI:	Yes	agreed		R2-162011	TS 36.300 Stage-2 CR correction for LWA	Intel Corporation	CR	36.300	13.2.0	0840	2	F		Rel-13	LTE_WLAN_radio-Core	R2-161786				
7.6.2.1	LTE Rel-13: WI:	Yes	agreed		R2-162012	Introducing LWA and RCLWI UE capabilities	Intel Corporation	CR	36.306	13.0.0	0337	2	B		Rel-13	LTE_WLAN_radio-Core	R2-161980				
7.15.1	LTE Rel-13: WI:	Yes	agreed		R2-162013	Stage-2 text for LWIP Tunnel Clarifications	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry, AT&T, Sony	CR	36.300	13.2.0	0839	3	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161991				
7.6.2.3	LTE Rel-13: WI:	Yes	email discussion		R2-162014	Introduction of LWA PDCP status report	Intel Corporation	CR	36.323	13.0.0	0158	3	B		Rel-13	LTE_WLAN_radio-Core	R2-161987				[93#12][LTE/WLAN]
7.9.1	LTE Rel-13: WI:	Yes	agreed		R2-162015	Miscelanous corrections to TS 36.331 related to eDRX	QUALCOMM CDMA Technologies	CR	36.331	13.0.0	2097	2	F		Rel-13	LTE_extDRX-Core	R2-162001				
7.9.1	LTE Rel-13: WI:	Yes	agreed		R2-162016	Introduction of LWIP UE capabilities	Nokia Networks, Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, Sprint, Broadcom, BlackBerry	CR	36.306	13.0.0	0335	2	B		Rel-13	LTE_WLAN_radio_legacy-Core	R2-161929				
3.2	LSin: LTE releva	Yes	available	late	R2-162017	LS on RRC parameters for LTE eMTC (R1-161545; contact: Ericsson)	RAN1	LS in						to: RAN2; not treated	Rel-13	LTE_MTCe2_L1-Core			R1-161545		
7.19.1	LTE Rel-13: LTE	Yes	approved		R2-162018	LS on CIoT optimization for non-NB-IoT UEs (to: SA2; cc: CT1, SA3; contact: Intel)	RAN2	LS out							Rel-13	TEI13, CIoT	R2-162010				
7.16.1	LTE Rel-13: WI:	Yes	approved		R2-162019	Reply LS on Clarifications on RRC Resume Request (to: SA3; cc: SA2, RAN3; contact: Nokia Networks)	RAN2	LS out						reply to R2-161048 = S3-160337	Rel-13	NB_IOT-Core	R2-161995				
3.2	LSin: LTE releva	Yes	approved		R2-162020	Response to LS on NB-IoT work progress in RAN2 (to: CT1; cc: SA2, RAN3; contact: NTT DOCOMO)	RAN2	LS out						reply to R2-161060 = C1-161187	Rel-13	NB_IOT-Core	R2-161942				

Samsung Exhibit 1025, Page 1596 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AI #	Agenda item	Uploaded	status	Late	Tdoc	Title	Source	Type:	Spec	Version #	CR #	rev	cat	further information	Release	SI/WI	Is revision of	Revised to	related Tdoc	comment	
7.16.2.1	LTE Rel-13: WI:	No	email discussion		R2-162021	LS on RRC connection resume procedure (to: CT1; cc: SA2, RAN3; contact: Ericsson)	RAN2	LS out							Rel-13	NB-IoT-Core	R2-161886			The LS out will be provided after email discussion [93#28][NB-IOT]	[93#28][NB-IOT]
3.2	LSin: LTE releva	No	email discussion		R2-162022	Reply LS to S2-160906 = R2-161050 on questions on CIoT (to: SA2; cc: -, contact: Vodafone)	RAN2	LS out							Rel-13	NB_IOT-Core	R2-161766			The LS out will be provided after email discussion [93#24][LTE/NB-IOT]	[93#24][LTE/NB-IOT]
7.6.2.3	LTE Rel-13: WI:	Yes	agreed		R2-162023	TS 36.360 v0.1.0 on LTE-WLAN Aggregation Adaptation Protocol (LWAAP)	LG Electronics Inc.	draft TS	36.360	0.1.0					Rel-13	LTE_WLAN_radio-Core	R2-161986	R2-162024			
7.6.2.3	LTE Rel-13: WI:	Yes	agreed		R2-162024	TS 36.360 v1.1.0 on LTE-WLAN Aggregation Adaptation Protocol (LWAAP)	LG Electronics Inc.	draft TS	36.360	1.0.0				will be submitted to RAN#71 for 1 step approval	Rel-13	LTE_WLAN_radio-Core	R2-162023				
6.1.1	LTE: Rel-12 and	No	email discussion		R2-162025	Reply LS on distinction of intra-band non-contiguous CA types (to: RAN4; cc: -; contact: NTT DOCOMO)	RAN2	LS out						Reply to R2-161018 = R4-158226	Rel-13	LTE_CA-Core, TEI13	R2-161962			The LS out will be provided after email discussion [93#01][LTE/ Intra band contiguous CA]	[93#01][LTE/ Intra band contiguous CA]

Samsung Exhibit 1025, Page 1597 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 45

3GPP TSG RAN meeting #77 **RP-171516**
Sapporo, Japan, September 11 – 14, 2017

Agenda Item: 3

Source: ETSI MCC

Title: Draft Report of 3GPP TSG RAN meeting #76,
West Palm Beach, USA, June 5 – 8, 2017

Document for: Approval

Draft Report of 3GPP TSG RAN meeting #76

held in West Palm Beach, USA

June 5 – 8, 2017

---

colour code:
blue: text that will be revised in the final report

The present document has been developed within the 3rd Generation Partnership Project (3GPP ™) and it has not been subject to any approval process by the 3GPP Organizational Partners.

Keywords
RAN, UTRA, LTE, NR, 5G

3GPP

Postal address

3GPP support office address
650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet
http://www.3gpp.org

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© 2017, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
All rights reserved.

UMTS™ is a Trade Mark of ETSI registered for the benefit of its members
3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners
LTE™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners
GSM® and the GSM logo are registered and owned by the GSM Association

Samsung Exhibit 1025, Page 1600 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Contents

Meeting Organisation 9

Executive Summary 9
1 Opening of the meeting 14
2 Reminders for usage of IT resources, IPR declaration and antitrust compliance 14
3 Approval of the agenda 15
4 Approval of the meeting report of TSG-RAN #75 18
5 RAN WG reports 18
5.1 TSG RAN WG1 18
5.2 TSG RAN WG2 19
5.3 TSG RAN WG3 20
5.4 TSG RAN WG4 20
5.5 TSG RAN WG5 22
5.6 TSG RAN WG6 22
6 Other Reports 23
6.1 Report on TSG SA activities 23
6.2 Report from PCG 23
6.3 Report from MCC 23
6.4 Reports from other groups/activities 24
7 Liaison activity of TSG RAN 24
8 ITU-R ad hoc 27
8.1 Status report 27
8.2 Documents related to IMT-2020 27
8.3 Other documents from/to ITU-R WP5D 27
8.4 Other documents from/to ITU-R WP5A 27
8.5 Documents from/to other ITU-R groups 27
9 New Radio 28
9.1 New WI/SI proposals for New Radio 28
9.2 Open REL-15 New Radio WIs 31
9.2.1 New Radio Access Technology [New WI: NR_newRAT] 31
9.3 Open REL-15 New Radio SIs 52
9.3.1 Study on NR to support non-terrestrial networks [New SI: FS_NR_nonterr_nw] 52
9.3.2 Study on CU-DU lower layer split for New Radio [New SI: FS_NR_CU_DU_LLS] 56
9.3.3 Study on NR-based access to unlicensed spectrum [New SI: FS_NR_unlic] 56
9.3.4 Study on Non-Orthogonal Multiple Access (NOMA) for NR [New SI: FS_NR_NOMA] 58
9.3.5 Study on integrated access and backhaul for NR [New SI: FS_NR_IAB] 59
9.3.6 Study of test methods for New Radio [New SI: FS_NR_test_methods] 59
9.3.7 Study on evaluation methodology of new V2X use cases for LTE and NR [New SI: FS_LTE_NR_V2X_eval] 59
9.3.8 Study on self-evaluation towards IMT-2020 submission [New SI: FS_5G_eval] 60
9.4 Closed REL-14 New Radio SIs 62
9.5 Other inputs 63
10 LTE 64
10.1 New WI/SI proposals for LTE 64
10.1.1 led by RAN1 64
10.1.2 led by RAN2 64
10.1.3 led by RAN3 67
10.1.4 led by RAN4 (not spectrum related) 67
10.1.5 led by RAN4 (spectrum related) 71
10.2 Open REL-13 LTE SIs 75
10.2.1 Study on multi-node testing for LAA [FS_LTE_LAA_multinode_test] 75
10.3 Open REL-14 LTE WIs (not spectrum related) 78
10.3.1 Perf. part: Enhanced LAA for LTE [LTE_eLAA-Perf] 78
10.3.2 Perf. part: Support for V2V services based on LTE sidelink [LTE_SL_V2V-Perf] 79
10.3.3 Perf. Part: Performance enhancements for high speed scenario in LTE [LTE_high_speed-Perf] 79
10.3.4 Core part: Radiated perf. req. for the verification of multi-antenna reception of UEs in LTE [LTE_MIMO_OTA-Core] 80

Samsung Exhibit 1025, Page 1601 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.3.5 Perf. part: Enhancements on FD-MIMO for LTE [LTE_eFDMIMO-Perf] 81
10.3.6 Perf. part: Further mobility enhancements in LTE [LTE_eMob-Perf] 81
10.3.7 Perf. part: Uplink Capacity Enhancements for LTE [LTE_UL_CAP_enh-Perf] 81
10.3.8 eMBMS enhancements for LTE [MBMS_LTE_enh2] 82
10.3.9 Perf. part: SRS switching between LTE component carriers [LTE_SRS_switch-Perf] 84
10.3.10 Perf. part: Downlink Multiuser Superposition Transmission for LTE [LTE_MUST-Perf] 84
10.3.11 LTE Measurement Gap Enhancement [LTE_meas_gap_enh] 84
10.3.12 Perf. part: LTE-based V2X Services [LTE_V2X-Perf] 85
10.3.13 Further enhanced MTC for LTE [LTE_feMTC] 85
10.3.14 Enhancements of NB-IoT [NB_IOTenh-Core] 86
10.3.15 Perf. part: 4 RX antenna ports with CA for LTE DL [LTE_4Rx_AP_DL_CA-Perf] 87
10.3.16 Requirements for a new UE cat. with single receiver based on Cat.1 for LTE [LTE_UE_cat_1RX] 88
10.3.17 Perf. part: Enh. CRS and SU-MIMO Interf. Mitigation Perf. Requirements for LTE [LTE_eCRSIM_eSUMIMO-Perf] 89
10.4 Open REL-14 LTE & UMTS WIs (not spectrum related) 89
10.4.1 Perf. part: Further Indoor Positioning Enh. for UTRA and LTE [UTRA_LTE_iPos_enh2-Perf] 89
10.4.2 Core part: LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Req. [LTE_UTRA_TRP_TRS-Core] 89
10.5 Open REL-14 LTE WIs (spectrum related) 90
10.5.1 LTE Advanced intra-band CA for xDL/yUL including contiguous and non-contiguous spectrum [LTE_CA_R14_intra] 90
10.5.2 LTE Advanced inter-band CA Rel-14 for 2DL/1UL [LTE_CA_R14_2DL1UL] 91
10.5.3 LTE Advanced inter-band CA Rel-14 for 3DL/1UL [LTE_CA_R14_3DL1UL] 92
10.5.4 LTE Advanced inter-band CA Rel-14 for 4DL/1UL [LTE_CA_R14_4DL1UL] 92
10.5.5 LTE Advanced inter-band CA Rel-14 for 5DL/1UL [LTE_CA_R14_5DL1UL] 93
10.5.6 LTE Advanced inter-band CA Rel-14 for 2DL/2UL [LTE_CA_R14_2DL2UL] 94
10.5.7 LTE Advanced inter-band CA Rel-14 for xDL/2UL with x=3,4,5 [LTE_CA_R14_xDL2UL] 94
10.5.8 New band support for Rel-14 NB-IOT [NB_IOT_R14_bands] 95
10.5.9 Core part: Introduction of new band support for 4Rx antenna ports for LTE [LTE_4Rx_AP_DL_bands-Core] 96
10.6 Small Technical Enhancements and Improvements for REL-14 [TEI14] 97
10.7 Closed REL-14 LTE WIs (not spectrum related) 99
10.7.1 Core part: Support for V2V services based on LTE sidelink [LTE_SL_V2V-Core] 99
10.7.2 Core part: LTE-based V2X Services [LTE_V2X-Core] 99
10.7.3 Core part: L2 latency reduction techniques for LTE [LTE_LATRED_L2-Core] 100
10.7.4 Core part: Perf. enhancements for high speed scenario in LTE [LTE_high_speed-Core] 100
10.7.5 Core part: SRS switching between LTE component carriers [LTE_SRS_switch-Core] 100
10.7.6 Core part: DL Multiuser Superposition Transmission for LTE [LTE_MUST-Core] 100
10.7.7 Core part: 4Rx antenna ports with CA for LTE DL [LTE_4Rx_AP_DL_CA-Core] 100
10.7.8 Core part: Enhanced LAA for LTE [LTE_eLAA-Core] 100
10.7.9 Core part: Enhancements on FD-MIMO for LTE [LTE_eFDMIMO-Core] 101
10.7.10 Core part: Further mobility enhancements in LTE [LTE_eMob-Core] 101
10.7.11 Core part: UL Capacity Enhancements for LTE [LTE_UL_CAP_enh-Core] 101
10.7.12 Core part: Voice and Video Enhancement for LTE [LTE_VoLTE_ViLTE_enh-Core] 102
10.7.13 Core part: Flexible eNB-ID and Cell-ID in E-UTRAN [LTE_FNBID-Core] 102
10.7.14 Core part: Enh. LTE-WLAN Aggregation (LWA) [LTE_WLAN_aggr-Core] 103
10.7.15 Core part: Enh. LTE WLAN Radio Level Integration with IPsec Tunnel [LTE_WLAN_eLWIP-Core] 103
10.8 Closed REL-14 LTE & UMTS WIs (not spectrum related) 103
10.8.1 Multi-Band BS testing with three or more bands [MB_BS_test_3B] 103
10.8.2 Core part: Further Indoor Positioning Enh. for UTRA and LTE [UTRA_LTE_iPos_enh2-Core] 103
10.8.3 Core part: Enh. of Dedicated Core Networks for UMTS and LTE [eDECOR-UTRA_LTE-Core] 103
10.9 Closed REL-14 LTE WIs (spectrum related) 104
10.9.1 LTE 2.6 GHz FDD Suppl. DL band (2570-2620 MHz) and LTE CA (2DL/1UL) with Band 3 for region 1 [LTE_FDD_2600_CA_B3] 104
10.9.2 AWS-3/4 Band for LTE [LTE_AWS_3_4] 104
10.9.3 Citizens Broadband Radio Service 3.5GHz band for LTE in the US [LTE_TDD_3550_CBRS_US] 104
10.9.4 LTE Band 41 UE power class 2 operation [LTE_B41_UE_PC2-Core] 104
10.9.5 LTE Advanced inter-band CA Rel-14 for 3DL/3UL [LTE_CA_R14_3DL3UL] 104

Samsung Exhibit 1025, Page 1602 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.9.6 Core part: Addition of 1.4 and 3 MHz Channel BW to E-UTRA operating band 65 for CGC operations in Region 1 [LTE_1980_2170_REG1_addBWs-Core] 104
10.9.7 Core part: Addition of band 25 and 26 to LTE MTC cat.0 [LC_MTC_LTE_cat0_B25_B26-Core] 104
10.9.8 Core part: Addition of bands 25 and 40 to LTE MTC cat.1 [LTE_MTCe2_L1_cat1_B25_B40-Core] 104
10.10 Closed REL-14 LTE SIs 104
10.11 Open REL-15 LTE WIs (not spectrum related) 104
10.11.1 Shortened TTI and processing time for LTE [LTE_sTTIandPT] 104
10.11.2 Core part: Signalling reduction to enable light connection for LTE [LTE_LIGHT_CON-Core] 106
10.11.3 Further enh. to CoMP Operation for LTE [New WI: feCOMP_LTE] 107
10.11.4 Highly Reliable Low Latency Communication for LTE [New WI: LTE_HRLLC] 107
10.11.5 V2X phase 2 based on LTE [New WI: LTE_eV2X] 108
10.11.6 UE Positioning Accuracy Enh. for LTE [New WI: LCS_LTE_acc_enh] 109
10.11.7 Enh. for high capacity stationary wireless link and introduction of 1024 QAM for LTE DL [New WI: LTE_1024QAM_DL] 110
10.11.8 Enh. to LTE operation in unlicensed spectrum [New WI: LTE_unlic] 110
10.11.9 Core part: Further video enhancements for LTE [New WI: LTE_ViLTE_enh2-Core] 111
10.11.10 Core part: QoE Measurement Collection for streaming services in E-UTRAN [New WI: LTE_QMC_Streaming-Core] 111
10.11.11 Enhancing LTE CA Utilization [New WI: LTE_euCA] 112
10.11.12 Core part: LTE connectivity to 5G-CN [New WI: LTE_5GCN_connect-Core] 112
10.11.13 WIs approved with working agreement at RAN #75 113
10.11.13.1 Even further enhanced MTC for LTE [New WI: LTE_eMTC4] 115
10.11.13.2 Further NB-IoT enhancements [New WI: NB_IOTenh2] 116
10.12 Open REL-15 LTE WIs (spectrum related) 120
10.12.1 450MHz E-UTRA FDD Band for LTE PPDR and PMR/PAMR in Europe [LTE450_Europe_PPDR] 120
10.12.2 Core part: E-UTRA 700MHz in Europe for Broadband-PPDR-Core [LTE700_Europe_PPDR-Core] 120
10.12.3 FDD operating band in the L-band for LTE [LTE_FDD_L_Band] 120
10.12.4 TDD operating band in the L-band for LTE [LTE_TDD_L_Band] 121
10.12.5 LTE Extended 1.5 GHz SDL band (1427 – 1518 MHz) and LTE CA (2DL/1UL) with Band 20 [LTE_SDL_1500ext] 122
10.12.6 Core part: Add UE Power Class 2 to band 41 intra-band contiguous LTE CA [LTE_CA_C_B41_PC2-Core] 122
10.12.7 Core part: Addition of Power Class 1 UE to bands B3/B20/B28 for LTE [LTE_HPUE_B3_B20_B28-Core] 122
10.12.8 450 MHz Band for LTE in Region 3 [New WI: LTE450_Reg3] 123
10.12.9 US 600 MHz Band for LTE [New WI: LTE600_US] 123
10.12.10 Core part: V2X new band combinations for LTE [New WI: LTE_V2X_CA_bands-Core] 124
10.12.11 LAA/eLAA for the CBRS 3.5GHz band in the US [New WI: LTE_3550_CBRS_US_LAA] 124
10.13 Open REL-15 LTE & UMTS WIs (not spectrum related) 125
10.13.1 Enh. of BS RF and EMC requirements for AAS [AASenh_BS_LTE_UTRA] 125
10.14 Open REL-15 LTE SIs (not spectrum related) 125
10.14.1 Study on further enh. to LTE D2D, UE to network relays for IoT and wearables [FS_feD2D_IoT_relay_wearable] 125
10.14.2 Study on interference cancellation receiver for LTE BS [FS_LTE_IC_BS] 126
10.14.3 Study on UL data compression in LTE [FS_LTE_UDC] 126
10.14.4 Study on SON for eCoMP for LTE [FS_LTE_SON_eCOMP] 127
10.14.5 Study on enhanced LTE Support for Aerial Vehicles [New SI: FS_LTE_Aerial] 128
10.14.6 Study on Architecture Evolution for E-UTRAN [New SI: FS_LTE_arch_evo] 128
10.15 LTE UE capabilities/FGIs/IoT bits/UE categories 128
11 UMTS 129
11.1 New WI/SI proposals for UMTS 129
11.2 Small Technical Enhancements and Improvements for REL-14 [TEI14] 130
11.3 Closed REL-14 UMTS WIs 130
11.3.1 Core part: RRC optimization for UMTS [UTRA_RRCopt-Core] 130
11.3.2 Core part: DTX/DRX enhancements in CELL_FACH [FACH_DTXDRX-Core] 130
11.3.3 Core part: Multi-Carrier Enhancements for UMTS [UTRA_MCe-Core] 130
11.3.4 Core part: QoE Measurement Collection for streaming services in UTRAN [UMTS_QMC_Streaming-Core] 130
11.4 Closed REL-14 UMTS SIs 131

Samsung Exhibit 1025, Page 1603 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.5 UMTS UE capabilities/IoT bits/UE categories 131
11.6 Open REL-15 UMTS WIs 131
11.6.1 Core part: DL interf. mitigation for UMTS [New WI: UTRA_DL_IM-Core] 131
11.7 Open REL-15 UMTS SIs 132
11.7.1 Study on scheduling enhancements with CA for UMTS [New SI: FS_UTRA_CA_sched_enh] 132
11.7.2 Study on a simplified HS-SCCH for UMTS [New SI: FS_UTRA_simple_HSSCCH] 132
12 GERAN 133
12.1 New WI/SI proposals for GERAN (led by RAN6) 133
12.2 Open REL-14 GERAN WIs 133
12.2.1 Positioning Enhancements for GERAN [ePOS_GERAN] 133
12.2.2 Radio Interface Enhancements for Extended Coverage GSM for support of Cellular IoT [CIoT_EC_GSM_radio_enh] 134
12.3 Small Technical Enhancements and Improvements for REL-14 [TEI14] 135
12.4 Closed REL-14 GERAN WIs 135
12.4.1 Core part: Dedicated Core Networks for GERAN [DECOR_GERAN-Core] 135
12.5 Closed REL-14 GERAN SIs 135
13 New and open RAN5 UE Conformance testing WIs and SIs 135
13.1 New WI/SI proposals for UE conformance testing (led by RAN5) 135
13.2 Open Rel-5 WIs 137
13.2.1 UE Conformance Test Aspects – IMS for Converged IP Communications [IMS_CONV_IP_COM-UEConTest] 137
13.3 Open Rel-12 WIs 137
13.3.1 UE Conf. Test Aspects – LTE D2D Proximity Services [LTE_D2D_Prox-UEConTest] 137
13.3.2 UE Conf. Test Aspects - E-UTRA Small cell enh. - Physical layer aspects [LTE_SC_enh_L1-UEConTest] 138
13.3.3 UE Conf. Test Aspects - Dual connectivity for LTE [LTE_SC_enh_dualC-UEConTest] 138
13.3.4 UE Conf. Test Aspects - Further Enh. to LTE TDD for DL-UL Interf. Management and Traffic Adaptation [LTE_TDD_eIMTA-UEConTest] 139
13.3.5 UE Conf. Test Aspects - Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA [LTE_UTRA_IncMon-UEConTest] 139
13.4 Open Rel-13 WIs 139
13.4.1 UE Conf. Test Aspects - Rel-13 LTE CA configurations [LTE_CA_Rel13-UEConTest] 139
13.4.2 UE Conf. Test Aspects - LTE DL 4 Rx antenna ports [LTE_4Rx_AP_DL-UEConTest] 140
13.4.3 UE Conf. Test Aspects - Licensed-Assisted Access using LTE [LTE_LAA-UEConTest] 140
13.4.4 UE Conf. Test Aspects - Further LTE Physical Layer Enh. for MTC [LTE_MTCe2_L1-UEConTest] 141
13.4.5 UE Conf. Test Aspects - WLAN/3GPP Radio Level Integration and Interworking Enh. [LTE_WLAN_radio-UEConTest] 142
13.4.6 UE Conf. Test Aspects - Narrowband IoT [NB_IOT-UEConTest] 142
13.4.7 UE Conf. Test Aspects - LTE CA Enh. Beyond 5 Carriers: PUCCH on Scell [LTE_CA_enh_b5C_PUCCH-UEConTest] 143
13.4.8 UE Conf. Test Aspects - Support for Mission Critical Push To Talk over LTE [New WI: MCPTT-ConTest] 143
13.4.9 UE Conf. Test Aspects - Interference Mitigation for DL Control Channels of LTE [New WI: LTE_IM_DLCCH-UEConTest] 143
13.5 Open Rel-14 WIs 144
13.5.1 UE Conf. Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom [LTE_UTRA_TRP_TRS-UEConTest] 144
13.5.2 UE Conf. Test Aspects – Rel-14 CA configurations [LTE_CA_R14-UEConTest] 144
13.5.3 UE Conf. Test Aspects - Radiated Performance of Multiple-antenna Receivers in the LTE UE [LTE_MIMO_OTA-UEConTest] 145
13.5.4 UE Conf. Test Aspects - Support for V2V services based on LTE sidelink [LTE_SL_V2V-UEConTest] 145
13.5.5 UE Conf. Test Aspects - Enhanced LAA for LTE [LTE_eLAA-UEConTest] 146
13.5.6 UE Conf. Test Aspects – CBRS 3.5GHz Band for LTE in the US (Band 48) [LTE_TDD_3550_CBRS_US-UEConTest] 146
13.5.7 UE Conf. Test Aspects - LTE 2.6 GHz FDD SDL band (2570-2620 MHz) and LTE CA (2DL/1UL) with Band 3 for Region 1 (Band 69) [New WI: LTE_FDD_2600_CA_B3-UEConTest] 147
13.5.8 UE Conf. Test Aspects - RAT Independent Further Indoor Positioning Enh. for LTE [New WI: LTE_iPos_enh2_RI-UEConTest] 147

Samsung Exhibit 1025, Page 1604 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

13.5.9 UE Conf. Test Aspects - SRS switching between LTE component carriers [New WI: LTE_SRS_switch-UEConTest] 148
13.5.10 UE Conf. Test Aspects - QoE Measurement Collection for streaming services in UTRAN [New WI: UMTS_QMC_Streaming-UEConTest] 148
13.5.11 UE Conf. Test Aspects - Perf. enh for high speed scenario in LTE [New WI: LTE_high_speed-UEConTest] 148
13.5.12 UE Conf. Test Aspects - New band support for Rel-14 NB-IoT [New WI: NB_IOT_R14_bands-UEConTest] 149
13.5.13 UE Conf. Test Aspects - 4 Rx antenna ports with CA for LTE DL [New WI: LTE_4Rx_AP_DL_CA-UEConTest] 149
13.5.14 Test - (Small) Technical Enhancements and Improvements for Rel-14 [TEI14_Test] 150
14 Maintenance for closed WIs/SIs for REL-13 and earlier 150
14.1 TSG RAN WG1 150
14.1.1 Approval of CRs to closed Rel-8 WIs and WIs of previous releases 150
14.1.2 Approval of CRs to closed Rel-9 WIs (incl. TEI9) 150
14.1.3 Approval of CRs to closed Rel-10 WIs (incl. TEI10) 150
14.1.4 Approval of CRs to closed Rel-11 WIs (incl. TEI11) 150
14.1.5 Approval of CRs to closed Rel-12 WIs (incl. TEI12) 150
14.1.6 Approval of CRs to closed Rel-13 WIs (incl. TEI13) 150
14.1.7 Approval of linked CR packages led by RAN WG1 151
14.2 TSG RAN WG2 152
14.2.1 Approval of CRs to closed Rel-8 WIs and WIs of previous releases 152
14.2.2 Approval of CRs to closed Rel-9 WIs (incl. TEI9) 152
14.2.3 Approval of CRs to closed Rel-10 WIs (incl. TEI10) 152
14.2.4 Approval of CRs to closed Rel-11 WIs (incl. TEI11) 152
14.2.5 Approval of CRs to closed Rel-12 WIs (incl. TEI12) 152
14.2.6 Approval of CRs to closed Rel-13 WIs (incl. TEI13) 153
14.2.7 Approval of linked CR packages led by RAN WG2 153
14.3 TSG RAN WG3 153
14.3.1 Approval of CRs to closed Rel-8 WIs and WIs of previous releases 153
14.3.2 Approval of CRs to closed Rel-9 WIs (incl. TEI9) 153
14.3.3 Approval of CRs to closed Rel-10 WIs (incl. TEI10) 153
14.3.4 Approval of CRs to closed Rel-11 WIs (incl. TEI11) 153
14.3.5 Approval of CRs to closed Rel-12 WIs (incl. TEI12) 153
14.3.6 Approval of CRs to closed Rel-13 WIs (incl. TEI13) 153
14.3.7 Approval of linked CR packages led by RAN WG3 154
14.4 TSG RAN WG4 154
14.4.1 Approval of CRs to closed Rel-8 WIs and WIs of previous releases 154
14.4.2 Approval of CRs to closed Rel-9 WIs (incl. TEI9) 154
14.4.3 Approval of CRs to closed Rel-10 WIs (incl. TEI10) 154
14.4.4 Approval of CRs to closed Rel-11 WIs (incl. TEI11) 154
14.4.5 Approval of CRs to closed Rel-12 WIs (incl. TEI12) 154
14.4.6 Approval of CRs to closed Rel-13 WIs (incl. TEI13) 155
14.4.7 Approval of linked CR packages led by RAN WG4 157
14.5 TSG RAN WG5 157
14.5.1 Approval of CRs to closed REL-10 WIs (incl. TEI10_Test) and WIs of previous releases 157
14.5.2 Approval of CRs to closed REL-11 WIs (incl. TEI11_Test) 157
14.5.3 Approval of CRs to closed REL-12 WIs (incl. TEI12_Test) 158
14.5.4 Approval of CRs to closed REL-13 WIs (incl. TEI13_Test) 158
14.5.5 Approval of linked CR packages led by RAN WG5 159
14.6 TSG RAN WG6 159
14.6.1 Approval of CRs to closed Rel-8 WIs and WIs of previous releases 159
14.6.2 Approval of CRs to closed Rel-9 WIs (incl. TEI9) 159
14.6.3 Approval of CRs to closed Rel-10 WIs (incl. TEI10) 159
14.6.4 Approval of CRs to closed Rel-11 WIs (incl. TEI11) 159
14.6.5 Approval of CRs to closed Rel-12 WIs (incl. TEI12) 159
14.6.6 Approval of CRs to closed Rel-13 WIs (incl. TEI13) 159
14.6.7 Approval of linked CR packages led by RAN WG6 160
14.7 Closed SIs for REL-13 and earlier 160
15 Inter WG/TSG-related discussions & decisions 160
16 Terms of Reference (ToR) 160
17 Project management 160

Samsung Exhibit 1025, Page 1605 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

18 Future meeting schedule 161
19 Any other business 163
20 Closing of the meeting 163

Annex A: List of participants 164

Annex B: List of Tdocs 165

Annex C: Incoming liaison statements (LSin) 166

Annex D: Outgoing liaison statements (LSout) 169

Annex E: List of Change Requests (CRs) 170

Annex F: Summary of RAN work items (WI) and study items (SI) 173

Annex G: RAN email discussions between RAN #76 and RAN #77: 178

Annex H: Actions decided by RAN #76 180

Annex I: History 181

Samsung Exhibit 1025, Page 1606 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Meeting Organisation

Meeting:	3GPP TSG RAN #76	
Meeting location:	West Palm Beach, USA	
	Hilton West Palm Beach hotel, room Oceana Ballroom A +B	
Scheduled:	Monday 05.06.2017 (9am) - Thursday 08.06.2017 (4pm)	
Host:	North American Friends of 3GPP (NAF3)	
TSG RAN Chairman:	Balázs Bertényi (Nokia Corporation, ETSI)	email: balazs.bertenyi@nokia.com
TSG RAN Vice chairman:	Vince Spatafora (AT&T, ATIS)	email: vince.spatafora@att.com
TSG RAN Vice chairman:	Xiaodong Xu (China Mobile Com. Corporation, CCSA)	email: xuxiaodong@chinamobile.com
TSG RAN Vice chairman:	Satoshi Nagata (NTT DOCOMO INC., ARIB)	email: nagatas@nttdocomo.com
TSG RAN MCC Support:	Joern Krause (ETSI MCC)	email: Joern.Krause@etsi.org
Email reflector:	3GPP_TSG_RAN@LIST.ETSI.ORG	
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/TSGR_76/Docs	

next meetings:	TSG RAN #77	11.09. - 14.09.2017	Sapporo, Japan	host: ARIB & TTC
	TSG RAN #78	18.12. - 21.12.2017	Lisbon, Portugal	host: EF3

Executive Summary

3GPP TSG RAN meeting #76 was held in West Palm Beach, USA, June 5-8, 2017, hosted by the North American Friends of 3GPP (NAF3). The meeting had 248 participants (see Annex A) and 657 Technical Documents (see Annex B).

Main topics/decisions:

- **block approval**: RAN #76 continued to use "block approval process" for agreed CR packages from WGs and WI/SI status reports, i.e. these contributions were only discussed on request (flag) otherwise the CRs were considered approved and the % complete and target date of the status reports were considered approved.

- **time budget analysis**: RAN #76 assessed the modified time budget requests in WI/SI status reports for already approved WIs/SIs relative to the time budget status endorsed by RAN #75 in RP-170822; the RAN WG chairmen provided their estimates of remaining time budgets in their WGs (see e.g. WG status reports); new WIs/SIs provided their time budget requests in the WI/SI descriptions; the resulting endorsed time budget allocations for all approved WIs/SIs after RAN #76 was endorsed by email in **RP-171478** (1 time unit (TU) ~ 2h). RAN5 WIs/SIs are excluded from this time budget handling.

-- **REL-14 ASN.1 freeze**: ASN.1 of REL-14 was frozen. However, still 3 2nd exceptions were granted to complete a REL-14 Core part WI by RAN #77 in Sep.2017 exceptions (see below).

- **working agreement** (AI 10.11.13): The working agreement of RAN #75 "Both the new work items in RP-170732 and RP-170852 (plus attachment in RP-170836) are approved" was not challenged and so the WIs Even further enhanced MTC for LTE (LTE_eMTC4) and Further NB-IoT enhancements (NB_IOTenh2) remain approved and no voting took place at RAN #76.

- **5G**:
  - new NR ad hocs agreed in RP-171509
  - RAN1 work for NR SIs is put on hold until Sep. 2017 (see RP-171475) in order to allow more time for NR Rel-15 WI; but no change to RAN plenary work on Non-terrestrial SI, no change to RAN plenary work on

Samsung Exhibit 1025, Page 1607 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

V2X SI, the email discussion in RAN1 is expected to progress (start after June ad hoc); no new NR WIs/SIs to be submitted to RAN #77
  - NR WI was revised in RP-171485, e.g. adding positioning support to cover regulatory needs
  - A way forward on the NG and Xn termination points was endorsed in RP-171474, an LSout on Termination of NG, Xn-C, S1-U and X2 interfaces was sent out in RP-171498.
  - RAN confirmed that F1 specification for NSA aspects should be completed by Dec. 2017 (see RP-171049). Also a RAN3 workplan for NR was endorsed in RP-171502.
  - An LSout on Closed Subscriber Group in 5G was sent out in RP-171479.
  - An LSout on UE categories for NR and LTE-NR Dual Connectivity was sent out in RP-171480. And a RAN email discussion will be conducted until RAN#77 to discuss the actual target peak data rates for LTE-NR DC and NR standalone.
  - A new SI on Study on separation of CP and UP for split option 2 of NR was approved in RP-171421 with target Dec.17.
  - IMT-2020 submission: RAN email discussion is planned until RAN #77 regarding how to contribute to IMT-2020 (see Annex G).
- **NB-IOT & eMTC**: A way forward avoiding overlapping UE categories was endorsed in RP-171467.
  Also a way forward on how to prioritize the work on Rel-15 NB-IoT UE power consumption was endorsed in RP-171440. Corresponding WIDs were updated accordingly: see RP-171427 (LTE_eMTC4) and RP-171428 (NB_IOTenh2).
- **Light connection for LTE** (AI 10.11.2): WI LTE_LIGHT_CON-Core is kept on hold until Sep.17 (waiting for SA2 progress). Nevertheless, also a corresponding Perf. part WI was created (see RP-171459).
- **UL data compression**: No new WI is started but SI FS_LTE_UDC (AI 10.14.3) continues. Additional information on APDC solution will be provided to RAN2 by 26.06.2017, RAN2 will do corresponding analysis on APDC solution and RAN #77 in Sep.17 will decide between DEFLATE-based solution and APDC solution.
- A **joint RAN-SA session** was held on Wed evening (see agenda RP-171470 and minutes RP-171501) addressing topics like Low Latency 5G/LTE, Emergency Support in NR, EUTRAN sharing enhancement and IOT planning. SA will add low latency work to their SA WI EDCE5 (see also RAN's LSout RP-171473).
- **LTE CA**: new basket WIs were introduced for REL-15 (see AI 10.1.5).
- **ATU**: An LSout RP-171507 was sent to the African Telecommunication Union (ATU) in reply to LSin RP-170890 indicating that 3GPP approved a WI "New LTE band for 3.3-3.4 GHz for Africa" in RP-171506 as requested.
- **WI summary**: At RAN #76, WI summaries (a descriptive summary of the features actually included in the specs) were presented for the following 8 REL-14 WIs:
  - ePOS_GERAN-Core: RP-170920
  - NB_IOT_R14_bands-Core: RP-170970
  - NB_IOTenh-Core: RP-171061
  - UTRA_DL_IM-Core: RP-171135
  - LTE_UE_cat_1RX-Core: RP-171317
  - CIoT_EC_GSM_radio_enh-Core: RP-171321
  - LTE_meas_gap_enh-Core: RP-171330
  - LTE_feMTC-Core: RP-171441

  Note: The rapporteur has to provide a WI summary to the RAN meeting at which a Core part WI is declared to be 100% complete; this WI summary has to be reviewed by the leading WG of the WI beforehand to check the technical correctness. Spectrum related Core part WI are excluded from this activity.
- **ITU-R** (see AI 8)**:**
  - LSin RP-170905 was received on revision of ITU-R M.2084-0 "Radio interface standards of vehicle-to-vehicle and vehicle-to-infrastructure communications for Intelligent Transport System applications" and the 3GPP ITU-R ad hoc was tasked to prepare a reply for RAN #77 in Sep.17.
  - LSin RP-170900 on adjacent band compatibility studies of IMT-Advanced systems in the mobile service in the band below 518MHz with respect to systems in teh mobile satellite service in the frequency band 518-1525MHz was received and forwarded to RAN4.
- Incoming Liaison Statements/Letters to ITU: 31, see Annex C
- Outgoing Liaison Statements/Letters to ITU: 8, see Annex D

Samsung Exhibit 1025, Page 1608 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- 37 closed work items (WI) (16 Core, 18 Perf., 3 Testing):
  - 2 RAN1 REL-14 Core part WIs:
    - Core part: Further enhanced MTC for LTE (720192, LTE_feMTC-Core)
    - Core part: Enhancements of NB-IoT (720193, NB_IOTenh-Core)
  - 1 RAN2 REL-14 Core part WIs:
    - Core part: DL interference mitigation for UMTS (750168, UTRA_DL_IM-Core)
      Note: This WI was shifted back from REL-15 to REL-14 at RAN #76.
  - 1 RAN4 REL-14 Core part only WI (i.e. WI without Perf. part):
    - Core part: Introduction of new band support for 4Rx antenna ports for LTE (740171, LTE_4Rx_AP_DL_bands-Core)
  - 6 RAN4 REL-14 Perf. part WIs (Core part already completed in the past):
    - Perf. part: Support for V2V services based on LTE sidelink (700261, LTE_SL_V2V-Perf) *0
    - Perf. part: SRS (sounding reference signal) switching between LTE component carriers (710282, LTE_SRS_switch-Perf) *1
    - Perf. part: Downlink Multiuser Superposition Transmission for LTE (710284, LTE_MUST-Perf) *1
    - Perf. part: Performance enhancements for high speed scenario in LTE (700282, LTE_high_speed-Perf) *1
    - Perf. part: Further Indoor Positioning Enhancements for UTRA and LTE (710272, UTRA_LTE_iPos_enh2-Perf) *1
    - Perf. part: Further mobility enhancements in LTE (740265, LTE_eMob-Perf) *2

    *0: Core part was completed at RAN #73 in Sep.16
    *1: Core part was completed at RAN #74 in Dec.16
    *2: Core part was completed at RAN #75 in March 17
  - 10 RAN4 REL-14 feature with Core & Perf. part WI:
    - LTE Measurement Gap Enhancement (710X83, LTE_meas_gap_enh)
    - Requirements for a new UE category with single receiver based on Category 1 for LTE (730X85, LTE_UE_cat_1RX)
    - New band support for Rel-14 Narrowband Internet of Things (NB-IOT) (730X83, NB_IOT_R14_bands-Core)
    - LTE Advanced intra-band CA for xDL/yUL including contiguous and non-contiguous spectrum (700X75, LTE_CA_R14_intra)
    - LTE Advanced inter-band CA Rel-14 for 2DL/1UL (700X70, LTE_CA_R14_2DL1UL)
    - LTE Advanced inter-band CA Rel-14 for 3DL/1UL (700X76, LTE_CA_R14_3DL1UL)
    - LTE Advanced inter-band CA Rel-14 for 4DL/1UL (700X74, LTE_CA_R14_4DL1UL)
    - LTE Advanced inter-band CA Rel-14 for 5DL/1UL (700X69, LTE_CA_R14_5DL1UL)
    - LTE Advanced inter-band CA Rel-14 for 2DL/2UL (700X71, LTE_CA_R14_2DL2UL)
    - LTE Advanced inter-band CA Rel-14 for xDL/2UL with x=3,4,5 (700X73, LTE_CA_R14_xDL2UL)
  - 3 RAN5 UE Conformance Test Aspects for:
    - REL-12, E-UTRA Small cell enhancements - Physical layer aspects (680068, LTE_SC_enh_L1-UEConTest)
    - REL-12, LTE Device-to-Device Proximity Services (670046, LTE_D2D_Prox-UEConTest)
    - REL-14, Citizens Broadband Radio Service (CBRS) 3.5GHz Band for LTE in the United States (Band 48) (740069, LTE_TDD_3550_CBRS_US-UEConTest)
  - 2 RAN6 REL-14 features with Core & Perf. part WI:
    - Positioning Enhancements for GERAN (721X03, ePOS_GERAN)
    - Radio Interface Enhancements for Extended Coverage GSM for support of Cellular Internet of Things (730X77, CIoT_EC_GSM_radio_enh)
- 5 closed REL-14 study items (SI):
  - RAN4, REL13: Study on multi-node testing for LAA (720087, FS_LTE_LAA_multinode_test)
  - RAN1, REL-15:Study on scheduling enhancements with carrier aggregation for UMTS (750041, FS_UTRA_CA_sched_enh)
  - RAN1, REL-15: Study on a simplified HS-SCCH for UMTS (750077, FS_UTRA_simple_HSSCCH)
  - RAN3, REL-15: Study on SON for eCoMP for LTE (720063, FS_LTE_SON_eCOMP)
  - RAN4 REL-15: Study on interference cancellation receiver for LTE BS (730070, FS_LTE_IC_BS)

Samsung Exhibit 1025, Page 1609 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- 3 granted 2nd REL-14 Core part exceptions in order to complete these WIs by RAN #77 still in REL-14:
  - 1 RAN1 REL-14 Core part WIs:
    - eMBMS enhancements for LTE (710181, MBMS_LTE_enh2-Core) RP-170979
  - 2 RAN4 REL-14 Core part WIs:
    - Radiated performance requirements for the verification of multi-antenna reception of UEs in LTE (710176, LTE_MIMO_OTA-Core) RP-171019
    - LTE UE TRP and TRS and UTRA Hand Phantom related UE TRP and TRS Requirements (580137, LTE_UTRA_TRP_TRS-Core) RP-171009
- 1 WI shifted back from REL-15 to REL-14:
  - Core part: DL interference mitigation for UMTS (750168, UTRA_DL_IM-Core)
- 34 new approved work items (WI) (13 Core, 14 Perf., 7 Testing):
  - 26 RAN4 WIs (12 Core, 14 Perf.):

    2 REL-15 Core part only WI (i.e. without Perf. part):
    - Addition of band 28 and 40 to LTE MTC cat.0 RP-171132
    - LTE Advanced high power TDD UE (power class 2) for Rel-15REL-15 RP-171492*

    *: basket WI

    10 REL-15 features with Core & Performance part WIs:
    - LTE Advanced intra-band CA Rel-15 for xDL/yUL including contiguous and non-contiguous spectrum RP-170962*
    - LTE Advanced inter-band CA Rel-15 for 2DL/1UL RP-171026*
    - LTE Advanced inter-band CA Rel-15 for 3DL/1UL RP-171126*
    - LTE Advanced inter-band CA Rel-15 for 4DL/1UL RP-170963*
    - LTE Advanced inter-band CA Rel-15 for 5DL/1UL RP-171466*
    - LTE Advanced inter-band CA Rel-15 for 2DL/2UL RP-171127*
    - LTE Advanced inter-band CA Rel-15 for xDL/2UL with x=3,4,5 RP-170946*
    - UE requirements for network-based CRS interference mitigation for LTE RP-171408
    - Introduction new band support for 4Rx antenna ports for LTE for REL-15 RP-171131*
    - New LTE band for 3.3-3.4 GHz for Africa RP-171506

    *: basket WI

    2 REL-15 Perf. part WIs (for Core parts of other WGs that existed already):
    - Signalling reduction to enable light connection for LTE RP-171459
    - LTE connectivity to 5G-CN RP-171432

    2 REL-15 Perf. part only WIs (i.e. no Core parts):
    - Performance requirements of interference cancellation receiver for LTE BS RP-171411
    - LTE CRS-Interference Mitigation performance requirements for single RX chain UEs RP-171465
  - 7 RAN5 UE Conformance Test Aspects WIs for:
    - REL-14, Addition of 1.4 and 3 MHz Channel Bandwidth to E-UTRA operating band 65 for CGC (Complementary Ground Component) operations in Region 1 RP-170931
    - REL-14, Evolution to and Interworking with eCall in IMS (EIEI) RP-171057
    - REL-14, Requirements for a new UE cat. 1bis with single receiver based on cat. 1 for LTE RP-171058
    - REL-15, Support for LTE-based V2X Services RP-171130
    - REL-15, 5G system with NR and LTE RP-171154
    - REL-14, Enhancements of Dedicated Core Networks for UTRA and LTE RP-171155
    - REL-14, Voice and Video Enhancement for LTE RP-171385
  - 1 RAN6 REL-15 Core part only WI:
    - Simplified HS-SCCH for UMTS RP-171443
- 2 new approved study items (SI) for REL-15:
  - RAN3: Study on separation of CP and UP for split option 2 of NR RP-171421
  - RAN4: Study on LTE DL 8Rx antenna ports REL-15 RP-171491

Samsung Exhibit 1025, Page 1610 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- 0 new approved Technical Specifications (TS), i.e. now under CR control
- 13 new approved Technical Reports (TR), i.e. now under CR control:
  - RAN1 Rel-15 TR 25.708 FS_UTRA_CA_sched_enh RP-170990
  - RAN1 Rel-15 TR 25.709 FS_UTRA_simple_HSSCCH RP-171316
  - RAN2 Rel-15 TR 36.754 FS_LTE_UDC RP-171139
  - RAN3 Rel-15 TR 36.742 FS_LTE_SON_eCOMP RP-171012
  - RAN4 Rel-15 TR 36.766 FS_LTE_IC_BS RP-170937
  - RAN4 Rel-13 TR 36.789 FS_LTE_LAA_multinode_test RP-171146
  - RAN4 Rel-14 TR 36.714-00-00 LTE_CA_R14_intra-Core RP-170964
  - RAN4 Rel-14 TR 36.714-02-01 LTE_CA_R14_2DL1UL-Core RP-171028
  - RAN4 Rel-14 TR 36.714-03-01 LTE_CA_R14_3DL1UL-Core RP-170987
  - RAN4 Rel-14 TR 36.714-04-01 LTE_CA_R14_4DL1UL-Core RP-170965
  - RAN4 Rel-14 TR 36.714-05-01 LTE_CA_R14_5DL1UL-Core RP-170932
  - RAN4 Rel-14 TR 36.714-02-02 LTE_CA_R14_2DL2UL-Core RP-170951
  - RAN4 Rel-14 TR 36.714-00-02 LTE_CA_R14_xDL2UL-Core RP-170941
- 1 agreed Technical Reports (TR):
  - RAN Rel-15 TR 38.811 v0.1.0 FS_NR_nonterr_nw RP-171453
- 0 new Technical Specifications (TS) provided for information
- 4 new Technical Reports (TR) provided for information:
  - RAN2 Rel-15 TR 36.746 FS_feD2D_IoT_relay_wearable RP-171312
  - RAN4 Rel-14 TR 36.747 LTE_eCRSIM_eSUMIMO-Perf RP-171144
  - RAN4 Rel-15 TR 36.748 LTE450_Europe_PPDR RP-170912
  - RAN4 Rel-15 TR 36.751 LTE_FDD_L_Band RP-171097
- Change request statistics (see also Annex E): 1615 CRs handled with 1584 approved CRs.

Phase	Cat	all CRs	Approved CRs	approved RAN1	approved RAN2	approved RAN3	approved RAN4	approved RAN5	approved RAN6	approved RAN
Rel-8	F	1	1	0	0	0	1	0	0	0
Rel-9	F	1	1	0	0	0	1	0	0	0
Rel-10	F	2	2	0	0	0	2	0	0	0
Rel-11	A	1	1	0	0	0	1	0	0	0
Rel-11	F	1	1	0	0	0	1	0	0	0
Rel-12	A	1	1	0	0	0	1	0	0	0
Rel-12	B	2	2	0	2	0	0	0	0	0
Rel-12	F	22	21	6	3	0	12	0	0	0
Rel-13	A	17	16	0	5	0	11	0	0	0
Rel-13	B	42	42	0	3	0	8	31	0	0
Rel-13	D	2	2	0	0	0	2	0	0	0
Rel-13	F	361	355	27	29	5	109	181	4	0
Rel-14	A	192	187	24	36	5	118	0	4	0
Rel-14	B	168	159	1	25	1	107	1	24	0
Rel-14	C	5	5	0	5	0	0	0	0	0
Rel-14	D	8	8	0	2	5	1	0	0	0
Rel-14	F	789	780	70	102	15	75	511	5	2
sum		1615	1584	128	212	31	450	724*	37	2

*: 140 of the RAN5 CRs are from TF160 (R5s)

Samsung Exhibit 1025, Page 1611 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

1 Opening of the meeting

TSG RAN chairman Mr. Balazs Bertenyi (Nokia) opened the meeting 3GPP TSG RAN #76 on Monday June 5th, 2017 at 9am.

On behalf of the host, the North American Friends of 3GPP, Marc Grant (AT&T) welcomed the delegates to West Palm Beach, USA and explained organisational issues of the meeting.

NOTE: The TSG meetings #76 will be carried out in the 1 week TSG set up (see RP-131328, RAN/CT at the beginning and SA at the end of the week).

2 Reminders for usage of IT resources, IPR declaration and antitrust compliance

The TSG RAN chairman made the following three announcements to remind the delegates of this meeting:

RAN chair's reminder regarding **responsible behaviour regarding IT resources of the meeting**:

Delegates are reminded that they share the meeting IT resources with their fellow delegates. You should not abuse the service by using bandwidth-hogging applications such as movie downloads, streaming video, web-based gaming, etc during the meeting. Use the internet service in your hotel rooms for this!

Delegates must respect the law of the hosting country, and should not visit prohibited internet sites.

In cases of persistent abuse of the internet bandwidth, MCC may restrict individual's use of the service.

In particular, the PCG has laid down the following network usage conditions:

1. Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws.

2. Users shall not engage in non-work related activities that are consume excessive bandwidth or cause significant degradation of the performance of the network.

Since the network is a shared resource, users should exercise some basic etiquette when using the 3GPP network at a meeting. It is understood that high bandwidth applications such as downloading large files or video streaming might be required for business purposes, but delegates should be strongly discouraged in performing these activities for personal use. Downloading a movie or doing something in an interactive environment for personal use essentially wastes bandwidth that others need to make the meeting effective. The meeting chairman should remind end users that the network is a shared resource; the more one user grabs, the less there is for another. Email and its attachments already take up significant bandwidth (certain email programs are not very bandwidth efficient). In case of need the chair can ask the delegates to restrict IT usage to things that are essential for the meeting itself.

1. DON'T place your WiFi device in ad-hoc mode
2. DON'T set up a personal hotspot in the meeting room
3. DO try 802.11a if your WiFi device supports it
4. DON'T manually allocate an IP address
5. DON'T be a bandwidth hog by streaming video, playing online games, or downloading huge files
6. DON'T use packet probing software which clogs the local network (e.g., packet sniffers or port scanners)

Based on the report of the PCG ad hoc group on IT improvements:

http://www.3gpp.org/ftp/PCG/PCG_27/DOCS/PCG27_13r1.zip

see also http://www.3gpp.org/Delegates-Corner#outil_sommaire_14

RAN chair's reminder regarding **IPRs**:

The attention of the delegates to the meeting of this Technical Specification Group was drawn to the fact that 3GPP Individual Members have the obligation under the IPR Policies of their respective Organizational Partners to inform their respective Organizational Partners of Essential IPRs they become aware of.

Samsung Exhibit 1025, Page 1612 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

The delegates were asked to take note that they were thereby invited:

- to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.

- to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Information Statement and the Licensing declaration forms

Based on http://www.3gpp.org/3gpp-calendar/89-call-for-ipr-meetings

RAN chair's reminder regarding **antitrust and competition law**:

The attention of the delegates to the meeting was drawn to the fact that 3GPP activities were subject to all applicable antitrust and competition laws and that compliance with said laws was therefore required by any participant of the meeting, including the Chairman and Vice-Chairmen and were invited to seek any clarification needed with their legal counsel. The leadership would conduct the present meeting with impartiality and in the interests of 3GPP. Delegates were reminded that timely submission of work items in advance of TSG/WG meetings was important to allow for full and fair consideration of such matters.

Based on http://www.3gpp.org/about-3gpp/legal-matters/21-3gpp-calendar/1616-statement-of-antitrust-compliance

3 Approval of the agenda

NOTE: Agreed CR packages of RAN WGs (if not flagged for discussion) will be approved without presentation. % complete and target dates of WI/SI status reports (if not flagged for discussion) will be approved without presentation.

RP-170856 **Agenda for RAN #76 held in West Palm Beach, USA, 05.06.-08.06.2017**
Source: RAN chairman (Nokia)

Discussion:

RAN chairman: There are some items for early consideration in the meeting and we will jump to them on Monday for a first pass:

- AI 9: NR standardization: RP-17 1172, RP-171249
- AI 9.2.1: low latency RP-170897, RP-171250
- AI 9.2.1: NR UE category RP-170 901, RP-170993, RP-171174
- AI 9.2.1: termination points RP-170968, RP-171216
- AI 9.2.1: separation CP/UP RP-171215
- AI 10.1.2: UL data compression RP-171108, RP-171387, RP-171184
- AI 10.11.13: Rel-15 NB_IOT/eMTC RP-171188, RP-171045, RP-171184
- AI 10.11.13.2: accelerating NB-IOT in 2017 RP-171005, RP-171006

Decision: The document was **revised to RP-171314**.

RP-171314 **Revised agenda for RAN #76 held in West Palm Beach, USA, 05.06.-08.06.2017**
Source: RAN chairman (Nokia)

(Replaces RP-170856)

Discussion:

Telecom Italia: offline session on Tue morning on ITU-R IMT-2020 suggested

RAN chairman: 8:00-9:00 IMT-2020 offline session, rapporteur: Telecom Italia

Deutsche Telekom: would like to avoid parallel sessions

RAN chairman: updated time plans will be made available so that everyone is available of offline sessions, no parallel sessions to the main session will happen

Samsung Exhibit 1025, Page 1613 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

SA chairman: joint session on Wed 18:00 - 19:00 in RAN room planned

RAN chairman: on Wed in the lunch break, the IETF chair will give a presentation in the RAN room

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1614 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

A tentative initial meeting schedule was distributed by the RAN chairman on 04.06.2017 over the RAN reflector:

	Monday	Tuesday	Wednesday	Thursday
	09.00 **Opening, RAN Report (1,2,3,4)**	Offline drafting	Offline drafting	Offline drafting
09.00 **10.30**	**NR items for early consideration (9.2.1, 9.3.3)** *CSG, Low latency,* *UE categories,* *NR WID revision proposals,* *RAN architecture issues,* *Unlicensed operation,* *NR workplan & scope*	**Reports, LSs (5,6,7)** **All RAN6 items**	**LTE existing items** **(10.2-10.15)**	**Management issues (15-19)** **Revisions**
10.30 **11.00**	Offline drafting	Offline drafting	Offline drafting	Offline drafting
11.00 **12.30**	**NR items for early consideration (9.2.1) contd'**	**NR SIs (9.3)**	**LTE existing items** **(10.2-10.15) contd'**	**Revisions**
12.30 **14.00**	Offline drafting	Offline drafting	Offline drafting	Offline drafting
14.00 **16.00**	**NR items for early consideration (9.2.1) contd'** **LTE items for early consideration** **(10.1.2, 10.11.13)** *Wearables, UDC* *Light connection, Positioning,* *Sharing enhancements,* *New DL UE category*	**LTE new proposals (10.1.3, 10.1.4, 10.1.5)**	**Existing items (10-14)**	**Revisions** **16.00 Close of the meeting**
16.00 **16.30**	Offline drafting	Offline drafting	Offline drafting	
16.30 **18.30**	**LTE items for early consideration** **(10.1.2, 10.11.13) contd'**	**LTE new proposals (10.1.3, 10.1.4, 10.1.5) contd'** **LTE existing items** **(10.2, 10.3, 10.4, 10.5)**	**Existing items (10-14)** **Revisions** **18.00 - 19.00** **RAN-SA joint session**	
19.00 **20.00**	Offline drafting	Offline drafting	Offline drafting	

NOTE: Times shown are only estimates and the schedule may change during the meeting.

Samsung Exhibit 1025, Page 1615 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

4 Approval of the meeting report of TSG-RAN #75

RP-170857 **Draft report of RAN #75 held in Dubrovnik, Croatia, 05.03.-08.03.2017**
Source: ETSI MCC

Decision: The document was **revised to RP-171409**.

RP-171409 **Report of RAN #75 held in Dubrovnik, Croatia, 05.03.-08.03.2017**
Source: ETSI MCC

(Replaces RP-170857)

Decision: The document was **approved**.

5 RAN WG reports

5.1 TSG RAN WG1

RP-170858 **Status Report RAN WG1**
Source: RAN1 chairman (NTT DOCOMO)

Discussion:

Telecom Italia:single UL support in RAN1 was supposed to be discussed in the connection with RAN1 report, any news?

RAN1 chairman: will discuss with RAN4 chair and delegates this week

Nokia: will have a Tdoc related to slide 25 in RP-171433 that we can discuss on Tue; we need a solution that works not just in RAN1 specs so we need to consult other WGs

Qualcomm: it was not intended that this works with all implementations, no band combinations were identified

Huawei: worried that we repeat here RAN1 discussions, RAN1 decision was made, RAN should not overtake the RAN1 decision

Nokia: RAN1 decision has significant impact on other WGs so they need to look at this as well

MCC: TR 38.900 will not be withdrawn

no further CRs to TR 38.900 are expected

Decision: The document was **noted**.

RP-170859 **List of CRs from RAN WG1**
Source: ETSI MCC

Decision: The document was **noted**.

RP-171433 **NR supporting 1Tx UE in LTE-NR UL Dual Connectivity**
Source: Nokia

Discussion:

Proposal 1: Down-scope the number of NSA architecture options and especially reconsider the architecture option 3A due to its limitation to support 1Tx UEs in LTE-NR UL DC.

Proposal 2: RAN#76 should decide if 1Tx UEs are only supported for certain problematic band combination or it is generic UE capability

Samsung Exhibit 1025, Page 1616 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Panasonic: First point is it would be useful to collect other WGs feedback here at RAN plenary than to wait one more meeting cycle for not taking any action in order to satisfy tight shedule of NR standardization. If necessary, the conclusion in WGs can be reverted. The second point is dynamic switching would have architecture impact but semi-static would be possible without having the impact on the architecture . Assuming semi-static like the pattern based.

Nokia: 1Tx UE is considered in RAN1 and asking other WGs, static/semi-statis/dynamic is not yet decided, we want to avoid that decision is taken in one WG with big impacts on other WGs;

Panasonic: "One WG took some decision but such a decision was modified in the other WG" happened in the past. In 3GPP it is not mandatory that one WG always follows the other WG's decision. The understanding of the WGs may differ as they have different expertises. If no modification from the other WGs, the agreement can remain.

Qualcomm: yes, it has an impact on architecture but no impact ...

LG: removal SCG bearers was not agreed in RAN2

Ericsson: we should not mix this paper with the bearer discussion; if there are intermodulation problems then we need to address this in this release and not 3 releases later;

Apple: we talk about "no simultaneous UL at a time" and not about "1Tx"; option 3A and this solution has nothing to do with each other; there was a good Samsung contribution explaining things in the last RAN4 meeting R4-17....

Sprint: not ready for down-scoping

NTT DOCOMO: agrees that we should not mix this paper with architecture discussions

Vodafone: mapping things to the same carrier does not necessarily impacts RAN2;

RAN chair: proposal 1 seems not agreeable; proposal 2: RAN2 and RAN4 will have to analyze this until Sep.17 and we cannot do this on the fly

Nokia: we should then task the WGs to analyze the impacts of the RAN1 decision on their work

RAN chair: is this acceptable?

Qualcomm: whether we task the WGs or not they need to analyze this but we could maybe decide about proposal 2

Intel: UE capability discussion can happen in RAN4; we do not need to send an LS now, can still do this later

RAN chair: there was no intention to send an LS but we can task the WGs

ZTE: it is clear that the RAN1 decision can impact on RAN2

Nokia: reminds that we need to have specs ready in Dec.

RAN chair: so the assumption is that RAN1/RAN2/RAN4 look into this problem until Sep.17

Decision: The document was **noted**.

5.2 TSG RAN WG2

RP-170860 **Status Report RAN WG2**
Source: RAN2 chairman (Intel)

Discussion:

No time to add new LTE SI/WIs

LTE and UMTS Rel-14 ASN.1 reviewed and ready to be frozen from RAN2 point of view

RAN2 NR ad hocs for Jan and July 2018

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1617 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-170861 **List of CRs from RAN WG2**
Source: ETSI MCC

Abstract:

2 CRs were missing in RP-171227, added in RP-171407

Decision: The document was **revised to RP-171406**.

RP-171406 **List of CRs from RAN WG2**
Source: ETSI MCC

(Replaces RP-170861)

Decision: The document was **noted**.

5.3 TSG RAN WG3

RP-170862 **Status Report RAN WG3**
Source: RAN3 chairman (Huawei)

Discussion:

New RAN3 Leaders elected:

Gino Masini (Ericsson) was elected as RAN3 chairman

Sasha Sirotkin (Intel) was elected as RAN3 vice-chairman

Rel-14 ASN.1 is ready for freezing from RAN3 point of view

Samsung: slide 11: prioritization will be discussed later, unclear what Dec.17 means here

RAN3 chair (Huawei): we did not reach consensus so far on Mon of RAN #76

Samsung: NSA option 3 should be completed by Dec.17

CMCC: no TU left in RAN3 so no new SIs/WIs?

RAN3 chair (Huawei): we added already something on Mon but companies need to be reasonable

RAN chair: so we need to make sure that everything that we approve related to RAN3 really fits into the RAN3 time budget

RAN chair and RAN thanked RAN3 chairman Philippe Reininger (Huawei) for his good and hard work in the last 4 years

Decision: The document was **noted**.

RP-170863 **List of CRs from RAN WG3**
Source: ETSI MCC

Decision: The document was **noted**.

5.4 TSG RAN WG4

RP-170864 **Status Report RAN WG4**
Source: RAN4 chairman (Samsung)

Discussion:

Samsung Exhibit 1025, Page 1618 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

presented by RAN4 vice-chairman Hiromasa Umeda (NTT DOCOMO) presented the report on behalf of the RAN4 chairman

RAN chair: slide 17 covers only ongoing and not yet new SIs/WIs, correct?

RAN4 vice-chairman (NTT DOCOMO): correct

"The need of Nov Ad-hoc shall be confirmed in June plenary"

Decision: The document was **noted**.

RP-170865 **List of CRs from RAN WG4**
Source: ETSI MCC

Abstract:

LTE_CA-Core CRs of RP-171293 were packed by accident in REL-9 CR Pack; these CRs were reissued in RP-171395

Decision: The document was **revised to RP-171394**.

RP-171394 **List of CRs from RAN WG4**
Source: ETSI MCC

(Replaces RP-170865)

Decision: The document was **noted**.

RP-171150 **RAN4 NR progress and session management**
Source: Qualcomm Incorporated

Abstract:

discussion of NR progress in RAN4 and possible changes to the meeting arrangement to further improve the working efficiency

Discussion:

Proposal 1: Some NR related topics should be handled in the LTE RF session to increase the time available for discussion and speed up the process.

Proposal 2: Confirm the NR ad-hoc between RAN4#84Bis (mid Oct.) and RAN4#85 (end of Nov)

Sprint: proposal 1 would be ok, depends on how it is handled

Dish Networks: views from RAN4 chair and vice-chairmen would be useful, there is LTE/NR commonality so treated them together would be useful

RAN chair: proposal 1 is completely up to RAN4 leadership, regarding proposal 2 we could take a decision in Sep.

Sprint: has offered to host the Nov ad hoc but we would need to decide about the ad hoc this week

Ericsson, Nokia: there are just 6 weeks between the 2 WG meetings, adding another ad hoc in between would be critical for simulations

NEC: agrees with Ericsson and Nokia, rather extending RAN4 meetings over the week-end

RAN4 chair: proposal 1: we should see how the meeting goes, proposal 2: we have an offline discussion on Tue evening of RAN #76 to discuss RAN4 time budget so let's see this first

RAN chair: we will come back on this topic once we see the outcome of the RAN4 offline session

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1619 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

5.5 TSG RAN WG5

RP-170866 **Status Report RAN WG5**
Source: RAN5 chairman (Motorola Mobility)

Discussion:

RAN5 5G-NR Adhoc#1 16 – 20 April 2018 planned

Decision: The document was **noted**.

RP-170867 **List of CRs from RAN WG5**
Source: ETSI MCC

Decision: The document was **noted**.

RP-170868 **Status Report MCC TF160 (for approval)**
Source: ETSI MCC TF160 Leader

Decision: The document was **approved**.

5.6 TSG RAN WG6

RP-170869 **Status Report RAN WG6**
Source: RAN6 chairman (Nokia)

Discussion:

presented by RAN1 vice-chairman Matthew Baker (Nokia) on behalf of the RAN6 chairman

RAN chair: slide 25: on LSs: SA people are reminded to not forget to keep GERAN/RAN6 in the loop

SA chair: interested companies should drive their WIs but we can make sure that RAN6 is kept informed as well

RAN chair: slide 27: we need to have an action for this

SA chair: how do we handle this in SA, do we need an LS or is there a centralized approach?

RAN chair: no, each TSG will handle this separately, it seems CT did this already

Spec manager: recommends that WG chairs put this on their WG agenda, their is an application on the 3GPP web page under Specifications to detect the corresponding specs

conclusion: Regarding slide 27:

ACTION_ITEM_1 for RAN1/2/3/4/5/6: The WGs are tasked to check that their TRs/TSs (Rel-12 and onwards) are not referencing TS 44.118 and TS 44.160. If there is a reference, they have to provide corresponding CRs to RAN #77 to remove these references as it is intended to withdraw TS 44.118 and TS 44.160 at RAN #77.

Decision: The document was **noted**.

RP-170870 **List of CRs from RAN WG6**
Source: ETSI MCC

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1620 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

6 Other Reports

6.1 Report on TSG SA activities

RP-170871 **TSG SA Report to TSG RAN - Questions for Advice and Requests**
Source: SA chairman (Samsung)

Decision: The document was **revised to RP-171438**.

RP-171438 **TSG SA Report to TSG RAN - Questions for Advice and Requests**
Source: SA chairman (Samsung)

(Replaces RP-170871)

Discussion:

CMCC: how could we handle Mobile Edge Computing?

SA chair: so far no coupling of SA work with RAN work is detected, if there is an input on this we would handle this in the usual way for inter-TSG related work

CMCC: yesterday it was said MEC is not addressed in RAN because it is more SA work and that if there is RAN impact SA would inform RAN by LS;

CMCC: if you see a need in SA2 to send an LS then you should present a proposal there, there is no need so far for SA to intervene

Telecom Italia: NB-IOT connected to 5G-CN will be considered in joint RAN-SA session?

SA chair: we will first discuss this topic in SA and see then what we need to discuss in the joint session

Decision: The document was **noted**.

6.2 Report from PCG

6.3 Report from MCC

RP-170872 **3GPP Support Team Report**
Source: ETSI MCC

Discussion:

RAN1 chair: election in RAN1 in Aug. with a high number voting companies: request to have multiple lines for voting to reduce the time needed for voting;

Qualcomm: slide 22: we consider the “multiple check-ins from the same IP address” to be a very severe issue; it could be critical if elections are decided just by a few votes;

Qualcomm: asked to clarify whether the episodes involving multiple companies include the case check-ins from the same IP address performed for completely different corporations (e.g. for the sake of example “it is as Qualcomm checking in on Nokia’s behalf even if Nokia is not there”).

It was confirmed that those cases did happen

Qualcomm: stated that, based on the information that emerged during the on-the-floor discussion, we are not confident that 3GPP can guarantee the integrity of the acquisition of the voting rights for the August 2017 elections

Mediatek: if we detect these problems we need to react immediately and send an official email to these companies;

Ericsson: it may be even easier to simply to remove the voting rights;

Samsung Exhibit 1025, Page 1621 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

specs manager: we could remove the voting rights from all affected companies;

RAN chair: this is what you should do

specs manager: it would be a lot of effort to check this on a permanent basis;

Qualcomm: asking for more radical solutions to solve these problems and to have a reliable way to register and to check in;

Nokia: supports that corresponding registrations have to be removed;

Telecom Italia: for the host, do we have some information how big is the difference between people in the room and people checked in?

specs manager: just an example: CT yesterday: 50 people in the room, more than 100 checked in;

conclusion: specs manager will double check the check-ins of previous meetings and where needed update the voting rights (see RP-171458)

Decision: The document was **noted**.

6.4 Reports from other groups/activities

RP-171393 **IETF/3PP Cooperation on 5G**
Source: 3GPP CT Chairman (Huawei)

Discussion:

RAN chair: reminder that IETF chair is coming on Wed in the lunch break to the RAN room for a presentation;

RAN chair: CT chair is the liaison person for IETF

Decision: The document was **noted**.

7 Liaison activity of TSG RAN

NOTE: This agenda item will only handle LSs not handled elsewhere.

RP-170875 **LS requesting support for defining Next Generation Protocols (NGP(17)000038; to: RAN, CT, SA, IETF; cc: -; contact: Vodafone)**
Source: ETSI ISG NGP

Abstract:

no explicit RAN action requested

Discussion:

superseded by updated LS RP-170891

Decision: The document was **noted**.

RP-170891 **LS requesting support for defining Next Generation Protocols (NGP(17)000038r2; to: RAN, CT, SA, IETF; cc: -; contact: Vodafone)**
Source: ETSI ISG NGP

Abstract:

Samsung Exhibit 1025, Page 1622 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

no explicit RAN action requested

Discussion:

RAN chair: any views from CT on this?

CT chair: plan is: collecting inputs from CT/RAN and SA will provide a response, CT views:

- in study phase for REL-15/16 on protocol requirements, inputs welcome

- do not want to be the man in the middle between NGP and IETF

- big attached documents, are not ready to be implemented in REL-15/16 so this is rather a longterm cooperation

RAN chair: anything we need to add from RAN? no comments were raised

conclusion: no LS answer from RAN, SA will send a reply LS

Decision: The document was **noted**.

RP-170879 **LS on ETSI ISG MEC (Multi access Edge Computing) Phase 2 (MEC(17)000231; to: RAN, SA; cc: -; contact: Vodafone)**

Source: ETSI ISG MEC

Abstract:

MEC = Multi access Edge Computing; no explicit RAN action requested

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170880 **LS on the new structure of ITU-T SG20 (ITU_T_SG20_LS33; to: RAN, SA, ISO/TC 122, ISO/TC 204, ISO/IEC JTC 1/SC 6, ISO/IEC JTC 1/SC 31, ISO/IEC JTC 1/WG 7, ISO/IEC JTC 1/WG 10, ISO/IEC JTC 1/WG 11, GS1 EPCglobal, EC/IERC, ETSI, CEN, OMA, YRP, Ecma International, GISFI, TIA, GSC MSTF, OGC, oneM2M, ISO/IEC JTC 1/SC 29/WG11, Augmented Reality (AR) standards, W3C, IETF, IEEE-SA, ANSI, BSI, CCSA, CDP, CEDARE, CEN/CENELEC/ETSI SSCC CG, CIC, CITEL, DIN, DKE (DIN/VDE), ETSI TC EE, ETSI TC Smart M2M, GSMA, IEC/SEG1, IEC/TC 100, IEC/TC 111, IEEE, ISO/TC 268/SC 1, MOHURD, SAC, AENOR, ISO/TC 184/SC5, AIOTI WG3; cc: -; contact: Telecommunications Regulatory Authority UAE)**

Source: ITU-T SG20

Abstract:

no RAN action requested

Discussion:

RAN chair: is only for information for RAN

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170890 **LS on Standardisation of a new E-UTRA band (ATU_LS_170516; to: RAN, RAN4; cc: -; contact: ATU Secretary General)**

Source: ATU

Abstract:

Samsung Exhibit 1025, Page 1623 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

ATU = African Telecommunications Union; RAN action requested; related new WI proposal in RP-171122 (see AI 10.1.5)

Discussion:

RAN chair: has RAN4 seen this?

RAN4 chair: yes, it was handled and there is a new WI proposal for this at RAN #76

conclusion: after approval of the WI in RP-171506 Huawei draft an LS reply in RP-171507

Decision: The document was **replied to**.

RP-171507 **Reply LS to ATU_LS_170516 = RP-170890 on standardisation of a new E-UTRA band from ATU (to: ATU; cc: RAN4; contact: Huawei)**
Source: RAN

Decision: The document was **approved**.

RP-170903 **Reply LS to R1-1709716 on monitoring of partial NPDCCH search spaces (R2-1706195; to: RAN1; cc: RAN; contact: Huawei)**
Source: RAN2

Abstract:

no RAN action requested; note: RAN1 LS R1-1709716 was only sent to RAN2;

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170904 **LS on Test Results of Technology Building Blocks phase of the Trial and Testing Initiative (NGMN_LS_170602; to: RAN, SA; cc: -; contact: KT)**
Source: NGMN

Abstract:

no RAN action requested

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170906 **Void**
Source: ETSI MCC

Decision: The document was **withdrawn**.

RP-170907 **Void**
Source: ETSI MCC

Decision: The document was **withdrawn**.

RP-170908 **Void**
Source: ETSI MCC

Samsung Exhibit 1025, Page 1624 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **withdrawn**.

RP-170909 **Void**
Source: ETSI MCC

Decision: The document was **withdrawn**.

8 ITU-R ad hoc

After offline discussion an email discussion is planned until RAN #77 regarding how to contribute to IMT-2020 (rapporteur: ITU-R ad hoc convener), a corresponding input will be provided to RAN #77.

8.1 Status report

RP-170873 **Status Report ITU-R Ad hoc**
Source: ITU-R Ad hoc Contact (Telecom Italia)

Decision: The document was **noted**.

8.2 Documents related to IMT-2020

8.3 Other documents from/to ITU-R WP5D

8.4 Other documents from/to ITU-R WP5A

RP-170905 **LS on the revision of Recommendation ITU-R M.2084-0 (ITU-R WP5A/TEMP/141(Rev.1); to: 3GPP, 5G Automotive Association, 79 GHz Project, ARIB, AWG, C2C-CC, CCSA, ETSI ERM-TG37, ETSI ERM-TGSRR, ETSI TC ERM, ETSI TC ERM TG 37, ETSI TC ITS, GSA, IEEE, IETF ITS, ISO TC 204, TIA, TTA, Wi-Fi Alliance; cc: -; contact: ITU-R SG5 Counselor)**
Source: ITU-R WP5A

Abstract:

no explicit RAN action requested; LS was received on Tue of RAN #76

Discussion:

ITU-R convener: we should task ITU-R ad hoc to contribute and prepare an input for RAN #77 in Sep.17

conclusion: ITU-R ad hoc is tasked to provide an input to RAN #77, so LS answer is postponed

Decision: The document was **noted**.

8.5 Documents from/to other ITU-R groups

RP-170900 **LS on ADJACENT BAND COMPATIBILITY STUDIES OF IMT-ADVANCED SYSTEMS IN THE MOBILE SERVICE IN THE BAND BELOW 1 518 MHz WITH RESPECT TO SYSTEMS IN THE MOBILE-SATELLITE SERVICE IN THE FREQUENCY BAND 1 518-1 525 MHz (ITU-R WP4C/TEMP/73; to: RAN; cc: ITU-R WP5D; contact: ITU)**
Source: ITU-R WP4C

Abstract:

also related to AI 10.12.5; no explicit RAN action requested; to be forwarded to RAN4? also to RAN1?

Discussion:

Samsung Exhibit 1025, Page 1625 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

ITU-R convener: suggests to provide this LS also to RAN4; no action needed at the moment

conclusion: MCC will forward the LS to RAN4; no LS answer from RAN

Decision: The document was **noted**.

9 New Radio

9.1 New WI/SI proposals for New Radio

NOTE: No contributions are expected for this agenda item.

RP-171035 **Motivation for SI on NR positioning support**
Source: Intel Corporation

Decision: The document was **not treated**.

RP-171115 **Motivation for new Study Item on NR UE Positioning**
Source: CATT

Abstract:

motivation contribution on new SI proposal on NR UE positioning

Decision: The document was **not treated**.

RP-171034 **New SID: Study on NR positioning support**
Source: Intel Corporation, CATT, Qualcomm Inc.

(Replaces RP-170743)

Abstract:

new WI for NR; leading WG: RAN1; postponed at RAN #75 in RP-170743

Decision: The document was **not treated**.

RP-170994 **Motivation for new SI on NR SON**
Source: CMCC

Abstract:

Motivation to introduce SON for NR. No related SI or WI.

Decision: The document was **not treated**.

RP-170995 **New Study Item proposal: Self-Organising Networks in New Radio**
Source: CMCC

Abstract:

new SI for NR;

leading WG: RAN3

Decision: The document was **not treated**.

Samsung Exhibit 1025, Page 1626 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-170992 **Motivation for new SI : Study on vehicle UE for NR**
Source: LG Electronics Inc.

Abstract:

This contribution is for motivation for study on vehicle UE for NR. Wrong Tdoc type in Tdoc request

Decision: The document was **not treated**.

RP-170991 **New SID on Study on vehicle UE for NR**
Source: LG Electronics Inc.

Abstract:

new SI for NR; leading WG: RAN4

Decision: The document was **not treated**.

RP-171110 **Motivation for Study on NR Sidelink Framework**
Source: CATT

Abstract:

motivation contribution on new SI proposal on NR sidelink framework

Decision: The document was **not treated**.

RP-171111 **New SID on NR Sidelink Framework**
Source: CATT

Abstract:

new SI for NR; leading WG: RAN1

Decision: The document was **not treated**.

RP-171112 **Motivation for Study on UE Wakeup Mechanism in NR**
Source: CATT

Abstract:

motivation contribution on new SI proposal on UE wakeup mechanism in NR

Decision: The document was **not treated**.

RP-171113 **New SID on UE Wakeup Mechanism in NR**
Source: CATT

Abstract:

new SI for NR; leading WG: RAN1

Decision: The document was **not treated**.

RP-171046 **Motivation for new WI on MBMS support for non-standalone NR**
Source: LG Electronics Inc.

Decision: The document was **not treated**.

Samsung Exhibit 1025, Page 1627 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171094 **Motivation for new SI : study on flexible and full duplex for NR**
Source: LG Electronics

Abstract:

Motivation for new SI of study on flexible and full duplex for NR

Decision: The document was **not treated**.

RP-171114 **Consideration on further enhancement for high layer CU/DU split**
Source: CATT

Abstract:

Discussion on potential study on further enhancment for high layer CU/DU split

Decision: The document was **not treated**.

RP-171033 **Motivation for SI on Enhancements to MIMO operation for NR**
Source: Intel Corporation

Decision: The document was **not treated**.

RP-171032 **New SID: Enhancements to MIMO operation for NR**
Source: Intel Corporation

Abstract:

corrected from WI to SI; new SI for NR; leading WG: RAN1; enhancing which existing functionality?

Decision: The document was **not treated**.

RP-171171 **Motivation for new Study Item on Multi Antenna Enhancements for NR**
Source: Nokia, Alcatel-Lucent Shanghai Bell

Decision: The document was **not treated**.

RP-171170 **New Study Item on Multi Antenna Enhancements for NR**
Source: Nokia, Alcatel-Lucent Shanghai Bell

Abstract:

new SI for NR; leading WG: RAN1; this is a proposal for REL-16??? Enhancing which existing functionality?

Decision: The document was **not treated**.

RP-171405 **Motivation for new WI: Enhancements on MIMO for NR**
Source: Samsung, ZTE, CATT

Decision: The document was **not treated**.

RP-171404 **New WID Proposal: Enhancements on MIMO for NR**
Source: Samsung

Abstract:

new WI for NR; leading WG: RAN1

Samsung Exhibit 1025, Page 1628 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **not treated**.

RP-171421 **New SI: Study on Separation of CP and UP for split option 2 for NR**
Source: Ericsson

Abstract:

new SI for NR; leading WG: RAN3 (RAN2 secondary)

Discussion:

China Unicom: no time in RAN3 but now we have additional TUs in RAN3?

RAN3 chair (Huawei): we said that we can accept new work but only with low priority

RAN3 chair (Ericsson): priority for SIs is lower than for WI

Vodafone: TUs allocated are a compromise and find to approve it

CMCC: we should not approve this new SI at RAN #76

NTT DOCOMO: supports China Unicom and CMCC, we are contribution driven

RAN3 chair (Huawei): solution indicated is an example

RAN chair: we agreed ealier this week to create a SI

Nokia: suggesting to have just 0,5 TUs per meeting

China Unicom: we want to make sure that this does not affect the SI for E-UTRAN

CMCC: we are objecting based on workload management reasons

RAN chairman: we will note the objection and will approve the SI

RAN3 chair (Ericsson): we can reass workload again in Sep.17

China Unicom: fine it will not affect E-UTRAN SI

RAN chair: that's ok

RAN chair: let's see RP-171476 for the RAN3 work load

Decision: The document was **approved**.

RP-171503 **Way forward for RAN1 led NR SIs/WIs**
Source: RAN1 chairman (NTT DOCOMO)

Decision: The document was **withdrawn**.

9.2 Open REL-15 New Radio WIs

9.2.1 New Radio Access Technology [New WI: NR_newRAT]

RP-171137 **Status Report of WI on New Radio Access Technology; rapporteur: NTT DOCOMO**
Source: RAN1

Abstract:

wrong Tdoc type in Tdoc request

Discussion:

Samsung Exhibit 1025, Page 1629 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Nokia: single UL dual transmission decision of RAN1 has impact on other WGs and we need to discuss this further during this week

RAN chair: can come back on this in connection with RAN1 chairman's report

Huawei: unclear what we need to discuss

Nokia: it may even have an impact on RAN architecture

Qualcomm: our understanding is that there is no impact on higher layers

Ericsson: has some sympathy for Nokia proposal

RAN chair: we will discuss it further in connection with RAN1 report but please discuss it offline

Telecom Italia: sees also that there may be impact on RAN4

Huawei: the RAN1 agreement does not preclude 2 uplinks

Decision: The document was **revised to RP-171505**.

RP-171505 **Status Report of WI on New Radio Access Technology; rapporteur: NTT DOCOMO**
Source: RAN1

(Replaces RP-171137)

Discussion:

MCC: late submission

NTT DOCOMO: TUs updated

conclusion: approved: Core: 22%, June 18 ; Perf.: 0%, Dec.18

Decision: The document was **noted**.

RP-170889 **LS on Closed Subscriber Group in 5GS (S1-172425; to: SA2, SA3, RAN; cc: -; contact: Qualcomm)**
Source: SA1

Abstract:

RAN action requested

Discussion:

RAN3 chairman (Huawei): we do not have a home Node B concept in 5G so far, CSG at macro cell concept was never agreed so this exists only for home Node Bs

Deutsche Telekom: we should come up with a concept applicable to all scenarios

Mediatek: is not an SA1 issue and supports RAN3 chairman

Deutsche Telekom: bit indication in UMTS was a mistake, in LTE we did it correctly

Ericsson (new RAN3 chairman: supports RAN3 chairman that we would need more technical discussion, it would have been useful that this LS was also sent to RAN3

RAN chair: let's see the related discussion paper from Qualcomm in RP-171165

Decision: The document was **replied to**.

RP-171165 **Discussion of Closed Subscriber Group (CSG) in NR**
Source: Qualcomm Incorporated

Samsung Exhibit 1025, Page 1630 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Abstract:

Related to incoming LS, RP-170889

Discussion:

proposal: Basic functionality is required in release 15 NR to satisfy the request from SA1 to avoid legacy issues. RAN2 should be further tasked to perform technical analysis on forward compatibility, and define the required functionality.

RAN should note that the future introduction of CSG will be problematic otherwise.

Ericsson: we can take this use case into account in REL-15 addressing forward compatibility but it does not mean we need to implement it

Deutsche Telekom: we agreed already 1 bit for LTE and should do the same for NR so RAN should task RAN2

Vodafone: is CSG an agreed concept in CT in REL-15, then we should align otherwise we could discuss in RAN2/3

RAN chair: CSG concept is not yet agreed for REL-15 but it may impact compatibility, so let's have an LS response drafted in RP-171410

Huawei: agrees the forward compatibility issue but unclear what else we would answer

Qualcomm: will draft a reply

Decision: The document was **noted**.

RP-171410 **Draft reply LS to RP-1710889 = S1-172425 on Closed Subscriber Group in 5GS (to: SA1, RAN2; cc: SA2, SA3, RAN3; cc: -; contact: Qualcomm)**
Source: Qualcomm

Decision: The document was **revised to RP-171479**.

RP-171479 **Reply LS to S1-172425 = RP-1710889 on Closed Subscriber Group in 5GS (to: SA1, RAN2; cc: SA2, SA3, RAN3; cc: -; contact: Qualcomm)**
Source: RAN

(Replaces RP-171410)

Decision: The document was **approved**.

RP-170897 **LS on EPC QoS aspects for TSG RAN's lower latency features (S2-173686; to: RAN, SA; cc: SA1, CT; contact: Vodafone)**
Source: SA2

Abstract:

RAN action requested

Discussion:

RAN chair: item for early consideration; and this is one topic for the joint session with SA on Wed evening; draft reply to this LS in RP-171217

Decision: The document was **replied to**.

RP-171217 **Draft reply LS to S2-173686 = RP-170897 on EPC QoS aspects for TSG RAN's lower latency features (to: SA2; cc: SA, SA1, CT; contact: Nokia)**
Source: Nokia, Alcatel-Lucent Shanghai Bell

Abstract:

Samsung Exhibit 1025, Page 1631 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

moved from AI 7 to AI 9.2.1

Discussion:

Ericsson: NR work is planned to complete in Dec., LTE work in Sep. so timing is quite clear

Mediatek: EPC part can not be answered by RAN, control plane latency is not enhanced

Vodafone: is not just a forward compatibility issue

Nokia: not all work will be completed in Dec.

KDDI: same view as Nokia: is for compatibility

Decision: The document was **revised to RP-171413**.

RP-171250 **Coordination of SA and RAN work on Low latency and URLLC**
Source: VODAFONE Group Plc

Abstract:

moved from AI 15 to AI 9.2.1 to keep together with LSin RP-170897

Discussion:

Proposal 1: Completion LTE work item on "Shortened TTI and processing time for LTE" by December 2017, and consider an early Release 15 ASN.1 freeze in March 2018.

Proposal 2: Respond to SA2 that we expect:

- Stage 3 completion of LTE low latency features in December 2017.
- Stage 3 completion of NR low latency for "Option 3 family" in December 2017.

Proposal 3: Agree to standardise one or a few QCIs for usage via EPC connected NR and LTE for low latency operation in Release 15.

Proposal 4: SA2 to strive to complete the standardisation of the first one or few QCIs for low latency services by December 2017.

Proposal 5: SA2 (and CT Working Groups) to strive to complete the standardisation of the "make before break" PDN connection continuity December 2017.

RAN chair: item for early consideration

Mediatek: we agreed at RAN #75 that the NR acceleration is the only acceleration

Nokia: finishing in Dec. seems reasonable but full ASN.1 freeze may not be beneficial as it would cause a lot of extra work

LG: would not be happy about a separate ASN.1 freeze

Huawei: LTE review for NSA will have to take place in March 18

RAN2 chair: correct, but sees a danger of setting a bad precedence case if we freeze one feature separately this time, we will see others next time

AT&T: supports RAN2 chairman

RAN chair: elements on short TTI completion should be captured in Nokia LS and we stick to the current ASN.1 freeze dates

Vodafone: stability of the feature is important, not so much the ASN.1 freeze; so we should emphasize that we do not touch it in a backward incompatible way after completion

Ericsson: from Ericsson point of view this should be fine, completion of the feature is a stage 3 completion and it is clear that we do not put the feature upside down afterwards

Samsung Exhibit 1025, Page 1632 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Nokia: can capture this in the LS

Vodafone: QCIs will be discussed in joint session?

RAN chair: yes

Vodafone: we have also an SA paper on this

Ericsson: what about target date?

RAN chair: realistically completion will probably Dec.

Huawei: this is in line with the current status report

RAN chair: so Dec.17 is assumed for the moment and can come back on this in connection with the status report

Decision: The document was **noted**.

RP-171413 **Draft reply LS to S2-173686 = RP-170897 on EPC QoS aspects for TSG RAN's lower latency features (to: SA2; cc: SA, SA1, CT; contact: Nokia)**
Source: Nokia, Alcatel-Lucent Shanghai Bell

(Replaces RP-171217)

Discussion:

Vodafone: not happy with the current text, SA2 asked us some specific questions and we answer "contact RAN2"

Nokia: we could delete the last sentence about QCI as this has nothing to do with the SA2 question

RAN2 chair: was wondering why SA2 could not decide on their own for a new QCI value, concluded that RAN could not conclude on this as this would require information from the core network;

RAN chair: do we see a need a new QCI value from RAN side?

Mediatek: we need technical discussion in the WGs about this, we are not changing control plane latency, agrees with Nokia that we could remove the last sentence if needed

Ericsson: supports Nokia

RAN chair: we could put text in [ ] and discuss it on Wed in the joint session

conclusion: remove comment, put [ ] around last paragraph and it will be still be a draft LS to be considered in joint session on Wed evening

Decision: The document was **revised to RP-171446**.

RP-171446 **Draft reply LS to S2-173686 = RP-170897 on EPC QoS aspects for TSG RAN's lower latency features (to: SA2; cc: SA, SA1, CT; contact: Nokia)**
Source: Nokia, Alcatel-Lucent Shanghai Bell

(Replaces RP-171413)

Decision: The document was **revised to RP-171471**.

RP-171471 **Draft reply LS to S2-173686 = RP-170897 on EPC QoS aspects for TSG RAN's lower latency features (to: SA2; cc: SA, SA1, CT; contact: Nokia)**
Source: Nokia, Alcatel-Lucent Shanghai Bell

(Replaces RP-171446)

Discussion:

Samsung: last paragraph only for LTE or also for NR?

Samsung Exhibit 1025, Page 1633 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN chair: scope of this LS is LTE, so maybe we can add "For LTE:".

Vodafone: things that the LS is covering LTE and NR

Nokia: we could say "at least LTE" and discuss the rest in the joint session with SA

Ericsson: we do not talk about reliability but just about low latency

Nokia: we could say "these features"

Ericsson: better to add "and high reliability"

RAN3 chair (Huawei): should we replace eNB by RAN?

Decision: The document was **revised to RP-171473**.

RP-171473 **Reply LS to S2-173686 = RP-170897 on EPC QoS aspects for TSG RAN's lower latency features (to: SA2; cc: SA, SA1, CT; contact: Nokia)**
Source: RAN

(Replaces RP-171471)

Decision: The document was **approved**.

RP-170901 **LS on UE categories for NR and LTE-NR Dual Connectivity (R2-1706141; to: RAN, RAN1; cc: RAN4; contact: NTT DOCOMO)**
Source: RAN2

Abstract:

RAN action requested

Discussion:

RAN chair: item for early consideration

Decision: The document was **replied to**.

RP-170993 **UE categories for NR and LTE-NR Dual Connectivity**
Source: NTT DOCOMO, INC.

Abstract:

related to LSin R2-1706141

Discussion:

Proposal 1: Confirm the necessity of UE categories for all LTE-NR DC options (Option 3/4/7 series) as well as the NR standalone (Option 2).

Proposal 1a: Let RAN WGs decide technical details on how the UE category is defined for LTE-NR DC.

Proposal 2: Operators are asked to coordinate (offline or official email discussion) and input their opinion on DL/UL peak data rate targeted for Option 3 deployments to TSG-RAN #77.

RAN chair: item for early consideration

Telecom Italia: also other use cases than eMBB considered?

NTT DOCOMO: main use case for LTE-NR dual connectivity is eMBB

Vodafone: why is it needed to distinguish cat. between options 3, 4 and 7?

NTT DOCOMO: we have to complete option 3 by Dec.17

Samsung Exhibit 1025, Page 1634 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Deutsche Telekom: access capability are independent of architecture options, but we should discuss in Sep. which options a UE should support and also consider downscoping the options

Miedatek: agrees with Vodafone that SA and NSA categories should be discussed together

Ericsson: would not like to agree on proposal 1 immediately

Qualcomm: to proposal 1: can it be a throughput class rather than a cat.?

RAN chair: this may be a possibility to get rid of the UE cat. concept

Huawei: agrees with Qualcomm that NR and LTE do not need to use the same cat. concept

Decision: The document was **noted**.

RP-171174 **Combined LTE-NR UE Category**
Source: MediaTek Inc.

Discussion:

Proposal#1 It is necessary to define UE categories in the LTE-NR DC (Opt. 3/4/7) as well as the NR standalone (Opt. 2) together

Proposal#2 The target peak data rate in DL and UL to be supported for Option 3 and Option 2 until December 2017.

Proposal#3 RAN to initiate email discussion toward RAN#77 on the peak data rate objectives for initial Rel-15 NR deployment by 2020

RAN chair: item for early consideration

CMCC: would like to have separate discussions of NSA and SA UE categories

Panasonic: concluding the case that NR UE processing resource is not shared with LTE is more important as the first step because NR UE capabilty itself is already a complicated discussion due to the NR flexibiltiy on subcarrier spacing and slot length.

RAN chair: not making UE cat. dependent on architecture options seems to be preferred, let's allocate a Tdoc for a draft LS answer for NTT DOCOMO in RP-171414

Mediatek: suggested to have email discussion until Sep.17 about alternative to UE categories

Decision: The document was **noted**.

RP-171414 **Draft reply to R2-1706141 = RP-170901 on UE categories for NR and LTE-NR Dual Connectivity (to: RAN2, RAN1; cc: RAN4; contact: NTT DOCOMO)**
Source: NTT DOCOMO

Decision: The document was **revised to RP-171480**.

RP-171480 **Reply to R2-1706141 = RP-170901 on UE categories for NR and LTE-NR Dual Connectivity (to: RAN2, RAN1; cc: RAN4; contact: NTT DOCOMO)**
Source: RAN

(Replaces RP-171414)

Decision: The document was **approved**.

RP-170898 **LS on Emergency Support in NR (S2-173700; to: RAN; cc: SA, RAN1, RAN2, RAN3; contact: Nokia)**
Source: SA2

Abstract:

Samsung Exhibit 1025, Page 1635 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN action requested

Decision: The document was **replied to**.

RP-170922 **Requirement for IMT Voice that Includes Regulatory Requirements**
Source: T-Mobile USA Inc.

Abstract:

moved from AI 9.5 to AI 9.2.1 as related to LSin RP-170898; the NR WID was approved with the requirement to support IMT Voice. In the United States voice requires certain regulatory support such as E911 location ability. This contribution clarifies that the NR WID requirement shall include those regulatory requirements such commercial voice serves may be offered in R15

Discussion:

clarification that regulatory requirements for E911 with IMS Voice are part of the 5G-NR WID item and continues to be natively supported on NR for non-standalone (NSA) and standalone (SA)

RAN chair: seems to be clear to everyone

Decision: The document was **noted**.

RP-171166 **Support of location services over NR required for emergency calls**
Source: Qualcomm Incorporated

Abstract:

Related to incoming LS, RP-170898

Discussion:

proposal: It is proposed TSG RAN #76 to adopt "TSG RAN#76 agrees that there is support for location services over NR in release 15 using RAT independent and E-UTRAN RAT dependent positioning methods" for rel.15. This can be extended to include LPP/LPPa support for NR in future releases.

Mediatek: asks for clarification how the exact regulatory requirement is

T-Mobile: 50m so far, does not specify a technology, passing NR 911 call to LTE to get location information will not fulfill regulatory requirement

LG: no location service in REL-15 preferred

RAN chair: did not think this is an option, we need to respond to the LS and we need to check whether we need to update our WID (T-Mobile seems to say the WID includes this implicitly so we need to check whether we need to be more clear);

CATT: option 1 and 2 will not work with voice over IMS, option 3 requires LTE

Ericsson: Cell-ID based on NR would be included anyway

Intel: option 3 does not work in standalone case, option 1 with proper scope could be considered in REL-15, does not think that Cell-ID based is possible

Nokia: we have Cell-ID concept in NR, we are looking for meeting regulatory requirements

RAN chair: LS to SA2 and RAN groups about the requirements for 911 to be considered; there will be one WID revision at the end of the week and we can consider to add something for this topic

Deutsche Telekom: there may be other requirements in other regions, e.g. in Germany Cell-ID is required

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1636 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171390 **Requirement for IMT Voice that Includes Regulatory Requirements**
Source: T-Mobile USA Inc.

(Replaces RP-170922)

Abstract:

moved from AI 9.5 to AI 9.2.1 as related to LSin RP-170898; The NR WID was approved with the requirement to support IMT Voice. In the United States voice requires certain regulatory support such as E911 location ability. This contribution clarifies that the NR WID requirement shall include those regulatory requirements such commercial voice serves may be offered in R15

Decision: The document was **revised to RP-171397**.

RP-171397 **Requirement for IMT Voice that Includes Regulatory Requirements**
Source: T-Mobile USA Inc.

(Replaces RP-171390)

Decision: The document was **noted**.

RP-171417 **Draft reply to S2-173700 = RP-170898 on Emergency Support in NR (to: SA2; cc: SA, RAN1, RAN2, RAN3; contact: T-Mobile)**
Source: T-Mobile

Discussion:

MCC: multiple versions of RP-171417 were distributed

Decision: The document was **revised to RP-171434**.

RP-171434 **Reply to S2-173700 = RP-170898 on Emergency Support in NR (to: SA2; cc: SA, RAN1, RAN2, RAN3; contact: T-Mobile)**
Source: RAN

(Replaces RP-171417)

Discussion:

SA chair: this LS was supposed to be still a draft

RAN3 chair (Huawei): we need to implement the protocols?

T-Mobile: this discussion is not coupled to the LS

RAN chair: this discussion will continue

Decision: The document was **approved**.

RP-171138 **Revision of WI: New Radio Access Technology**
Source: NTT DOCOMO, INC.

Abstract:

last approved WID: RP-170855

Decision: The document was **revised to RP-171418**.

RP-171418 **Revision of WI: New Radio Access Technology**
Source: NTT DOCOMO, INC.

Samsung Exhibit 1025, Page 1637 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

(Replaces RP-171138)

Abstract:

last approved WID: RP-170855

Discussion:

Intel: cell-ID based positioning should not be considered in REL-15

RAN chair: if we remove it, do we still fulfill regulatory requirements?

Ericsson: does not agree with Intel

Deutsche Telekom: supports Ericsson and text should say "positioning compliant to regulatory requirements"

LG: we should make clear that this just means reporting Cell ID and nothing more

Deutsche Telekom: improved or enhanced Cell-ID is not intended here, so reporting Cell ID would be enough

Decision: The document was **revised to RP-171485**.

RP-171485 **Revision of WI: New Radio Access Technology**
Source: NTT DOCOMO, INC.

(Replaces RP-171418)

Abstract:

last approved WID: RP-170855

Discussion:

Telecom Italia: positioning will be handled when

RAN chair: it is for standalone so later

Decision: The document was **approved**.

RP-171472 **Way forward on support for edge computing**
Source: CMCC

Abstract:

related to RP-171418

Discussion:

proposal:

RAN tasks RAN2/3 to start the work on support of edge computing, in the framework of New Radio Access Technology.

Any work on edge computing in RAN must be aligned with the SA2 edge computing work.

RAN2 chair: what should we start doing without input from SA2?

RAN chair: we could ask SA2 by LS to provide corresponding information and then we can see in Sep.17 what we can do about it in RAN

conclusion: Nokia will draft an LS to SA2 in RP-171484

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1638 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171484 **Draft LS on support for edge computing (to: SA2; cc: -; contact: Nokia)**
Source: Niokia

Discussion:

Nokia: will add meeting dates

RAN chair: this should have been a draft LS with source Nokia

Decision: The document was **revised to RP-171497**.

RP-171497 **LS on NR Edge Computing (to: SA2; cc: SA, RAN2, RAN3; contact: Nokia)**
Source: RAN

(Replaces RP-171484)

Decision: The document was **approved**.

RP-171315 **RAN WG chairmen's guidance related to specification approval for WI NR_newRAT**
Source: RAN1/RAN2/RAN3/RAN4 chairmen

Abstract:

NSA completion in Dec.17 and SA completion in June 18 under the same REL-15 WI NR_newRAT requires guidance which specs need to be approved when

Discussion:

Ericsson: proposal is not reflecting the latest RAN1 status

RAN2 chair: is based on current WID and further merging with other WID revisions is still needed

RAN3 chair: changes after Dec.17 to NSA should be F or B?

MCC: acc. to the agreements we are only looking for cat.F corrections but if we really need a cat.B CR then be honest and bring this to RAN for decision (do not falsify this to cat.F)

conclusion: will be merged into RP-171418

Decision: The document was **merged**.

RP-170980 **Revised WID: New Radio Access Technology**
Source: Ericsson

Abstract:

rapporteur: NTT DOCOMO; last approved WID: RP-170855; MSR and AAS specifications are included

Discussion:

NTT DOCOMO: not fine with the change but single RAT text would be ok, after single RAT we could talk about Multi-Standard

RAN4 chair: target dates for single RAT could be different

Ericsson: final approval could be in June 18

Nokia: before we are rushing too much we need to check the RAN4 impact

conclusion: parts of this Tdoc can be merged into RP-171418, details to be discussed offline

Decision: The document was **merged**.

Samsung Exhibit 1025, Page 1639 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-170996 **Motivation for support of edge computing in NR WI**
Source: CMCC

Abstract:

Motivation to support edge compution in NR WI.

Discussion:

Proposal: It is proposed to include "RAN supporting of edge computing defined in SA2, if applicable" in current NR WID.

RAN3 chair: nothing against the feature but having generic features listed is probably not really helpful

Nokia: also understands that it is part of the WI but details are missing

Mediatek: "UE should be aware" is not in line with SA discussions and is rather a deployment issue

Ericsson: is ongoing SA2 work but does not see the RAN impact here

RAN chair: noone said that it is not part of the 5G scope but it may not be needed to spell this in out in the RAN WID

Ericsson: is SA2 work and if they identify any RAN impacts they will certainly let us know

Vodafone: there may be some UE impacts

CMCC: can we discuss MEC in RAN WGs?

RAN3 chairman (Huawei): should be discussed in connection with Tdoc about RAN3 prioritization

conclusion: If SA will identify any RAN impact, they will inform RAN and we will address this in due course.

Decision: The document was **noted**.

RP-170997 **Update of WI: New Radio Access Technology**
Source: CMCC

Abstract:

rapporteur: NTT DOCOMO; last approved WID: RP-170855; introducing edge computing

Discussion:

conclusion: No WID revision is approved but if SA will identify any RAN impact, they will inform RAN and we will address this in due course.

Decision: The document was **rejected**.

RP-171167 **Proposed updated to WID on New Radio Access Technology**
Source: Qualcomm Incorporated

Abstract:

rapporteur: NTT DOCOMO; last approved WID: RP-170855; related to incoming LS RP-170898

Discussion:

Qualcomm: related to location services

RAN chair: can come back later

conclusion: merged into RP-171418

Decision: The document was **merged**.

Samsung Exhibit 1025, Page 1640 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171173 **Revised WID on New Radio Access Technology**
Source: Nokia Corporation

(Replaces RP-170855)

Abstract:

rapporteur: NTT DOCOMO; last approved WID: RP-170855; to reflect the request from SA2

Decision: The document was **withdrawn**.

RP-171399 **LTE 4CC + NR 1CC combination to be added as CA band combination to NR WI**
Source: Telstra Corporation, Nokia, Ericsson, Samsung, Cohere Technologies

Abstract:

RAN4 discussed this combination (LTE (4CC) CA_3A-7C-28A + NR (1CC) 3.3 – 4.2 GHz) but did not add it so far due to pending supporting companies

Discussion:

RAN4 chair: in the future please make sure that you follow the RAN4 approach to bring the proposal to RAN4 first and make sure that it is included there

CMCC: some RAN1 impact?

conclusion: combination LTE (4CC) CA_3A-7C-28A + NR (1CC) 3.3 – 4.2 GHz will be included in RP-171418

Finally, it was decided to not include the combination at RAN #76 and to discuss the addition in RAN4.

Decision: The document was **noted**.

RP-171186 **Considerations on the Progress of NR in RAN3**
Source: RAN3 Chairman (Ericsson), RAN3 former Chairman (Huawei)

Abstract:

moved from AI 9.5 to AI 9.2.1

Discussion:

Proposal 1: RAN to consider making NR option family 7 as part of the June 2018 drop and confirm that a specified F1 is part of the December 2017 drop; in alternative, RAN to consider making a fully specified F1 part of the June 2018 drop and keeping the current work plan for option families 3 and 7 as it is.

Proposal 2: Considering the current load of RAN3, and the need to progress in order to provide by December a first ASN.1 (including option 3, potentially F1/CP-UP separation), it is requested to RAN to treat the following topics as low priority, e.g. discuss if time allows until December, NG 'agnostic', SA2 related topics.

Nokia: concern about proposal 2, topics with architecture impacts need to be considered early enough otherwise they cannot happen

Deutsche Telekom: supports Nokia

RAN3 chairman (Huawei): this is not an attempt to stop the work but a reminder that we have priorities to be taken into account

Telecom Italia: ASN.1 freeze is in March 18, if RAN3 has an overload issue here, then we need to revise the priorities

Broadcom: changes regarding non-3GPP access are minor

RAN chair: would like to check all architecture topics before having a summary we could provide to RAN3 for further discussion

Samsung Exhibit 1025, Page 1641 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **noted**.

RP-170968 **Termination points for NG, S1-U, Xn and X2 interfaces**
38.401 v0.0.1
Source: Deutsche Telekom, T-Mobile USA, Orange, TELUS, Telekom R&D Sdn. Bhd., Telecom Italia, BT, SK Telecom, KT, Samsung, Telstra, Telefonica et al

Abstract:

discussion and decision

Discussion:

RAN chair: item for early consideration

CMCC, China Unicom: support the proposal

Decision: The document was **rejected**.

RP-171216 **Termination points for NG and Xn interfaces**
Source: Ericsson

Discussion:

proposal: ask 3GPP TSG RAN to follow the argumentation line provided in this document and to

- acknowledge the working assumption from RAN3#95bis that the Internal structure of the gNB is not visible to the CN and to other RAN nodes.

- abstain from following proposals brought forward in RP-170968

RAN chair: item for early consideration

Deutsche Telekom: only one company supporting this view

RAN chair: so where are we: a fully interoperable interface on S1 seems to be wanted by operators and we need to check the corresponding impacts; so it is needed that people sit together to address the issues

Ericsson: S1 will be a fully operable multi-vendor interface, noone is disputing this

BT: we need to decide the termination before we specify F1

conclusion: Ericsson will summarize result of offline discussion in RP-171419 (no piggy-backing of NG messages ...)

Decision: The document was **noted**.

RP-171419 **Way forward on termination points NG and Xn interfaces**
Source: Ericsson

Discussion:

proposal from offline discussion:

- For NG-RAN, the NG and Xn-C interfaces in a physical, disaggregated deployment terminate in the Central Unit

- The F1 design will take 1) into account

RAN3 chair (Huawei): this was not discussed in RAN3

Deutsche Telekom: thinks this can be easily agreed

RAN chair: extension to S1 and S2 is discussed now

ZTE: extension to E-UTRAN is unclear

Samsung Exhibit 1025, Page 1642 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AT&T: the way forward text is ok for us, would it be captured in a spec?

Ericsson: will be captured in the minutes and RAN3 would take it into account

Deutsche Telekom: we should at first approve this and then we can see where to put the text (Ericsson wants to have it only in the minutes but we want to capture it in the pCR to TR 38.401)

Vodafone: option 3 needs to be covered as well, this is clear; the text covers NR and we need to discuss how to cover option 3;

Nokia: supports to agree this text for NR and option 3 can be discussed afterwards

CMCC: we want to remove the "disaggregated deployment"

RAN chair: you should explain what "physical" means here

Deutsche Telekom: how do we capture the agreement?

RAN3 chair (Ericsson): LS to RAN3 would be also possible

conclusion: the first 2 points are stable and we discuss how to cover/add option 3, explain what "physical" means

Decision: The document was **revised to RP-171474**.

RP-171474 Way forward on termination points NG and Xn interfaces

Source: Ericsson

(Replaces RP-171419)

Discussion:

proposal:

1. For NG-RAN, the NG and Xn-C interfaces in a physical, disaggregated deployment terminate in the Central Unit

2. For the Option 3 family, the S1-U and X2-C interfaces in a physical, disaggregated deployment terminate in the gNB Central Unit

3. The F1 design will take 1) and 2) into account

CMCC: does not want to see the word "physical" there

RAN3 chair (Huawei): "physical" emphasizes that we look at one type of deployment

BT: we agreed already the black text, so no need to debate this further

Vodafone: same view as BT

RAN3 chair (Huawei): we should minute 2 points:

1. S1 user plane part: it will bring some restriction

2. no F1 interface related technical discussion regarding option 3 happened in RAN3

RAN chair: anyone who wants to minute concerns about "physical"? noone

conclusion: RP-171474 is endorsed

Deutsche Telekom: would still like to have an LS to RAN3

Vodafone: supports this

RAN chair: sending an LS to RAN3 asking to implement the way forward

Ericsson: sending an LS taking this into account is ok but "implementing" may too strong

Nokia: should RAN3 not follow what we agreed?

Samsung Exhibit 1025, Page 1643 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Telecom Italia: worried that RAN3 could ignore the way forward

Ericsson: disagreement is rather on the deployment options

Decision: The document was **endorsed**.

RP-171483 **Draft LS on Termination of NG, Xn-C, S1-U and X2 interfaces (to: RAN3; cc: -; contact: Deutsche Telekom)**

Source: Deutsche Telekom

Abstract:

related to RP-171474

Discussion:

RAN3 chair (Huawei): the documentation of the agreement may be difficult, this task is difficult

Vodafone: we could have "suggests" instead of "asks"

Deutsche Telekom: does not think it matters much, we want to accelerate this in RAN3

new RAN3 chair (Ericsson): with the current LS it looks like having an informative annex which is certainly not intended

Ericsson: the easiest way would be to have an action that RAN3 takes the RAN conclusion into account

Decision: The document was **revised to RP-171498**.

RP-171498 **LS on Termination of NG, Xn-C, S1-U and X2 interfaces (to: RAN3; cc: -; contact: Deutsche Telekom)**

Source: RAN

(Replaces RP-171483)

Decision: The document was **approved**.

RP-171049 **F1 interface: Work Plan on F1**

Source: NTT DOCOMO, INC.

Discussion:

Proposal: RAN to confirm that F1 specification for NSA aspects should be completed by Dec. 2017.

RAN chair: so target for F1 for stage 2 and stage 3 is Dec.17

RAN3 chair (Huawei): we need to take prioritization into account

RAN chair: can we endorse RP-171049?

Vodafone: we need to look at the full picture

Ericsson: approving F1 in Dec.17 will be challenging

Deutsche Telekom: we may have to downprioritize other topics

conclusion: RP-171049 is endorsed with the understanding that we need to make sure that we do not overpromise considering the work load

Decision: The document was **endorsed**.

RP-171215 **Separation of CP and UP**

Source: Ericsson

Samsung Exhibit 1025, Page 1644 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Discussion:

Proposal 1: RAN is kindly asked to approve the standardization of a new control interface between CU-CP and CU-UP in RAN3. We suggest to name this interface E1.

Proposal 2: The E1 interface should be added to the NR Access Technology WID RP-170855.

RAN chair: item for early consideration

RAN3 chair (Huawei): it was asked whether this is part of the WI?

Nokia: does not think it is part of the existing WI at the moment, it it an interesting area but there are a number of open issues we would need to study first so starting a WI would be too early

NTT DOCOMO: there was no conclusion of CU-CP and CU-UP separation so far

Vodafone: supports the proposals

Deutsche Telekom: we were always promoting the CU-CP and CU-UP separation and proposed this already some time ago

ZTE: it is clear that currently it is not covered but we can discuss whether to add it, but since RAN3 is overloaded we can could consider it later but not calling it E1 may be better;

LG: topic should be also discussed with RAN2 as it is not a RAN3 only issue

NEC: supports to further study this first

RAN chair: we could have a 6 months SI and then could still have a WI afterwards in REL-15

RAN3 chair (Huawei): currently no time/TU available in RAN3 for a SI

conclusion: Ericsson will draft a SI proposal in RP-171421, leading WG: RAN3, RAN2 secondary responsible, target date: Dec.17

Decision: The document was **noted**.

RP-171252 **Discussion on gNobe B logical description**
Source: VODAFONE Group Plc

Decision: The document was **withdrawn**.

RP-171172 **A concern on NR standardization**
Source: SoftBank Corp.

Abstract:

moved from AI 9 to AI 9.2.1

Discussion:

proposal:

- RAN and WGs to consider further scope redunction (or something similar, e.g. delaying the start of SIs) to assign more time to review/stabilize the NR specifications, especially at the last half of Rel-15.
- RAN should this discuss this issue in RAN#77 taking into account the progress of NR work.

RAN chair: item for early consideration

Mediatek: this morning we have already increased the NR WI scope and we seriously need to consider the Softbank proposal

Deutsche Telekom: we would be happy do further shift the SIs

Samsung Exhibit 1025, Page 1645 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

KT: downscoping of NR WI would be better

Telecom Italia: delaying SIs until Sep.17 would be ok for us

Deutsche Telekom: would this means SIs would complete a quarter later?

Thales: delaying NR SIs would impact scoping of satellite aspects in RAN?

RAN1 chair: only RAN1 led SIs should be shifted

Ericsson: if we take SIs one by one we will probably not achieve anything so a general guidance RAN1 led SIs should be kept on hold until Sep.17

Ericsson: RAN3 led SIs will be handled in RAN1?

RAN chair: RAN1 work for such a SI should also be on hold

Sprint: what about RAN2?

RAN chair: in RAN2 no TUs for NR SIs allocated

conclusion: Softbank will summarize the way forward on postponing RAN1 work of NR SIs until Sep.17

Decision: The document was **noted**.

RP-171422 **Way forward on postponing RAN1 work for NR SIs**
Source: Softbank

Discussion:

proposals:

- RAN1 work for NR SIs is put on hold until September 2017
  - The scope, completion date and the total number of TUs for these SIs
    are not changed by this proposal.
  - This proposal has no impact for RAN2 and RAN4 work
  - RAN3 led SIs are separately discussed taking into account
    RAN3 workload

No change to RAN plenary work on Non-terrestrial SI

RAN1 chair: some SIs have target June 17 and need to be changed

RAN3 chair: "RAN3 led SIs are separately discussed taking into account

RAN3 workload" unclear

Dish: RAN1 work on non-terrestrial SI would be needed

ZTE: no RAN2/RAN4 work is expected for the SIs anyway

Regarding "[No change to RAN plenary work on V2X SI, but email discussion in RAN1 is put on hold]":

LG: why does email discussion would affect NR completion

NTT DOCOMO: email discussion would not affect TUs in RAN1

RAN chair: suggests to remove the red part and endorse the rest

Huawei: all SIs were approved because of industry interest so concerned why V2X part is handled separately, RAN1 email discussion on V2X has not yet started

Samsung Exhibit 1025, Page 1646 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Mediatek: bullet on V2X not really needed

Decision: The document was **revised to RP-171475**.

RP-171475 **Way forward on postponing RAN1 work for NR SIs**
Source: Softbank

(Replaces RP-171422)

Discussion:

conclusion: RAN1 email discussion will start after WG ad hoc in June 17

Decision: The document was **endorsed**.

RP-171249 **NR Standardization**
Source: NEC EUROPE LTD

Abstract:

moved from AI 9 to AI 9.2.1

Discussion:

RAN chair: item for early consideration

Decision: The document was **withdrawn**.

RP-170882 **Reply LS to ECC_PT1_LS_160915 = RP-161968 and ECC_PT1_LS_170120b = RP-170037 on Suitability of technical conditions of ECC DEC (11) 06 for 5G (R4-1704402; to: ECC PT1; cc: RAN, ETSI TC ERM; contact: Ericsson)**
Source: RAN4

Abstract:

R4-1610994 (which was RAN4's reply to ECC_PT1_LS_160915 = RP-161968) was not sent to/cc RAN; no RAN action requested;

Discussion:

RAN chair: is only for information for RAN

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170884 **Reply LS to S2-171611 = RP-170035 on N2 and N3 reference points for 5G system (R3-171401; to: SA2; cc: SA, RAN, CT, CT4, CT1, SA3, RAN2; contact: Qualcomm)**
Source: RAN3

Abstract:

no RAN action requested

Discussion:

RAN chair: is only for information for RAN

conclusion: no LS answer from RAN

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1647 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-170892 **LS on NGMN Paper on 5G End-to-end Architecture Framework (NGMN_LS_170511; to: SA2; cc: SA, RAN; contact: Vodafone)**

Source: NGMN

Abstract:

no RAN action requested

Discussion:

RAN chair: is only for information for RAN

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170886 **LS on Requesting status and technical information on WLAN integration in 3GPP NextGen System (IEEE 802.11-16/1574r3; to: SA, SA1, SA2, SA3; cc: IEEE 802 EC, IEEE 802.1 WG, RAN; contact: InterDigital)**

Source: IEEE 802.11 WG

Abstract:

no RAN action requested; moved from AI 7 to AI 9.2.1

Discussion:

conclusion: no LS answer from RAN (is primarily for SA)

Decision: The document was **noted**.

RP-171437 **RAN3 way forward on workplan**

Source: RAN3 chairman (Ericsson)

Discussion:

proposals:

- It is confirmed to keep the completion dates for NSA (Opt. 3 family) and SA (Opts. 2, 4, 5, 7 families)

- Aim for a resolution of general architecture issues, interface termination(?), node names issues, etc. by next quarter

- Given the consensus on making the F1 interface part of the Dec. 2017 deadline:

  - F1 for Opt. 3 only contains features which are strictly necessary (without precluding later enhancements)

  - F1 completion date should not be impacted by e.g. CP-UP SI

  - Work on F1 applicable for NG RAN has lower priority until Dec. 2017, apart from any elements necessary to specify “hooks” for NG-RAN-related F1 functionality

- Study items can proceed:

  - Study CP-UP separation (if approved by RAN)

  - Low-layer split – with a shift of 1 quarter – 1 TU

- Other issues to be considered as lower priority

- Agree the 2 AdHoc meetings in 2018

- Agree that AdHoc meetings in 2018 last for 5 days

Nokia: suggests to ask the RAN3 chair to not overrun time budgets

Samsung Exhibit 1025, Page 1648 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN chair: suggests to note the document and to not do a prioritization here

RAN3 chair (Ericsson): (?) is for discussion on interface termination issues

RAN chair: if RAN agrees we could remove the (?)

Telecom Italia: should TUs for ad hocs appear in the overview

RAN chair: they should

RAN3 chair (Huawei): so far the ad hocs do not appear in the list

ZTE: supports that when we have more and more ad hocs we need to add them to the time budget planning

RAN3 chair (Huawei): ad hocs are on NR

conclusion: remove slide 2 and add ad hoc dates

Decision: The document was **revised to RP-171476**.

RP-171476 **RAN3 way forward on workplan**
Source: RAN3 chairman (Ericsson)

(Replaces RP-171437)

Discussion:

Deutsche T: F1 optimisation: can we add "family" after option 3?

RAN3 chair (Ericsson): ok

RAN3 chair (Ericson): we will reassess the workload in Sep.

Decision: The document was **revised to RP-171502**.

RP-171502 **RAN3 way forward on workplan**
Source: RAN3 chairman (Ericsson)

(Replaces RP-171476)

Decision: The document was **endorsed**.

RP-171493 **NR ad hocs 2017/2018**
Source: RAN1/2/3/4 Chairs

Discussion:

RAN chair: we leave RAN1 and RAN4 July ad hocs "to be determined"

RAN1 vice-chair: can we keep July dates to be discussed for RAN1/RAN4?

conclusion: tbc under the July date and "to b e determined" under the RAN1/RAN4 July dates

Decision: The document was **revised to RP-171504**.

RP-171504 **NR ad hocs 2017/2018**
Source: RAN1/2/3/4 Chairs

(Replaces RP-171493)

Decision: The document was **revised to RP-171509**.

Samsung Exhibit 1025, Page 1649 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171509 **NR ad hocs 2017/2018**
Source: RAN1/2/3/4 Chairs

(Replaces RP-171504)

Discussion:

Note: The RAN4 chairman confirmed in the week after RAN #76 that RAN4 will have a 5 days Jan. 2018 ad hoc as indicated on slide 3 of RP-171509.

Decision: The document was **endorsed**.

9.3 Open REL-15 New Radio SIs

9.3.1 Study on NR to support non-terrestrial networks [New SI: FS_NR_nonterr_nw]

RP-170981 **Status Report for SI Study on NR to support Non Terrrestrial Networks; rapporteur: Thales**
Source: RAN1

Decision: The document was **revised to RP-171488**.

RP-171488 **Status Report for SI Study on NR to support Non Terrrestrial Networks; rapporteur: Thales**
Source: RAN1

(Replaces RP-170981)

Discussion:

MCC: late submission

Huawei: what do we do with the TUs we gain by putting NR SIs on hold? going into NR WI

RAN chair: we will anyway discuss TUs in Sep. again

Ericsson: assumed that SIs are just shifted by 1 quarter

RAN chair: suggests some offline discussion

conclusion: approved: 25%, March 18

Decision: The document was **noted**.

RP-170983 **Draft TR 38.811 v0.0.0 for NR to support Non Terrestrial Networks**
38.811 v0.0.0
Source: Thales

Abstract:

Skeleton of the TR; note: This TR is under RAN1 control and should be submitted there.

Discussion:

MCC: FS_NR_nonterr_nw is a RAN1 SI and TR should be submitted to RAN1

note: leadership of this TR will be changed from RAN1 to RAN

Decision: The document was **revised to RP-171453**.

Samsung Exhibit 1025, Page 1650 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171453 **TR 38.811 v0.1.0 on Study on NR to support non-terrestrial networks**
38.811 v0.1.0
Source: Thales

(Replaces RP-170983)

Abstract:

including agreements of RAN #76

Decision: The document was **agreed**.

RP-170921 **Revised SID: Study on NR to support Non-Terrestrial Networks**
Source: THALES

Abstract:

last approved SID: RP-170717

Discussion:

conclusion: among other changes, the leadership of the SI and the SI TR 38.811 will be moved from RAN1 to RAN

Decision: The document was **revised to RP-171450**.

RP-170973 **On NR support of non-terrestrial networks**
Source: Ericsson LM

Abstract:

Clarification of WI content and prioritized topics

Discussion:

Proposal 1: Prioritize the work on satellites

Proposal 2: Remove the overlap with the ongoing SI on enhanced LTE support for aerial vehicles

Ericsson: SID is too wide at the moment

Dish: there is a SID revision in which we could include the changes there

Nokia: overlap in channel modelling part is not clarified enough so the 2nd SID change should be improved

Ericsson: if "first priority" is changed to scope then this would be ok

conclusion: first change can be included adding HUBs and replacing "first priority" by "scope", then 2nd change not needed, will be covered in the revision of SID RP-170921 in RP-171450

Decision: The document was **noted**.

RP-171450 **Revised SID: Study on NR to support Non-Terrestrial Networks**
Source: THALES

(Replaces RP-170921)

Abstract:

last approved SID: RP-170717

Discussion:

Thales: meeting header on Tdoc should say RAN not RAN1

Samsung Exhibit 1025, Page 1651 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

leadership was changed from RAN1 to RAN

Decision: The document was **approved**.

RP-170917 **Proposed template for the NR-NTN technical report**
38.811 v0.0.0
Source: THALES

Abstract:

Proposed template for the NR-NTN technical report

Decision: The document was **approved**.

RP-170918 **Proposed scope for the sFS_NR_nonterr_nw technical report**
38.811 v0.0.0
Source: THALES

Abstract:

Proposed scope for the technical report "Study of NR to support Non Terrestrial networks"

Decision: The document was **approved**.

RP-170929 **Non-Terrestrial Network overview**
38.811 v0.0.0
Source: THALES

Abstract:

Proposed chapter 4 "Non-Terrestrial Network overview" for the technical report "Study on NR to support non-terrestrial networks"

Discussion:

specs manager: why is RAN drafting a RAN1 TR? We need a proper TR template

Qualcomm: KPIs are mentioned, would prefer to remove it

Nokia: capabilities always dimensioned for worst case?

Ericsson: taking use cases first will help, drones, helicopters etc. excluded?

Thales: correct

Decision: The document was **revised to RP-171447**.

RP-171447 **Non-Terrestrial Network overview**
38.811 v0.0.0
Source: THALES

(Replaces RP-170929)

Discussion:

AT&T: use cases in RAN and channel modelling in RAN1?

RAN chair: yes

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1652 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-170930 **Non-Terrestrial Network Deployment scenarios**
38.811 v0.0.0
Source: THALES

Abstract:

Proposed chapter 5 "Non-Terrestrial Network Deployment scenarios" for the technical report "Study on NR to support non-terrestrial networks"

Discussion:

Ericsson: commercial airplanes? you are rather considering rather high altitude platforms

Qualcomm: KPIs also need to be removed here

Decision: The document was **revised to RP-171448**.

RP-171448 **Non-Terrestrial Network Deployment scenarios**
38.811 v0.0.0
Source: THALES

(Replaces RP-170930)

Decision: The document was **approved**.

RP-170982 **Propagation delay and Doppler in Non-Terrestrial Networks**
38.811 v0.0.0
Source: THALES

Discussion:

ZTE: channel modelling should be discussed in RAN1

Qualcomm: code Doppler: may be ok for DL but not for UL so that that needs further study

RAN chair: could be put ffs

Ericsson: RAN1 should look at this document

Qualcomm: thought deployment part is under RAN control

Decision: The document was **revised to RP-171449**.

RP-171449 **Propagation delay and Doppler in Non-Terrestrial Networks**
38.811 v0.0.0
Source: THALES

(Replaces RP-170982)

Discussion:

RAN chair: is this for RAN1?

ZTE: should be taken in RAN1

Qualcomm: we could approve it with the understanding that RAN1 can stll revisit it

Telecom Italia: should be discussed at RAN1 level

Ericsson: supports to send it to RAN1

ZTE: if we approve this, we would encourage people to have more channel modelling proposals to RAN #77

Dish: this is not addressing channel modelling

Samsung Exhibit 1025, Page 1653 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN chair: we could give time until Sep.17 to check

Fraunhofer: we could also take out the channel modelling aspects and approve the rest

conclusion: email discussion until RAN #77 in order to approve a pCR at RAN #77, but after this no further inputs to section 6 should be brought directly to RAN (they should be handled in RAN1 first)

Decision: The document was **postponed**.

9.3.2 Study on CU-DU lower layer split for New Radio [New SI: FS_NR_CU_DU_LLS]

RP-171176 **Status report of Study on CU-DU lower layer split for New Radio; rapporteur: NTT DOCOMO, INC.**

Source: RAN3

Discussion:

MCC: late submission

conclusion: Revised to update TU allocation (RP-171475: postponing RAN1 work for NR SIs)

Decision: The document was **revised to RP-171487**.

RP-171487 **Status report of Study on CU-DU lower layer split for New Radio; rapporteur: NTT DOCOMO, INC.**

Source: RAN3

(Replaces RP-171176)

Discussion:

MCC: late submission

conclusion: approved: 0%, Dec.17

Decision: The document was **noted**.

9.3.3 Study on NR-based access to unlicensed spectrum [New SI: FS_NR_unlic]

RP-171322 **Status report for SI Study on NR-based access to unlicensed spectrum; rapporteur: Qualcomm**

Source: RAN1

Discussion:

MCC: late request

Decision: The document was **revised to RP-171490**.

RP-171490 **Status report for SI Study on NR-based access to unlicensed spectrum; rapporteur: Qualcomm**

Source: RAN1

(Replaces RP-171322)

Discussion:

MCC: late request;

conclusion: revised as multiple versions of RP-171490 exist

Samsung Exhibit 1025, Page 1654 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **revised to RP-171494**.

RP-171494 **Status report for SI Study on NR-based access to unlicensed spectrum; rapporteur: Qualcomm**
Source: RAN1

(Replaces RP-171490)

Decision: The document was **revised to RP-171496**.

RP-171496 **Status report for SI Study on NR-based access to unlicensed spectrum; rapporteur: Qualcomm**
Source: RAN1

(Replaces RP-171494)

Discussion:

conclusion: approved: 0%, June 18

Decision: The document was **noted**.

RP-171128 **Specification handling of 3GPP-based access to unlicensed spectrum**
Source: Huawei, HiSilicon

Discussion:

RAN chair: Tdoc for early consideration

proposal:

- From Rel-15 onwards, standard impact specific to 3GPP-based access to unlicensed spectrum will be specified in a different set of specifications.

- No use of unlicensed spectrum will be assumed in the IMT-2020 self-evaluations from 3GPP, and the corresponding specifications will not be submitted to ITU-R as part of the IMT-2020 submission.

Broadcom: unclear how non-3GPP access would be addressed

RAN chair: this is not affected

MCC: we discussed this topic offline at last meeting with the specs manager and his clear answer was that we will not be able to allocate another spec series for this (shortage of series numbers); will this split only affect RAN1 and RAN4 specs?

Huawei: correct

RAN1 chair: some further discussion about RAN1 specs needed

Dish Networks: will we remove band 46 from the specs?

RAN4 chair: suggests that RAN4 checks the impacts and comes back next quarter

RAN chair: would prefer to not load WGs with this

Telecom Italia: LTE CRs for next time?

RAN chair: yes, no hurry for this

conclusion: proposal is endorsed with the focus on RAN1 and RAN4 specs, detailed to be discussed with MCC/specs manager

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1655 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171416 **Revised SI: Study on NR-based Access to Unlicensed Spectrum**
Source: Qualcomm

Abstract:

last approved SID: RP-170828

Decision: The document was **approved**.

9.3.4 Study on Non-Orthogonal Multiple Access (NOMA) for NR [New SI: FS_NR_NOMA]

RP-171185 **Status report of SI Study on 5G Non-Orthogonal Multiple Access ; rapporteur:ZTE**
Source: RAN1

Decision: The document was **revised to RP-171499**.

RP-171499 **Status report of SI Study on 5G Non-Orthogonal Multiple Access ; rapporteur:ZTE**
Source: RAN1

(Replaces RP-171185)

Discussion:

MCC: late submission;

conclusion: approved: 0%, June 18

Decision: The document was **noted**.

RP-171042 **Summary of the workshop on NOMA**
Source: ZTE Corporation

Abstract:

Show the industry's activity on NOMA

Discussion:

Mediatek: workshop is outside of 3GPP?

ZTE: correct

Decision: The document was **noted**.

RP-171043 **Revision of Study on 5G Non-Orthogonal Multiple Access**
Source: ZTE Corporation

(Replaces RP-170829)

Abstract:

last approved SID: RP-170829

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1656 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

9.3.5 Study on integrated access and backhaul for NR [New SI: FS_NR_IAB]

RP-171318 **Status report for SI Study on integrated access and backhaul for NR; rapporteur: Qualcomm**
Source: RAN2

Abstract:

Huawei: open issues missing

Discussion:

MCC: late request

Decision: The document was **revised to RP-171333**.

RP-171333 **Status report for SI Study on integrated access and backhaul for NR; rapporteur: Qualcomm**
Source: RAN2

(Replaces RP-171318)

Discussion:

MCC: late request

conclusion: approved: 0%, June 18

Decision: The document was **noted**.

9.3.6 Study of test methods for New Radio [New SI: FS_NR_test_methods]

RP-171020 **Status report of SI: Study on test methods for New Radio; rapporteur: Intel**
Source: RAN4

Discussion:

conclusion: approved: 10%, March 18

Decision: The document was **noted**.

RP-171021 **Revision of SI: Study on test methods for New Radio**
Source: Intel Corporation

Abstract:

last approved SID: RP-170824

Decision: The document was **approved**.

9.3.7 Study on evaluation methodology of new V2X use cases for LTE and NR [New SI: FS_LTE_NR_V2X_eval]

RP-171092 **Status report of SI: Study on evaluation methodology of new V2X use cases for LTE and NR; rapporteur: LG Electronics**
Source: RAN1

Discussion:

conclusion: approved: 0%, Dec.17

Samsung Exhibit 1025, Page 1657 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **noted**.

RP-171093 **Revision of SI: Study on evaluation methodology of new V2X use cases for LTE and NR**
Source: LG Electronics

Abstract:

last approved SID: RP-170837

Decision: The document was **approved**.

9.3.8 Study on self-evaluation towards IMT-2020 submission [New SI: FS_5G_eval]

RP-171090 **Status report for SI: Study on Self-Evaluation towards IMT-2020 submission; rapporteur: Huawei**
Source: ITU-R ad hoc

Discussion:

conclusion: approved: 0%, June 18

Decision: The document was **noted**.

RP-170913 **Motivation for change request on Self Evaluation towards IMT-2020 Submission Study Item**
Source: TELEFONICA S.A.

Abstract:

The current doc presents the motivation to include changes in the current SID

Decision: The document was **withdrawn**.

RP-171044 **Discussion on SID and work plan of self-evaluation towards IMT-2020 submission**
Source: ZTE Corporation

Discussion:

Proposal 1: Phased approach including calibration phase, performance evaluation phase and submission template preparation phase should be clearly described in the SID.

Proposal 2: NR MIMO calibration should be reused and continue in this self-evaluation SI at least for eMBB. A new set of calibration should be setup in this SI for scenarios which are not covered by NR MIMO calibration e.g. URLLC and mMTC.

Proposal 3: Update the SID to allow updated proposal submission with additional self-evaluation before June 2019.\

Proposal 4: Update the meeting time of ITU-R WP 5D meeting #32 in Justification part of the SID.

Proposal 5: RAN4 should be involved in evaluation of other requirements described in Objective (d) of the SID.

Proposal 6: Update the SID to describe technical performance requirements for each of the three eMBB test environments in objective (a).

Huawei: some of the proposals are already reflected (4. and 5.) in the revised SID, some proposals (3.) were discussed in the offline discussion on Tue morning, calibration and proposal 1./2./6. are a bit too early i.e. we should wait for WP5D and can then probably refer to their documents;

Mediatek: system description also needs to be included in submission template or just the self-evaluation;

ZTE: probably also system description needs to be included in template as well

Samsung Exhibit 1025, Page 1658 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **noted**.

RP-171129 **Updated workplan for the study on self-evaluation towards IMT-2020 submission**
Source: Huawei, Ericsson, Telecom Italia

Discussion:

Proposal: plan a session at RAN#77 where companies are encouraged to provide views on the following aspects to facilitate the work on self evaluation towards IMT-2020 submission.

- Review the draft skeleton of TR 37.910

- Provide views on 3GPP's IMT-2020 submission format (RIT/SRIT definition)

- Provide views on evaluation configurations as defined in Report ITU-R M.[IMT-2020.EVAL], and the technical features to be evaluated to meet eMBB, mMTC and URLLC technical performance.

  - Details can be further discussed in related RAN WGs.

RAN1 chair: worried about TUs needed

Decision: The document was **noted**.

RP-171091 **Revision of SI: Study on self-evaluation towards IMT-2020 submission**
Source: Huawei, Ericsson, Telecom Italia

Abstract:

last approved SID: RP-170832

Decision: The document was **revised to RP-171439**.

RP-171439 **Revision of SI: Study on self-evaluation towards IMT-2020 submission**
Source: Huawei, Ericsson, Telecom Italia

(Replaces RP-171091)

Abstract:

last approved SID: RP-170832

Discussion:

MCC: suggests to have RAN as primary resp. as it will be RAN and not ITU-R ad hoc which is creating new TR versions

Huawei: time budget has TUs in [ ] and it is still unclear

RAN chair: can be done in Sep.17

conclusion: revised to correct prim. resp. to RAN, ITU-R ad hoc will be sec. resp.

Decision: The document was **revised to RP-171451**.

RP-171451 **Revision of SI: Study on self-evaluation towards IMT-2020 submission**
Source: Huawei, Ericsson, Telecom Italia

(Replaces RP-171439)

Abstract:

last approved SID: RP-170832

Samsung Exhibit 1025, Page 1659 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Discussion:

leadership of the SI shifted from ITU-R ad hoc to RAN

Decision: The document was **approved**.

9.4 Closed REL-14 New Radio SIs

RP-170967 **Update to TR 38.913 to take into account ITU-R KPIs**
38.913 CR-0009 Cat: F (Rel-14) v14.2.0
Source: TELECOM ITALIA S.p.A.

Abstract:

company CR to RAN TR 38.913; result of RAN email discussion; ITU-R defined their KPI for IMT-2020. This contribution states that 3GPP will take into account ITU-R KPIs when submitting their proposal

Discussion:

Note: CR RP-170967 is pointing to ITU-R reports provided to RAN in LSs RP-170044 (ITU-R M.[IMT-2020.TECH PERF REQ]) and RP-1715?? (ITU-R M.[IMT-2020.EVAL]).

Decision: The document was **approved**.

RP-170955 **CR to TR 38.912 on architecture and LDPC terminology**
38.912 CR-0001 Cat: F (Rel-14) v14.0.0
Source: NTT DOCOMO, INC.

Abstract:

company CR to RAN TR 38.912

Decision: The document was **revised to RP-171386**.

RP-171386 **CR to TR 38.912 on architecture and LDPC terminology**
38.912 CR-0001 rev 1 Cat: F (Rel-14) v14.0.0
Source: NTT DOCOMO, INC.

(Replaces RP-170955)

Abstract:

company CR to RAN TR 38.912

Discussion:

NTT DOCOMO: related to RAN1 and RAN3 CRs to the SI TRs

Decision: The document was **approved**.

RP-171104 **Architecture terminology update**
38.912 v14.0.0
Source: Huawei

Abstract:

This change was reviewed by RAN3; finally withdrawn as covered by RP-170955

Decision: The document was **withdrawn**.

Samsung Exhibit 1025, Page 1660 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171207 **Maintenance to TR38.900/38.901 related to channel model for frequencies from 0.5 to 100 GHz**
Source: RAN1

Discussion:

MCC: WI code for TR 38.901 has to be FS_NR_newRAT

Decision: The document was **approved**.

RP-171208 **Maintenance to TR38.802/TR38.901 related to New Radio (NR) Access Technology**
Source: RAN1

Decision: The document was **approved**.

RP-171254 **RAN4 38.803 CRs to Closed REL-14 New Radio SIs**
Source: RAN4

Decision: The document was **approved**.

RP-171253 **RAN4 TR 38.803 CRs to New Radio Access Technology**
Source: RAN4

Abstract:

moved from AI 9.2.1 to AI 9.4

Discussion:

MCC: CRs are modifying former SI TR 38.803 with cat.B CRs and wrong WI code NR_newRAT; WID RP-170855 is crystal clear: TR 38.803 is not affected

Nokia: reminder to leave enough time for RAN4 to finish their work

RAN chair: avoid cat.B CRs to completed SIs in the future

conclusion: WI codes will be corrected to FS_NR_newRAT in RP-171452

Decision: The document was **revised to RP-171452**.

RP-171452 **RAN4 TR 38.803 CRs to New Radio Access Technology**
Source: RAN4

(Replaces RP-171253)

Decision: The document was **approved**.

9.5 Other inputs

RP-171430 **Views on NR UL coverage**
Source: Qualcomm

Abstract:

late input; follow up to RP-170758 of RAN #75

Decision: The document was **revised to RP-171445**.

RP-171445 **Views on NR UL coverage**
Source: Qualcomm

Samsung Exhibit 1025, Page 1661 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

(Replaces RP-171430)

Discussion:

Telecom Italia: suppl. UL in line with RAN1?

Qualcomm: some simultaneous UL assumed

Huawei: we do not agree with everything but contents almost in line with WGs, the Tdoc was late and we do not need to treat WG discussion here

Nokia: Tdoc shows that multiple aspects have to be considered in RAN1 (e.g. coverage aspect) so we need to avoid that one WG decides alone about systemwide aspects

Orange: would like to have a continuation of this discussion in RAN1

ZTE: discussion on WG level appreciated but as Nokia said some system aspects need to be discussed in RAN

Vodafone: Tdoc highlights all of the issues but does not have the solutions, we need to address the issues and not just say it's complex

Qualcomm: providing good UL coverage is crucial, reason why we use UL sharing needs to be clear in order to find good solutions

RAN chair: companies are encouraged to discuss this more and to take this up in the WGs

Decision: The document was **noted**.

10 LTE

NOTE: This agenda item covers REL-14/15 LTE WIs/SIs and one open REL-13 LTE SI on testing. But LTE UE conformance aspects are covered under AI13 and maintenance of closed REL-8 to REL-13 WIs/SIs is covered under AI 14. Open WIs/SIs that affect LTE and Next Generation (if any) have to be covered under AI 9.

10.1 New WI/SI proposals for LTE

NOTE: No contributions are expected for agenda items 10.1.1, 10.1.2, 10.1.3 and 10.1.4 apart from follow-up WIs of completed SIs.

10.1.1 led by RAN1

10.1.2 led by RAN2

RP-171117 Motivation for new WI on Further Enhancements LTE Device to Device, UE to Network Relays for IoT and Wearables
Source: Huawei, Huawei Device

Discussion:

Nokia: existing SI is still ongoing in RAN1 and this should be completed before we start a WI; detailed contents of the WI needs to be discussed offline as it seems to be a basket for several topics

Ericsson: same views

ZTE: similar views, if we would start it we would need to improve the scope a lot

Qualcomm: same views

LG: RAN2 TUs need to be reconsidered for the SI if we have no WI

Samsung: supports Nokia view

Samsung Exhibit 1025, Page 1662 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN1 chair: RAN1 time budget already overloaded for the next 6 months

Huawei: we timed the SI to start RAN2 study part now; compromise offer to allow to treat SA1/SA2 LSs;

US Dep.of Commerce: we are supporting this work

RAN2 chair: this shows that starting a SI where the leading WG has no time allocated is not ideal;

conclusion: SI will continue, LSs will be handled in RAN2 as business as usual (within SI scope) and we discuss a WI proposal again in Sep.17

Decision: The document was **noted**.

RP-171054 **Motivation for new WI on Further Enhancements to LTE Device to Device, UE to Network Relays for IoT and Wearables**

Source: LG Electronics Inc.

Decision: The document was **not treated**.

RP-171116 **New WI proposal: Further Enhancements LTE Device to Device, UE to Network Relays for IoT and Wearables**

Source: Huawei, Huawei Device, Intel, LG Electronics, Sony

Abstract:

new WI for LTE only; leading WG: RAN2; follow-up WI of REL-15 SI FS_feD2D_IoT_relay_wearable (RAN #75: target of SI: Sep.17)

Decision: The document was **revised to RP-171415**.

RP-171415 **New WI proposal: Further Enhancements LTE Device to Device, UE to Network Relays for IoT and Wearables**

Source: Huawei, Huawei Device, Intel, LG Electronics, Sony

(Replaces RP-171116)

Abstract:

new WI for LTE only; leading WG: RAN2; follow-up WI of REL-15 SI

Decision: The document was **not treated**.

RP-171168 **FeD2D assessment based on architecture impacts**

Source: Qualcomm Incorporated

Decision: The document was **not treated**.

RP-171108 **How to progress on UDC WI**

Source: CATT

Discussion:

RAN chair: item for early consideration

Nokia: supports downselection but it should be done in RAN and not in RAN2

Samsung: supports Nokia

Ericsson: for one of the algorithms there was a lack of information so that's where the downselection in WG makes sense

Samsung Exhibit 1025, Page 1663 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Mediatek: prefers decision this week in RAN

RAN chair: suggests info is provided to RAN2 until 26.6.; RAN2 can analyse in their Aug. meeting and in Sep.17 at RAN #77 we will decide (down selection between DEFLATE-based solution and APDC solution)

Mediatek: companies should be able to verify the performance

Broadcom: there are algorithms in IETF for 10 years and we should check first that they do not provide what we need before we introduce something else

Samsung: this means we extend the SI by one quarter based on a company that did not provide their input earlier

Mediatek: RAN2 analysis should be only on APDC solution

conclusion: additional information on APDC solution is provided to RAN2 by 26.06.2017, RAN2 will do corresponding analysis on APDC solution and RAN #77 in Sep.17 will decide between DEFLATE-based solution and APDC solution

Decision: The document was **noted**.

RP-171109 **New WID on UL data compression in LTE**
Source: CATT, Qualcomm Incorporated

Abstract:

new WID for LTE; leading WG: RAN2; follow-up WI of REL-15 SI FS_LTE_UDC (RAN #75: SI was 0% complete)

Decision: The document was **revised to RP-171387**.

RP-171387 **New WID on UL data compression in LTE**
Source: CATT, Qualcomm Incorporated

(Replaces RP-171109)

Abstract:

new WID for LTE; leading WG: RAN2; follow-up WI of REL-15 SI FS_LTE_UDC (RAN #75: SI was 0% complete)

Discussion:

RAN chair: item for early consideration

Decision: The document was **not treated**.

RP-171184 **Algorithm for UDC**
Source: MediaTek Inc.

Abstract:

This contribution suggests a way forward for UDC normative work, based on RAN2 conclusion to select a single algorithm (also relevant to agenda 10.14.3).

Discussion:

RAN chair: item for early consideration

Decision: The document was **not treated**.

RP-171398 **Comments regarding UL data compression (UDC)**
Source: KDDI

Abstract:

Samsung Exhibit 1025, Page 1664 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

related to new WID RP-171109 (revised in RP-171116)

Decision: The document was **not treated**.

10.1.3 led by RAN3

RP-171119 **Motivation for new WI on Network Assistance for Network Synchronization in LTE**
Source: Huawei, HiSilicon

Decision: The document was **not treated**.

RP-171118 **New WI proposal: Network Assistance for Network Synchronization in LTE**
Source: Huawei, HiSilicon

Abstract:

new WI for LTE only; leading WG: RAN3; follow-up WI of REL-14 SI FS_LTE_NW_SYNC completed in Dec. 2016

Discussion:

Huawei: was proposed already in March 17

Ericsson: same comment: why is solution 1/option 1 included as SI did not conclude on it

RAN chair: would you be fine with the other solutions?

Ericsson: yes

Deutsche Telekom: would like to see solution 1 in

Samsung: agrees with Ericsson that solution 1 should not be in

RAN3 chair (Huawei): no TU available in RAN3,, so better come back in Dec.17

Nokia: supports RAN3 chair

RAN chair: is the new RAN3 chair also ok to postpone the WI proposal to Dec.17?

new RAN3 chair (Ericsson): ok

Decision: The document was **postponed**.

10.1.4 led by RAN4 (not spectrum related)

RP-170940 **Motivation for new WI on Performance requirements of interference cancellation receiver for LTE BS**
Source: China Telecom, Huawei

Decision: The document was **not treated**.

RP-170939 **New WID on performance requirements of interference cancellation receiver for LTE BS**
Source: China Telecom, Huawei

Abstract:

new WI for LTE only; leading WG: RAN4; follow-up WI of REL-15 SI FS_LTE_IC_BS (RAN #75: SI was 65% complete)

Decision: The document was **revised to RP-171411**.

Samsung Exhibit 1025, Page 1665 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171411 **New WID on performance requirements of interference cancellation receiver for LTE BS**
Source: China Telecom, Huawei

(Replaces RP-170939)

Abstract:

new WI for LTE only; leading WG: RAN4; follow-up WI of REL-15 SI FS_LTE_IC_BS

Decision: The document was **approved**.

RP-170976 **Motivation for new Work Item on network based CRS mitigation for LTE**
Source: Ericsson

Abstract:

Motivation for new Work Item on network based CRS mitigation for LTE

Decision: The document was **not treated**.

RP-170977 **New Work Item on UE requirements for network-based CRS mitigation for LTE**
Source: Ericsson

Abstract:

new WI for LTE; leading WG: RAN4;

Decision: The document was **revised to RP-171408**.

RP-171408 **New Work Item on UE requirements for network-based CRS mitigation for LTE**
Source: Ericsson

(Replaces RP-170977)

Abstract:

new WI for LTE; leading WG: RAN4;

Discussion:

Nokia: problem with LS sentence sending to other groups, this is business as usual

Mediatek: we wanted this sentence as bigger impact is expected

Ericsson: it was a compromise to have the note

Decision: The document was **approved**.

RP-171015 **Motivation for WI: LTE CRS-IM Performance Requirements for Single RX Chain UEs**
Source: Intel Corporation

Decision: The document was **not treated**.

RP-171014 **New WI Proposal: LTE CRS-IM Performance Requirements for Single RX Chain UEs**
Source: Intel Corporation

Abstract:

new WI for LTE only; leading WG: RAN4; CRS = Cell-specific Reference Signal; IM = Interference Mitigation; only Perf. part (detailed CRS-IM solutions will not be standardized)

Samsung Exhibit 1025, Page 1666 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **revised to RP-171465**.

RP-171465 **New WI Proposal: LTE CRS-IM Performance Requirements for Single RX Chain UEs**
Source: Intel Corporation

(Replaces RP-171014)

Abstract:

new WI for LTE only; leading WG: RAN4; CRS = Cell-specific Reference Signal; IM = Interference Mitigation; only Perf. part (detailed CRS-IM solutions will not be standardized)

Decision: The document was **approved**.

RP-171017 **Motivation for SI: Study on Advanced Receivers LTE V2X**
Source: Intel Corporation

Decision: The document was **not treated**.

RP-171016 **New SI proposal: Study on Advanced Receivers for LTE V2X**
Source: Intel Corporation

Abstract:

new SI for LTE only; leading WG: RAN4

Decision: The document was **not treated**.

RP-171023 **Motivation for SI: Enhanced Carrier Aggregation Mobility**
Source: Intel Corporation

Abstract:

In order to improve the mobility procedure for CA UEs to maintain the high date rate traffic during handover procedure, the study item of enhanced carrier aggregation mobility is therefore proposed for this purpose

Decision: The document was **not treated**.

RP-171022 **New SI Proposal: Enhanced LTE Carrier Aggregation Mobility**
Source: Intel Corporation

Abstract:

new SI for LTE only; leading WG: RAN4

Decision: The document was **not treated**.

RP-171125 **Motivation for new work item on LTE DL 8Rx antenna ports**
Source: Huawei, HiSilicon

Decision: The document was **not treated**.

RP-171124 **New WI proposal: LTE DL 8Rx antenna ports**
Source: Huawei, HiSilicon

Abstract:

Samsung Exhibit 1025, Page 1667 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

new WI for LTE only; leading WG: RAN4; compare: REL-12 WI LTE_UL_8Rx-Perf and REL-13 WI LTE_4Rx_AP_DL

Discussion:

conclusion: revised to create a SI

Decision: The document was **revised to RP-171491**.

RP-171491 **New SW proposal: Study on LTE DL 8Rx antenna ports**
Source: Huawei, HiSilicon

(Replaces RP-171124)

Abstract:

new WI for LTE only; leading WG: RAN4; compare: REL-12 WI LTE_UL_8Rx-Perf and REL-13 WI LTE_4Rx_AP_DL

Discussion:

MCC: leading WG RAN4 needs to be indicated (revision at RAN #77 needed)

Decision: The document was **approved**.

RP-171147 **Motivation for New Work Item on Lower Complexity Higher Order MIMO for LTE**
Source: Qualcomm Incorporated

Abstract:

Motivation paper for our proposal on enabling a simpler implementation of higher order receive diversity

Decision: The document was **not treated**.

RP-171145 **New Work Item: Lower Complexity Higher Order MIMO for LTE**
Source: Qualcomm Incorporated

Abstract:

new WI for LTE; leading WG: RAN4; on lower complexity Higher Order MIMO, proposal to define requirements to enable a simpler and cheaper implementation of higher order receive diversity (4Rx)

Decision: The document was **revised to RP-171486**.

RP-171486 **New Work Item: Lower Complexity Higher Order MIMO for LTE**
Source: Qualcomm Incorporated

(Replaces RP-171145)

Abstract:

new WI for LTE; leading WG: RAN4;

Decision: The document was **not treated**.

RP-171181 **Legacy UE protection for Lean Carrier**
Source: MediaTek Inc.

Discussion:

Samsung Exhibit 1025, Page 1668 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Proposal 1: Solutions for network-based CRS mitigation support in legacy devices need to be first identified in a RAN1-led Study Item.

Proposal 2: Solutions identified for Network-based CRS mitigation with no impact on legacy devices can be specified in a RAN1-led working item.

Decision: The document was **not treated**.

RP-171454 **Way forward on new proposals in RAN4**
Source: RAN4 vice-chairman (Huawei)

Discussion:

RAN4 vice-chairman: SKT was not taking part in the offline discussion so we need to check with them

Qualcomm: we should split spectrum and non-spectrum WIs, we have a problem with the CRS WI as we do not see a benefit (but power consumption could be problematic)

Vodafone: do not submit Tdocs with companies in [ ] in the source field

RAN4 vice-chair: as indicated on slide 6 the 3.3.-3.4GHz topic needs further discussion

RAN chair: any other issues than CRS and 3.3.-3.4GHz?

conclusion:

Decision: The document was **endorsed**.

10.1.5 led by RAN4 (spectrum related)

RP-170962 **New WID: LTE Advanced intra-band Carrier Aggregation Rel-15 for xDL/yUL including contiguous and non-contiguous spectrum**
Source: Ericsson

Abstract:

new WI for LTE; leading WG: RAN4; basket CA WI as follow-up of REL-14 WI LTE_CA_R14_intra

Discussion:

note: Core part target has to be the end of REL-15 which is June 18 as this is a basket WI of REL-15; this will be corrected in the workplan and has to be corrected in the WID at RAN #77

Decision: The document was **approved**.

RP-171002 **Motivation for necessity dual uplink intra-band non-contiguous CA_7A-7A with operator specific holding spectrum restriction**
Source: SK Telecom, LG Electronics

Abstract:

Motivation to include 2UL_NC-CA_7A-7A into the corresponding Rel-15 revised basket CA WID with operator specific holding spectrum restriction; moved from AI 10.5.1 to AI 10.1.5

Decision: The document was **not treated**.

RP-171026 **New WID: LTE Advanced inter-band Carrier Aggregation Rel-15 for 2DL/1UL**
Source: Qualcomm Incorporated

Abstract:

new WI for LTE; leading WG: RAN4; basket CA WI as follow-up of REL-14 WI LTE_CA_R14_2DL1UL

Samsung Exhibit 1025, Page 1669 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

RP-171126 **New WID proposal: LTE Advanced inter-band CA Rel-15 for 3DL/1UL**
Source: Huawei, HiSilicon

Abstract:

moved from AI 10.1.4 to AI 10.1.5; new WI for LTE only; leading WG: RAN4; basket CA WI as follow-up of REL-14 WI LTE_CA_R14_3DL1UL

Decision: The document was **approved**.

RP-170963 **New WID: LTE Advanced inter-band Carrier Aggregation Rel-15 for 4DL/1UL**
Source: Ericsson

Abstract:

new WI for LTE; leading WG: RAN4; basket CA WI as follow-up of REL-14 WI LTE_CA_R14_4DL1UL

Discussion:

note: Core part target has to be the end of REL-15 which is June 18 as this is a basket WI of REL-15; this will be corrected in the workplan and has to be corrected in the WID at RAN #77

Decision: The document was **approved**.

RP-170935 **New WI: LTE Advanced inter-band CA Rel-15 for 5DL/1UL**
Source: Nokia

Abstract:

new WI for LTE; leading WG: RAN4; basket CA WI as follow-up of REL-14 WI LTE_CA_R14_5DL1UL

Decision: The document was **revised to RP-171466**.

RP-171466 **New WI: LTE Advanced inter-band CA Rel-15 for 5DL/1UL**
Source: Nokia

(Replaces RP-170935)

Abstract:

new WI for LTE; leading WG: RAN4; basket CA WI as follow-up of REL-14 WI LTE_CA_R14_5DL1UL

Discussion:

Nokia: 1A_3A_7A_40C was removed

Decision: The document was **approved**.

RP-171127 **New WID proposal: LTE Advanced inter-band CA Rel-15 for 2DL/2UL**
Source: Huawei, HiSilicon

Abstract:

moved from AI 10.1.4 to AI 10.1.5; new WI for LTE only; leading WG: RAN4; basket CA WI as follow-up of REL-14 WI LTE_CA_R14_2DL2UL

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1670 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-170946 **New WID: LTE Advanced inter-band CA for xDL/2UL with x=3,4,5 in Rel-15**
Source: LG Electronics Inc.

Abstract:

new WI for LTE; leading WG: RAN4; basket CA WI as follow-up of REL-14 WI LTE_CA_R14_xDL2UL

Discussion:

note: Core part target has to be the end of REL-15 which is June 18 as this is a basket WI of REL-15; this will be corrected in the workplan and has to be corrected in the WID at RAN #77

Decision: The document was **approved**.

RP-171121 **Motivation for new work item on high power UE for LTE band 42 (power class 2)**
Source: Huawei, HiSilicon

Decision: The document was **not treated**.

RP-171120 **New work item proposal: high power UE for LTE band 42 (power class 2)**
Source: Huawei, HiSilicon

Abstract:

new WI for LTE only; leading WG: RAN4; compare REL-11 LTE_B14_PSBB_HPUE-Core, REL-14 WI LTE_B41_UE_PC2

Decision: The document was **revised to RP-171492**.

RP-171492 **New WID: LTE Advanced high power TDD UE (power class 2)**
Source: Huawei, HiSilicon

(Replaces RP-171120)

Abstract:

new WI for LTE only; leading WG: RAN4

Discussion:

RAN4 vice-chairman (Huawei): African band is not yet covered here as we have no band number yet but as it is a basket WI it can be easily added later

Mediatek: band 42 may also be used for NR

Decision: The document was **approved**.

RP-171219 **Motivation High Power UE in Band 38**
Source: VODAFONE Group Plc

Decision: The document was **not treated**.

RP-171220 **New WI proposal: High Power UE for LTE Band 38**
Source: VODAFONE Group Plc

Abstract:

new WI for LTE only; leading WG: RAN4; compare REL-11 LTE_B14_PSBB_HPUE-Core, REL-14 WI LTE_B41_UE_PC2

Samsung Exhibit 1025, Page 1671 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **not treated**.

RP-171047 **New work item proposal: High Power UE for LTE Band 40 (power class 2)**
Source: Reliance Jio

Abstract:

new WI for LTE only; leading WG: RAN4; moved from AI 10.1.4 to AI 10.1.5

Decision: The document was **not treated**.

RP-171123 **Motivation for new work item on new LTE band for 3.3-3.4 GHz for Africa**
Source: Huawei, HiSilicon

Decision: The document was **not treated**.

RP-171122 **New WI proposal: new LTE band for 3.3-3.4 GHz for Africa**
Source: Huawei, HiSilicon

Abstract:

new WI for LTE only; leading WG: RAN4; compare LSin RP-170890

Discussion:

Ericsson: we have already band 42 and band 43, we need to check band harmonization, so either approving it with studying the band first or doing WI approval

ZTE: seems to have also high power as well which will now be covered in the new basket WI on high power UEs

RAN4 vice-chair: we should remove the high power aspect

Ericsson: we still need to check the band arrangement

Vodafone: understands that they want this band arrangement

conclusion: high power aspect will be removed (covered in a different WI), can still discuss offline the band arrangement aspect

Decision: The document was **revised to RP-171495**.

RP-171495 **New WI proposal: new LTE band for 3.3-3.4 GHz for Africa**
Source: Huawei, HiSilicon

(Replaces RP-171122)

Abstract:

new WI for LTE only; leading WG: RAN4; compare LSin RP-170890

Discussion:

ZTE: last sentence section 3 should be removed

Hauwei: can do this

conclusion: last sentence in section 3 will be removed

Decision: The document was **revised to RP-171506**.

Samsung Exhibit 1025, Page 1672 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171506 **New WI proposal: new LTE band for 3.3-3.4 GHz for Africa**
Source: Huawei, HiSilicon

(Replaces RP-171495)

Abstract:

new WI for LTE only; leading WG: RAN4; compare LSin RP-170890

Decision: The document was **approved**.

RP-171131 **New work item proposal: Introduction of new band support for 4Rx antenna ports for LTE for Rel-15**
Source: Huawei, HiSilicon

Abstract:

new WI for LTE only; leading WG: RAN4; basket WI as follow-up WI of REL-14 WI LTE_4Rx_AP_DL_bands-Core which had no Perf. part

Decision: The document was **approved**.

RP-171132 **New WID Proposal: Addition of band 28 and 40 to LTE MTC Cat.0**
Source: Huawei, HiSilicon

Abstract:

new WI for LTE only; leading WG: RAN4; compare REL-14 WI LC_MTC_LTE_cat0_B25_B26-Core

Decision: The document was **approved**.

10.2 Open REL-13 LTE SIs

10.2.1 Study on multi-node testing for LAA [FS_LTE_LAA_multinode_test]

RP-170877 **LS to related to PD & ED issues (IEEE_802_LMSC_LS170322; to: RAN, RAN1, RAN4; cc: -; contact: Chairman IEEE 802 LMSC)**
Source: IEEE 802 LMSC

Abstract:

ED = energy detection (threshold); PD = preamble detection (threshold); no explicit RAN action requested

Discussion:

RAN1 answered this LSin in RP-170894

conclusion: Qualcomm drafted an additional LS answer from RAN in RP-171029

Decision: The document was **replied to**.

RP-170894 **Response to IEEE_802_LMSC_LS170322 = RP-170877 related to PD and ED issues (R1-1709855; to: IEEE 802 LMSC, RAN; cc: -; contact: Qualcomm)**
Source: RAN1

Abstract:

no RAN action requested

Discussion:

Samsung Exhibit 1025, Page 1673 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-171029 **Draft Response LS to IEEE_802_LMSC_LS170322 = RP-170877 related to PD and ED issues (to: IEEE 802 LMSC; cc: RAN1, RAN4; contact: Qualcomm)**
Source: Qualcomm Incorporated

Discussion:

MCC: is this an addition to RP-170894 ?

Qualcomm: there was one question that RAN1 left to RAN to answer it and this is a proposal how to answer it;

Broadcom: we should discuss status of the SI first before we decide to send this LS

RAN chair: is the rest agreeable? seems so

conclusion: we will see outcome of SI discussion on RAN4 testing before we approve RP-171455

Decision: The document was **revised to RP-171455**.

RP-171455 **Draft Response LS to IEEE_802_LMSC_LS170322 = RP-170877 related to PD and ED issues (to: IEEE 802 LMSC; cc: RAN1, RAN4; contact: Qualcomm)**
Source: Qualcomm Incorporated

(Replaces RP-171029)

Discussion:

CableLabs: "The execution of ..." and next paragraph should be removed

Qualcomm: if we remove the 2 paragraphs we would not answer the IEEE questions (2nd and 3rd bullet of IEEE questions)

RAN chair: is there an alternative text that CableLabs would propose?

Decision: The document was **revised to RP-171482**.

RP-171482 **Response LS to IEEE_802_LMSC_LS170322 = RP-170877 related to PD and ED issues (to: IEEE 802 LMSC; cc: RAN1, RAN4; contact: Qualcomm)**
Source: RAN

(Replaces RP-171455)

Abstract:

ED = energy detection (threshold); PD = preamble detection (threshold)

Discussion:

compare also RP-170894

Decision: The document was **approved**.

RP-170878 **LS on IEEE 802 response to 3GPP RAN1 LS dated November 2016 (R1-1613770) (IEEE_802_LMSC_LS170322b; to: RAN, RAN1; cc: IEEE 802.11 WG, IEEE 802.19 Coexistence WG; contact: Chairman IEEE 802 LMSC)**
Source: IEEE 802 LMSC

Abstract:

Samsung Exhibit 1025, Page 1674 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

no explicit RAN action requested

Discussion:

RAN1 answered this LSin in RP-170893

Decision: The document was **noted**.

RP-170893 **Response LS to IEEE_802_LMSC_LS170322b = RP-170878 regarding LAA (R1-1709854; to: IEEE 802 LMSC, RAN; cc: -; contact: Qualcomm)**
Source: RAN1

Abstract:

LMSC = Local and Metropolitan Area Network Standards Committee; no RAN action requested

Discussion:

is actually a joint response from RAN1 and RAN4

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-171077 **Status report for SI: Study on Multi-node testing for LAA; rapporteur: Huawei**
Source: RAN4

Discussion:

MCC: status report with values in [ ] is unacceptable, revision required

Huawei: after offline discussion we concluded that the SI is 100% complete

NEC: all open issues solved?

Huawei: yes

Decision: The document was **revised to RP-171456**.

RP-171456 **Status report for SI: Study on Multi-node testing for LAA; rapporteur: Huawei**
Source: RAN4

(Replaces RP-171077)

Discussion:

conclusion: approved: 100%, June 17; SI completed

Broadcom: what is the plan regarding moving this topic to a normative state?

CableLabs: would support to have normative WI on this

RAN chair: was this discussed in RAN4?

Ericsson: there is no such an agreement in RAN4

RAN chair: so we close the SI and is no normative WI available so far

Qualcomm: this is contribution driven and not up to RAN4 to

CableLabs: we should also capture this in the IEEE LS that no normative WI is planned

Qualcomm: we should say that there is no normative WI now

RAN chair: can be done in the LSout RP-171455

Samsung Exhibit 1025, Page 1675 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **noted**.

RP-171143 **Summary of email discussions on remaining issues for multi-node tests**
Source: Ericsson, Qualcomm, Huawei, HiSilicon, Nokia, Alcatel-Lucent, Shanghai Bell, Verizon, AT&T, US Cellular, Vodafone, Skyworks, T-Mobile USA, MediaTek, Broadcom, Blackberry, CableLabs, Brocade, Blackberry, Orange, Hewlett Packard Enterprise

Abstract:

This document collects the input from different companies in the email discussions on the open issues related to multi-node tests.

Discussion:

MCC: is this documentation of what happened already in RAN4 or are there remaining open issues?

Ericsson: is a documentation of what happened after the RAN4 meeting

Decision: The document was **noted**.

RP-171146 **TR 36.789 v1.0.0 on Study on multi-node testing for license-assisted access (LAA); for approval**
36.789 v1.0.0
Source: Ericsson, Qualcomm, Huawei, HiSilicon, Nokia, Alcatel-Lucent, Shanghai Bell, Verizon, AT&T, US Cellular, Vodafone, Skyworks, T-Mobile USA, MediaTek, Broadcom, Blackberry, CableLabs, Brocade, Blackberry, Orange, Hewlett Packard Enterprise

Abstract:

RAN4 TR 36.789 is provided for 1-step approval

Discussion:

MCC: Is the SI completed or not?

Ericsson: all work is done

Blackberry: is there something missing?

RAN chair: check offlline

Ericsson: nothing was missing, this was checked with Blackberry

Decision: The document was **approved**.

10.3 Open REL-14 LTE WIs (not spectrum related)

10.3.1 Perf. part: Enhanced LAA for LTE [LTE_eLAA-Perf]

RP-171040 **Status Report for WI Perf. part: Enhanced LAA for LTE; rapporteur: Ericsson**
Source: RAN4

Abstract:

wrong Tdoc type in Tdoc request

Decision: The document was **revised to RP-171401**.

RP-171401 **Status Report for WI Perf. part: Enhanced LAA for LTE; rapporteur: Ericsson**
Source: RAN4

(Replaces RP-171040)

Samsung Exhibit 1025, Page 1676 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Abstract:

Excel list added

Discussion:

MCC: late submission, target date change

conclusion: approved: Perf.: 50%, Sep.17

Decision: The document was **noted**.

RP-171255 **RAN4 CRs to Perf. part: Enhanced LAA for LTE**
Source: RAN4

Decision: The document was **approved**.

10.3.2 Perf. part: Support for V2V services based on LTE sidelink [LTE_SL_V2V-Perf]

RP-170984 **Status report of WI Perf. part: Support for V2V services based on LTE sidelink; rapporteur: LG Electronics**
Source: RAN4

Discussion:

conclusion: approved: Perf.: 100%, June 17; Perf. part completed

Decision: The document was **noted**.

RP-171256 **RAN4 CRs to Perf. part: Support for V2V services based on LTE sidelink**
Source: RAN4

Decision: The document was **approved**.

10.3.3 Perf. Part: Performance enhancements for high speed scenario in LTE [LTE_high_speed-Perf]

RP-171038 **Status report for WI: Perf. part: Performance enhancements for high speed scenario in LTE; rapporteur: NTT DOCOMO**
Source: RAN4

Discussion:

conclusion: approved: Perf.: 100%, June 17; Perf. part completed

Decision: The document was **noted**.

RP-171257 **RAN4 CRs to Perf. Part: Performance enhancements for high speed scenario in LTE**
Source: RAN4

Discussion:

Note: It turned out after RAN #76, that RP-171257 includes some CRs that are superseded already by higher revisions (also included in RP-171257), this means the status of RP-171257 was corrected from approved to partially approved because the CRs R4-1704194, R4-1704195, R4-1704248, R4-1704249 are withdrawn (WG status corrected to "revised").

Samsung Exhibit 1025, Page 1677 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **partially approved**.

RP-171039 **Revised WID for Performance enhancements for high speed scenario in LTE**
Source: NTT DOCOMO, INC., Huawei, HiSilicon

Abstract:

moved from AI 10.7.4 to AI 10.3.3; last approved WID: RP-160172

Decision: The document was **approved**.

10.3.4 Core part: Radiated perf. req. for the verification of multi-antenna reception of UEs in LTE [LTE_MIMO_OTA-Core]

RP-170895 **LS on MIMO OTA progress (R4-1705922; to: GCF CAG, GCF PAG, CTIA MOSG, CCSA; cc: RAN5, RAN; contact: Intel)**
Source: RAN4

Abstract:

no RAN action requested

Discussion:

conclusion: no LS answer

Decision: The document was **noted**.

RP-171018 **Status report of WI Core part: Radiated performance requirements for the verification of multi-antenna reception of UEs in LTE; rapporteur: Intel**
Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

MCC: This Core part had already one exception and achieved so far just 50% in 15 months, are we confident that the other 50% can be achieved in 3 months?

RAN chair: continuation is planned in the RAN4 time budget for the future? yes

conclusion: approved: Core: 50%, Sep.17

Decision: The document was **noted**.

RP-171258 **RAN4 CRs to Radiated performance requirements for the verification of multi-antenna reception of UEs in LTE**
Source: RAN4

Discussion:

MCC: CR set should only be approved if WI can really be completed by Sep.17 as if we move it to the next REL i Sep.17 all these CRs would have to be deimplemented

RAN chair: so you better complete the WI by Sep.17

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1678 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171019 **Exception for WI Core part: Radiated performance requirements for the verification of multi-antenna reception of UEs in LTE**
Source: Intel Corporation

Abstract:

RAN #75 approved already an exception in RP-170277

Decision: The document was **approved**.

10.3.5 Perf. part: Enhancements on FD-MIMO for LTE [LTE_eFDMIMO-Perf]

RP-170989 **Status report for WI: Perf. part: Enhancement on Full-Dimension (FD) MIMO for LTE; rapporteur:Samsung**
Source: RAN4

Abstract:

RAN4 TU change

Decision: The document was **revised to RP-171431**.

RP-171431 **Status report for WI: Perf. part: Enhancement on Full-Dimension (FD) MIMO for LTE; rapporteur:Samsung**
Source: RAN4

(Replaces RP-170989)

Discussion:

MCC: late submission

conclusion: approved: Perf.: 50%, Sep.17

Decision: The document was **noted**.

10.3.6 Perf. part: Further mobility enhancements in LTE [LTE_eMob-Perf]

RP-171041 **Status report of WI Perf. part: Further mobility enhancements in LTE; rapporteur: ZTE**
Source: RAN4

Discussion:

conclusion: approved: Perf.: 100%, June 17; Perf. part is completed

Decision: The document was **noted**.

RP-171259 **RAN4 CRs to Perf. part: Further mobility enhancements in LTE**
Source: RAN4

Decision: The document was **approved**.

10.3.7 Perf. part: Uplink Capacity Enhancements for LTE [LTE_UL_CAP_enh-Perf]

RP-170966 **Status report for WI Perf. part: Uplink Capacity Enhancements for LTE; rapporteur: Ericsson**
Source: RAN4

Samsung Exhibit 1025, Page 1679 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **revised to RP-171457**.

RP-171457 **Status report for WI Perf. part: Uplink Capacity Enhancements for LTE; rapporteur: Ericsson**
Source: RAN4

(Replaces RP-170966)

Discussion:

MCC: late submission

conclusion: approved: Perf.: 75%, Sep.17

Decision: The document was **noted**.

RP-171260 **RAN4 CRs to Perf. part: Uplink Capacity Enhancements for LTE**
Source: RAN4

Decision: The document was **approved**.

10.3.8 eMBMS enhancements for LTE [MBMS_LTE_enh2]

RP-170978 **Status report for WI eMBMS enhancements for LTE; rapporteur: Ericsson**
Source: RAN1

Abstract:

Core part exception granted until June 17

Discussion:

MCC: only use integer values for the % complete please; this WI had already one exception promising completion by RAN #76; target date change;

conclusion: approved: Core: 97%, Sep.17; Perf.: 70%, Sep.17

Decision: The document was **noted**.

RP-171195 **Maintenance of Rel-14 eMBMS enhancements for LTE**
Source: RAN1

Decision: The document was **approved**.

RP-171221 **RAN2 CRs to eMBMS enhancements for LTE**
Source: RAN2

Discussion:

MCC: CR set should only be approved if a 2nd exception is granted and the WI can be completed by Sep.17

Decision: The document was **approved**.

RP-171261 **RAN4 CRs to eMBMS enhancements for LTE**
Source: RAN4

Discussion:

MCC: CR set should only be approved if a 2nd exception is granted and the WI can be completed by Sep.17

Samsung Exhibit 1025, Page 1680 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

RP-171169 **FeMBMS/unicast-mixed carrier flag in measurement object**
36.331 CR-2958 Cat: C (Rel-14) v14.2.2
Source: Qualcomm Incorporated

Abstract:

company CR to RAN2 TS 36.331;

Discussion:

MCC: this CR was not seen in RAN2, it is related to a decision made in RAN4 (related to way forward R4-1706012) which requires an ASN.1 change; this CR is also relevant for exception request RP-170979

Nokia: was this discussed in RAN WGs?

Qualcomm: was a company CR

Decision: The document was **approved**.

RP-171191 **Inter-site synchronization requirements for eMBMS**
Source: Huawei, HiSilicon

Abstract:

motivation for this Tdoc: one company considered the synchronization requirement is not in the scope of this WI but should be defined in TEI

Discussion:

Proposal: RAN should task RAN4 to specify the inter-cell synchronization requirement for 200us CP length for eMBMS enhancement under either the WID of eMBMS enhancement or under TEI.

Ericsson: we had a discussion in the past to do this under TEI, MBMS does not need this requirement;

RAN chair: TEI is usually not a clean approach, we should use it for things that affect 1 WG in 1 quarter;

Huawei: we are fine either way

Qualcomm: preference for TEI, feature works without it

conclusion: work will be done under TEI14 with the understanding that this happens in the next quarter

Decision: The document was **noted**.

RP-170979 **WI exception request for Core part: eMBMS enhancement for LTE**
Source: Ericsson

Abstract:

RAN #75 approved already an exception in RP-170201; RAN2 open issue can be solved by approving company CR RP-171169, afterwards the only open issue is in RAN4 (RRM requirements in unicast subframes in FeMBMS mixed and dedicated cells) which requires signalling of RP-171169

Discussion:

Huawei: we have a related Tdoc in RP-171191

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1681 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.3.9 Perf. part: SRS switching between LTE component carriers [LTE_SRS_switch-Perf]

RP-171074 **Status report for WI Perf. Part: SRS (sounding reference signal) switching between LTE component carriers, rapporteur: Huawei**
Source: RAN4

Discussion:

conclusion: approved: Perf.: 100%, June 17; Perf. part WI is completed

Decision: The document was **noted**.

RP-171262 **RAN4 CRs to Perf. part: SRS switching between LTE component carriers**
Source: RAN4

Decision: The document was **approved**.

10.3.10 Perf. part: Downlink Multiuser Superposition Transmission for LTE [LTE_MUST-Perf]

RP-171178 **Status Report for WI: Perf. part: Downlink Multiuser Superposition Transmission for LTE; rapporteur: MediaTek**
Source: RAN4

Discussion:

conclusion: approved: Perf.: 100%, June 17; Perf. part WI is completed

Decision: The document was **noted**.

RP-171263 **RAN4 CRs to Perf. part: Downlink Multiuser Superposition Transmission for LTE**
Source: RAN4

Decision: The document was **approved**.

10.3.11 LTE Measurement Gap Enhancement [LTE_meas_gap_enh]

RP-171024 **Status report of WI: Measurement gap enhancement for LTE; rapporteur: Intel**
Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

RP-171222 **RAN2 CRs to LTE Measurement Gap Enhancement**
Source: RAN2

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1682 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171264 **RAN4 CRs to LTE Measurement Gap Enhancement**
Source: RAN4

Decision: The document was **approved**.

RP-171330 **WI summary for WI Core part: LTE Measurement Gap Enhancement**
Source: Intel

Abstract:

late request

Decision: The document was **noted**.

10.3.12 Perf. part: LTE-based V2X Services [LTE_V2X-Perf]

RP-170985 **Status report of WI Perf. part: LTE-based V2X Services; rapporteur: LG Electronics**
Source: RAN4

Discussion:

conclusion: approved: Perf.: 75%, Sep.17

Decision: The document was **noted**.

RP-171265 **RAN4 CRs to Perf. part: LTE-based V2X Services**
Source: RAN4

Decision: The document was **approved**.

10.3.13 Further enhanced MTC for LTE [LTE_feMTC]

RP-171175 **Status report of WI Further enhanced MTC for LTE; rapporteur: Ericsson**
Source: RAN1

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 35%, Dec.17; Core part WI completed

Decision: The document was **noted**.

RP-171204 **Maintenance of Rel-14 FeMTC**
Source: RAN1

Decision: The document was **approved**.

RP-171223 **RAN2 CRs to Further enhanced MTC for LTE**
Source: RAN2

Decision: The document was **approved**.

RP-171266 **RAN4 CRs to Further enhanced MTC for LTE**
Source: RAN4

Samsung Exhibit 1025, Page 1683 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

RP-171177 **Summary for WI Further enhanced MTC for LTE**
Source: Ericsson LM

Decision: The document was **revised to RP-171441**.

RP-171441 **Summary for WI Further enhanced MTC for LTE**
Source: Ericsson LM

(Replaces RP-171177)

Decision: The document was **noted**.

10.3.14 Enhancements of NB-IoT [NB_IOTenh-Core]

RP-171059 **Status report for WI: Enhancements of NB-IoT; rapporteur: Huawei**
Source: RAN1

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 50%, Dec.17; Core part WI is completed

Decision: The document was **noted**.

RP-171205 **Maintenance of Rel-14 NB-IoT enhancements for LTE**
Source: RAN1

Decision: The document was **approved**.

RP-171224 **RAN2 CRs to Enhancements of NB-IoT**
Source: RAN2

Decision: The document was **approved**.

RP-171323 **Enhancements of NB-IoT**
Source: RAN3

Decision: The document was **approved**.

RP-171267 **RAN4 CRs to Enhancements of NB-IoT**
Source: RAN4

Discussion:

Note: It turned out after RAN #76, that RP-171267 includes some CRs that are superseded already by higher revisions (also included in RP-171267), this means the status of RP-171267 was corrected from approved to partially approved because the CRs R4-1704253, R4-1703616 are withdrawn (WG status corrected to "revised").

Decision: The document was **partially approved**.

Samsung Exhibit 1025, Page 1684 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171218 **On the UL power control of NPRACH in NB-IoT**
Source: Ericsson India Private Limited

Discussion:

Proposal: RAN1 is tasked to present a solution to the identified issues at RAN#77 in the scope of NB-IoT Release 14.

Ericsson: related to ongoing RAN1 email discussion, we should look at it for REL-14 and not REL-13

Huawei: (Wed of RAN #76) RAN1 chair allowed for another day of email discussion

Samsung: supports Ericsson

MCC: would this be a cat.F or cat.B CR?

Ericsson: cat.F

RAN chair: if there is a CR we can see it in Sep.17

Decision: The document was **noted**.

RP-171060 **Revision of WI: Enhancements of NB-IoT**
Source: Huawei, HiSilicon

Abstract:

last approved WID: RP-161901

Decision: The document was **approved**.

RP-171061 **Work Item completion summary for enhancements of NB-IoT**
Source: Huawei, HiSilicon

Decision: The document was **noted**.

10.3.15 Perf. part: 4 RX antenna ports with CA for LTE DL [LTE_4Rx_AP_DL_CA-Perf]

RP-170957 **Status Report of WI: Perf. part 4 receiver (RX) antenna ports with Carrier Aggregation (CA) for LTE downlink (DL); rapporteur: Ericsson**
Source: RAN4

Discussion:

conclusion: approved: Perf.: 90%, Sep.17

Decision: The document was **noted**.

RP-171268 **RAN4 CRs to Perf. part: 4 receiver (RX) antenna ports with Carrier Aggregation (CA) for LTE downlink (DL)**
Source: RAN4

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1685 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.3.16 Requirements for a new UE cat. with single receiver based on Cat.1 for LTE [LTE_UE_cat_1RX]

RP-171148 **Status report for WI Requirements for a new UE category with single receiver based on Category 1 for LTE; rapporteur: Qualcomm**
Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core & Perf. part WI are completed

Decision: The document was **noted**.

RP-171269 **RAN4 CRs to Requirements for a new UE category with single receiver based on Category 1 for LTE**
Source: RAN4

Discussion:

Note: It turned out after RAN #76, that RP-171269 includes some CRs that are superseded already by higher revisions (also included in RP-171269), this means the status of RP-171269 was corrected from approved to partially approved because the CRs R4-1704123, R4-1704125 are withdrawn (WG status corrected to "revised").

Decision: The document was **partially approved**.

RP-171149 **Revision of WID: Requirements for a new UE category with single receiver based on Category 1 for LTE**
Source: Qualcomm Incorporated

Abstract:

last approved WID: RP-170791

Discussion:

related to RP-171048

Decision: The document was **approved**.

RP-171048 **Addition of Band 28 UE category 1bis into TS 36.101**
36.101 CR-4379 rev 1 Cat: B (Rel-14) v14.3.0
Source: Telstra Corporation Limited

Abstract:

moved from AI 10.9 to AI 10.3.16; company CR; RAN4 endorsed R4-1704512 for this but as band 28 is not covered in WID RP-170791 the CR was not agreed in RAN4; a WID revision will be provided in RP-171149 in order to allow approval of this company CR

Decision: The document was **approved**.

RP-171317 **WI summary for WI Core part: Requirements for a new UE category with single receiver based on Category 1 for LTE**
Source: Qualcomm

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1686 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.3.17 Perf. part: Enh. CRS and SU-MIMO Interf. Mitigation Perf. Requirements for LTE [LTE_eCRSIM_eSUMIMO-Perf]

RP-171013 **Status report of WI: Perf. part: Enhanced CRS and SU-MIMO Interference Mitigation Performance Requirements for LTE; rapporteur: Intel**
Source: RAN4

Discussion:

conclusion: approved: Perf.: 85%, Sep.17

Decision: The document was **noted**.

RP-171144 **TR 36.747 v1.0.0 on Enhanced CRS and 4Rx SU-MIMO Interference Mitigation Performance Requirements for LTE; for information**
36.747 v1.0.0
Source: Huawei

Abstract:

RAN4 TR 36.747 v1.0.0 is provided for information.

Decision: The document was **noted**.

10.4 Open REL-14 LTE & UMTS WIs (not spectrum related)

10.4.1 Perf. part: Further Indoor Positioning Enh. for UTRA and LTE [UTRA_LTE_iPos_enh2-Perf]

RP-170948 **Status report of WI Perf. part: Further Indoor Positioning enhancements for UTRA and LTE; rapporteur: Huawei, NextNav**
Source: RAN4

Discussion:

conclusion: approved: Perf.: 100%, June 17; Perf. part is completed

Decision: The document was **noted**.

RP-171270 **RAN4 CRs to Perf. part: Further Indoor Positioning Enhancements for UTRA and LTE**
Source: RAN4

Decision: The document was **approved**.

10.4.2 Core part: LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Req. [LTE_UTRA_TRP_TRS-Core]

RP-171007 **Status Report of WI: Core part: LTE UE TRP and TRS and UTRA Hand Phantom related UE TRP and TRS Requirements; rapporteur: Telecom Italia**
Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

Samsung Exhibit 1025, Page 1687 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

MCC: this WI had already one exception promising completion by RAN #76; WI achieved 85% in 54 months (4,5 years), are we confident that the remaining 15% can be achieved in 3 months?

Telecom Italia: in the worst case that the work is not completed in Sep.17 the missing parts could split off so we would not need big deimplementation efforts

conclusion: approved: Core: 85%, Sep.17

Decision: The document was **noted**.

RP-171010 **Revised WID: LTE UE TRP and TRS and UTRA Hand Phantom related UE TRP and TRS Requirements**

Source: TELECOM ITALIA S.p.A.

Abstract:

last approved WID: RP-170222

Decision: The document was **approved**.

RP-171009 **Exception sheet of WI: Core part: LTE UE TRP and TRS and UTRA Hand Phantom related UE TRP and TRS Requirements**

Source: TELECOM ITALIA S.p.A.

Abstract:

RAN #75 approved already an exception in RP-170222

Decision: The document was **approved**.

RP-171271 **RAN4 CRs to Core part: LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Requirements**

Source: RAN4

Decision: The document was **approved**.

10.5 Open REL-14 LTE WIs (spectrum related)

10.5.1 LTE Advanced intra-band CA for xDL/yUL including contiguous and non-contiguous spectrum [LTE_CA_R14_intra]

RP-170958 **Status report of WI LTE Advanced intra-band CA for xDL/yUL including contiguous and non-contiguous spectrum; rapporteur: Ericsson**

Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

RP-171272 **RAN4 CRs to LTE Advanced intra-band CA for xDL/yUL including contiguous and non-contiguous spectrum**

Source: RAN4

Samsung Exhibit 1025, Page 1688 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

RP-170964 **TR 36.714-00-00 v1.0.0 on LTE Advanced intra-band Carrier Aggregation (CA) Rel-14 for x Down Link (DL) / y Up Link (UL) including contiguous and non-contiguous spectrum; for approval**
36.714-00-00 v1.0.0
Source: Ericsson

Abstract:

RAN4 TR 36.714-00-00 is provided for 1-step approval

Decision: The document was **approved**.

RP-170960 **Revised WID: Rel-14 Basket WI for LTE Advanced Intra-band CA including contiguous and non-contiguous spectrum**
Source: Ericsson

Abstract:

last approved WID: RP-170188.

Decision: The document was **approved**.

10.5.2 LTE Advanced inter-band CA Rel-14 for 2DL/1UL [LTE_CA_R14_2DL1UL]

RP-171027 **Status Report LTE Advanced inter-band CA Rel-14 for 2DL/1UL; rapporteur: Qualcomm**
Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

RP-171273 **RAN4 CRs to LTE Advanced inter-band CA Rel-14 for 2DL/1UL**
Source: RAN4

Decision: The document was **approved**.

RP-171028 **TR 36 714-02-01 v1.0.0 LTE Advanced intra-band Carrier Aggregation (CA) Rel-14 for 2 Down Link (DL) / 1 Up Link (UL); for approval**
36.714-02-01 v1.0.0
Source: Qualcomm Incorporated

Abstract:

RAN4 TR 36.714-02-01 is provided for 1-step approval

Decision: The document was **approved**.

RP-171025 **Revision of WID:LTE Advanced inter-band CA Rel-14 for 2DL1UL**
Source: Qualcomm Incorporated

Abstract:

Samsung Exhibit 1025, Page 1689 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

last approved WID: RP-170123; removing configurations that are moved to Rel-15 and updating status

Decision: The document was **approved**.

10.5.3 LTE Advanced inter-band CA Rel-14 for 3DL/1UL [LTE_CA_R14_3DL1UL]

RP-171081 **Status report for WI: LTE Advanced inter-band CA Rel-14 for 3DL/1UL; rapporteur: Huawei**
Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

RP-171274 **RAN4 CRs to LTE Advanced inter-band CA Rel-14 for 3DL/1UL**
Source: RAN4

Decision: The document was **approved**.

RP-170987 **TR 36.714-03-01 v1.0.0: LTE Advanced intra-band Carrier Aggregation (CA) Rel-14 for 3 Down Link (DL) / 1 Up Link (UL); for approval**
36.714-03-01 v1.0.0
Source: Huawei, HiSilicon

Abstract:

RAN4 TR 36.714-03-01 is provided for 1-step approval

Decision: The document was **approved**.

RP-171082 **Revised WID: LTE Advanced inter-band CA Rel-14 for 3DL/1UL**
Source: Huawei, HiSilicon

Abstract:

last approved WID: RP-170309

Decision: The document was **approved**.

10.5.4 LTE Advanced inter-band CA Rel-14 for 4DL/1UL [LTE_CA_R14_4DL1UL]

RP-170959 **Status report of WI LTE_CA_R14_4DL1UL; rapporteur: Ericsson**
Source: RAN4

Abstract:

Core part exception granted until June 17;

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1690 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171275 **RAN4 CRs to LTE Advanced inter-band CA Rel-14 for 4DL/1UL**
Source: RAN4

Decision: The document was **approved**.

RP-170965 **TR 36.714-04-01 v1.0.0 on LTE Advanced intra-band Carrier Aggregation (CA) Rel-14 for 4 Down Link (DL) / 1 Up Link (UL); for approval**
36.714-04-01 v1.0.0
Source: Ericsson

Abstract:

RAN4 TR 36.714-04-01 is provided for 1-step approval

Decision: The document was **approved**.

RP-170961 **Revised WID: Rel-14 Basket WI for LTE Advanced Inter-band CA Rel-14 for 4DL/1UL**
Source: Ericsson

Abstract:

last approved WID: RP-170189.

Decision: The document was **approved**.

10.5.5 LTE Advanced inter-band CA Rel-14 for 5DL/1UL [LTE_CA_R14_5DL1UL]

RP-170934 **Status Report of WI LTE Advanced inter-band CA Rel-14 for 5DL/1UL; Rapporteur: Nokia**
Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

RP-171276 **RAN4 CRs to LTE Advanced inter-band CA Rel-14 for 5DL/1UL**
Source: RAN4

Decision: The document was **approved**.

RP-170932 **TR 36.714-05-01 v1.0.0 on TE Advanced intra-band Carrier Aggregation (CA) Rel-14 for 5 Down Link (DL) / 1 Up Link (UL); for approval**
36.714-05-01 v1.0.0
Source: Nokia

Abstract:

RAN4 TR 36.714-05-01 is provided for 1-step approval

Decision: The document was **approved**.

RP-170933 **Revised WI: LTE Advanced inter-band CA Rel-14 for 5DL/1UL**
Source: Nokia

Samsung Exhibit 1025, Page 1691 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Abstract:

last approved WID: RP-170143

Decision: The document was **approved**.

10.5.6 LTE Advanced inter-band CA Rel-14 for 2DL/2UL [LTE_CA_R14_2DL2UL]

RP-171083 **Status report for WI: LTE Advanced inter-band CA Rel-14 for 2DL/2UL; rapporteur: Huawei**
Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

RP-171277 **RAN4 CRs to LTE Advanced inter-band CA Rel-14 for 2DL/2UL**
Source: RAN4

Decision: The document was **approved**.

RP-170951 **TR 36.714-02-02 v1.0.0:LTE Advanced intra-band Carrier Aggregation (CA) Rel-14 for 2 Down Link (DL) / 2 Up Link (UL); for approval**
36.714-02-02 v1.0.0
Source: Huawei Technologies France

Abstract:

RAN4 TR 36.714-02-02 is provided for 1-step approval

Decision: The document was **approved**.

RP-171084 **Revised WID: LTE Advanced inter-band CA Rel-14 for 2DL/2UL**
Source: Huawei, HiSilicon

Abstract:

last approved WID: RP-170312

Decision: The document was **approved**.

10.5.7 LTE Advanced inter-band CA Rel-14 for xDL/2UL with x=3,4,5 [LTE_CA_R14_xDL2UL]

RP-170943 **Status report for WI LTE Advanced inter-band CA Rel-14 for xDL/2UL with x=3,4,5; rapporteur: LG Electronics**
Source: RAN4

Abstract:

Core part exception granted until June 17; all proposed xDL/2UL CA band combinations were completed and specified in rel-14.

Discussion:

Samsung Exhibit 1025, Page 1692 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

RP-171278 **RAN4 CRs to LTE Advanced inter-band CA Rel-14 for xDL/2UL**
Source: RAN4

Decision: The document was **approved**.

RP-170941 **TR 36.714-00-02 v1.0.0 on LTE Advanced inter-band CA for xDL/2UL with x=3,4,5 in rel-14**
36.714-00-02 v1.0.0
Source: LG Electronics Inc.

Abstract:

RAN4 TR 36.714-00-02 is provided for 1-step approval

Decision: The document was **approved**.

RP-170942 **Revised WID: LTE Advanced inter-band CA Rel-14 for xDL/2UL with x=3,4,5**
Source: LG Electronics Inc.

Abstract:

last approved WID: RP-170128; to update status for related CA band combinations

Decision: The document was **approved**.

10.5.8 New band support for Rel-14 NB-IOT [NB_IOT_R14_bands]

RP-170969 **Status report for WI New band support for Rel-14 NB-IOT; rapporteur: Ericsson**
Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

RP-171279 **RAN4 CRs to New band support for Rel-14 Narrowband Internet of Things (NB-IOT)**
Source: RAN4

Decision: The document was **approved**.

RP-171051 **Adding Band 4 to NB-IoT Bands**
Source: T-Mobile USA Inc.

Abstract:

In this paper we have discussed operator's needs to have Band 4 support NB-IoT and propose adding band 4 to NB-IoT bands.

Discussion:

Samsung Exhibit 1025, Page 1693 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Proposal: RAN approves adding Band 4 to NB-IoT bands to support UE category NB1 starting from Release-13 and NB2 starting from Release-14.

MCC: This is a Rel-14 WI that had a 3 months exception to complete by RAN #76. Neither WID RP-170139 nor exception request sheet RP-170141 talks about band 4.

T-Mobile: wants to have it in REL-14

Ericsson: is anyway REL-independent and can be added in a new REL-15 basket

Nokia: there is already a basket WI for REL-15 in RP-171131 which includes band 4

MCC: it turned out later that RP-171131 is on a different basket WI but a REL-15 basket for bands to support UE cat.NB1 can be created in Sep.17 and the bands would then be supported in a REL independent way starting from REL-13

conclusion: band 4 will be added in REL-15 basket in Sep.17 in a release independent way starting from REL-13

Decision: The document was **noted**.

RP-170970 **Summary for WI new band support for Rel-14 NB-IoT**
Source: Ericsson

Abstract:

note: This is a spectrum related WI which does not require a WI summary.

Decision: The document was **noted**.

10.5.9 Core part: Introduction of new band support for 4Rx antenna ports for LTE [LTE_4Rx_AP_DL_bands-Core]

RP-171080 **Status report for WI: Core part: Introduction of new band support for 4Rx antenna ports; rapporteur: Huawei**
Source: RAN4

Abstract:

Core part exception granted until June 17

Discussion:

MCC: REL-14 WI LTE_4Rx_AP_DL_bands-Core had a 3 months exception to complete by RAN #76, no CRs are provided to RAN #76?

Huawei: there were 2 CRs to this WI:

R4-1702301 in RP-170574 approved by RAN #75 and

R4-1706077 in RP-171304 (see AI 14.4.6) using just the WI code LTE_4Rx_AP_DL-Core although it should have used LTE_4Rx_AP_DL-Core, LTE_4Rx_AP_DL_bands-Core because it merged CRs of 2 WIs in one CR

conclusion: approved: 100%, June 17; Core part WI is completed

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1694 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.6 Small Technical Enhancements and Improvements for REL-14 [TEI14]

RP-170888 **LS on EUTRAN sharing enhancement (R2-1706003; to: SA2, RAN3, RAN, SA; cc: -; contact: Ericsson)**

Source: RAN2

Abstract:

no RAN action requested; see related RAN2 CR pack in RP-171246; moved from AI 7 to AI 10.6

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170899 **Reply LS to R2-1706003 = RP-170888 on EUTRAN sharing enhancement (S2-173701; to: RAN2, RAN, SA, SA5; cc: RAN3; contact: Ericsson)**

Source: SA2

Abstract:

no explicit RAN action requested; moved from AI 7 to AI 10.6

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170902 **Reply to LS R2-1706003 = RP-170888 on EUTRAN sharing enhancement (R3-172026; to: RAN2, RAN; cc: SA2, SA; contact: Ericsson)**

Source: RAN3

Abstract:

no explicit RAN action requested; moved from AI 7 to AI 10.6

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-171251 **EUTRAN Sharing enhancement**

Source: Ericsson

Abstract:

moved from AI 11.2 to AI 10.6

Discussion:

Proposal 1: Approve the RAN2 CRs

Decision: The document was **noted**.

RP-171246 **RAN2 CRs EUTRAN Sharing enhancement**

Source: RAN2

Samsung Exhibit 1025, Page 1695 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Abstract:

Endorsed by RAN2; moved from AI 11.2 to AI 10.6; compare RAN2 LS RP-170888 and SA2 reply RP-170899 and RAN3 reply RP-170902;

Discussion:

MCC: Acc. to RAN2 chairman's report: E-UTRAN sharing enhancement:

Enables PLMNs sharing a RAN to configure independent values of TAC and Cell-ID in broadcast system information;

RAN2 technically endorsed 36.300 and 36.331 CRs under TEI14 (provided to RAN in CR pack RP-171246);

RAN2 also sent LS to SA2, RAN3 and RAN requesting that SA2/RAN3 provide feedback on the CRs;

RAN is requested to make final decision on the CRs considering any feedback received from SA2 or RAN3;

RAN2 chair: any impact in RAN3 or SA2 was the open issue, acc. to the LSs there are no impacts so we could go ahead and approve the CRs

Nokia: this is a late addition to REL-14, it seems some changes are needed, at least we have no confirmation from SA so we should postpone the CRs

conclusion: will postpone the CRs to joint RAN-SA session on Wed evening

conclusion: CRs are approved after joint session with SA

RAN chair: as this is a very late REL-14 feature: if there are any RAN3 impacts, they have to be done in a backwards compatible way

Decision: The document was **approved**.

RP-171210 **Corrections for Rel-14 (36.212/36213)**
Source: RAN1

Decision: The document was **approved**.

RP-171225 **RAN2 CRs to Small Technical Enhanements and Improvements for REL-14**
Source: RAN2

Discussion:

MCC: company CR in RP-171425 in order to revise R2-1706185 of RP-171225

conclusion: partially approved, i.e. all CRs of RP-171225 are approved except R2-1706185 which is revised in RP-171425

Decision: The document was **partially approved**.

RP-171425 **Miscellaneous general corrections and clarifications resulting from ASN.1 review**
36.331 CR-2872 rev 3 Cat: F (Rel-14) v14.2.2
Source: Ericsson

Abstract:

company CR; revising R2-1706185 of RP-171225 as an ASN.1 problem was detected

Decision: The document was **approved**.

RP-171324 **Small Technical Enhancements and Improvements for REL-14**
Source: RAN3

Samsung Exhibit 1025, Page 1696 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

RP-171280 **RAN4 CRs to Small Technical Enhanements and Improvements for REL-14**
Source: RAN4

Decision: The document was **approved**.

10.7 Closed REL-14 LTE WIs (not spectrum related)

10.7.1 Core part: Support for V2V services based on LTE sidelink [LTE_SL_V2V-Core]

RP-171199 **Maintenance of Rel-14 Support for V2V services based on LTE sidelink**
Source: RAN1

Decision: The document was **approved**.

RP-171226 **RAN2 CRs to Support for V2V services based on LTE sidelink**
Source: RAN2

Decision: The document was **approved**.

RP-171281 **RAN4 CRs to Core part: Support for V2V services based on LTE sidelink**
Source: RAN4

Decision: The document was **approved**.

10.7.2 Core part: LTE-based V2X Services [LTE_V2X-Core]

RP-171203 **Maintenance of Rel-14 V2X**
Source: RAN1

Decision: The document was **approved**.

RP-171227 **RAN2 CRs to LTE-based V2X Services**
Source: RAN2

Decision: The document was **approved**.

RP-171407 **RAN2 CRs to LTE-based V2X Services (part 2)**
Source: RAN2

Discussion:

MCC: late submission; 8 RAN1, 9 RAN2 and 14 RAN4 CRs? How complete was this WI when it was declared 100% complete at RAN #75?

Decision: The document was **approved**.

RP-171282 **RAN4 CRs to Core part: LTE-based V2X Services**
Source: RAN4

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1697 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.7.3 Core part: L2 latency reduction techniques for LTE [LTE_LATRED_L2-Core]

RP-171228 **RAN2 CRs to L2 latency reduction techniques for LTE**
Source: RAN2

Decision: The document was **approved**.

10.7.4 Core part: Perf. enhancements for high speed scenario in LTE [LTE_high_speed-Core]

RP-171229 **RAN2 CRs to Performance enhancements for high speed scenario in LTE**
Source: RAN2

Decision: The document was **approved**.

RP-171283 **RAN4 CRs to Core part: Performance enhancements for high speed scenario in LTE**
Source: RAN4

Decision: The document was **approved**.

10.7.5 Core part: SRS switching between LTE component carriers [LTE_SRS_switch-Core]

RP-171200 **Maintenance of Rel-14 SRS (sounding reference signal) switching between LTE component carriers**
Source: RAN1

Decision: The document was **approved**.

RP-171230 **RAN2 CRs to SRS (sounding reference signal) switching between LTE component carriers**
Source: RAN2

Decision: The document was **approved**.

RP-171284 **RAN4 CRs to Core part: SRS switching between LTE component carriers**
Source: RAN4

Decision: The document was **approved**.

10.7.6 Core part: DL Multiuser Superposition Transmission for LTE [LTE_MUST-Core]

10.7.7 Core part: 4Rx antenna ports with CA for LTE DL [LTE_4Rx_AP_DL_CA-Core]

10.7.8 Core part: Enhanced LAA for LTE [LTE_eLAA-Core]

RP-171201 **Maintenance of Rel-14 Enhanced LAA**
Source: RAN1

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1698 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171231 **RAN2 CRs to Enhanced LAA for LTE**
Source: RAN2

Decision: The document was **approved**.

RP-171285 **RAN4 CRs to Core part: Enhanced LAA for LTE**
Source: RAN4

Decision: The document was **approved**.

10.7.9 Core part: Enhancements on FD-MIMO for LTE [LTE_eFDMIMO-Core]

RP-171194 **Maintenance of Rel-14 eFD-MIMO**
Source: RAN1

Decision: The document was **approved**.

RP-171232 **RAN2 CRs to Enhancements on Full-Dimension (FD) MIMO for LTE**
Source: RAN2

Decision: The document was **approved**.

RP-171511 **RAN2 CR to Enhancements on Full-Dimension (FD) MIMO for LTE**
Source: RAN2

Discussion:

Note: It was spotted after RAN #76 that the RAN2 agreed CR R2-1705852 was not submitted to RAN #76. Since this CR has ASN.1 REL-14 impact, a late email approval was organized for RP-171511 via the RAN reflector (5-12.07.2017).

Decision: The document was **approved**.

10.7.10 Core part: Further mobility enhancements in LTE [LTE_eMob-Core]

RP-171233 **RAN2 CRs to Further mobility enhancements in LTE**
Source: RAN2

Decision: The document was **approved**.

RP-171286 **RAN4 CRs to Core part: Further mobility enhancements in LTE**
Source: RAN4

Decision: The document was **approved**.

10.7.11 Core part: UL Capacity Enhancements for LTE [LTE_UL_CAP_enh-Core]

RP-171192 **Maintenance of Rel-14 Uplink Capacity Enhancements for LTE**
Source: RAN1

Decision: The document was **approved**.

RP-171234 **RAN2 CRs to Uplink Capacity Enhancements for LTE**
Source: RAN2

Samsung Exhibit 1025, Page 1699 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

RP-171287 **RAN4 CRs to Core part: Uplink Capacity Enhancements for LTE**
Source: RAN4

Decision: The document was **approved**.

10.7.12 Core part: Voice and Video Enhancement for LTE [LTE_VoLTE_ViLTE_enh-Core]

RP-170881 **Reply LS to C3-171255 = RP-170038 on RAN-Assisted Codec Adaptation (R2-1703968; to: CT3, SA4; cc: RAN3, RAN, SA2; contact: Ericsson)**
Source: RAN2

Abstract:

no RAN action requested

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170885 **Reply LS to R2-1703968 = RP-170881 and C3-171255 = RP-170038 on RAN-Assisted Codec Adaptation (S4-170430; to: RAN2, CT3; cc: RAN3, SA2, RAN; contact: Intel)**
Source: SA4

Abstract:

no RAN action requested

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-171206 **Maintenance of Rel-14 Voice and Video enhancement for LTE**
Source: RAN1

Decision: The document was **approved**.

RP-171235 **RAN2 CRs to Voice and Video Enhancement for LTE**
Source: RAN2

Decision: The document was **approved**.

10.7.13 Core part: Flexible eNB-ID and Cell-ID in E-UTRAN [LTE_FNBID-Core]

RP-171325 **Flexible eNB-ID and Cell-ID in E-UTRAN - Core**
Source: RAN3

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1700 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.7.14 Core part: Enh. LTE-WLAN Aggregation (LWA) [LTE_WLAN_aggr-Core]

RP-170883 **Response LS to SP-160457 = RP-161378 on Progress on Security for LWIP (R3-171272; to: SA, SA3; cc: RAN; contact: Nokia)**
Source: RAN3

Abstract:

no RAN action requested

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-171236 **RAN2 CRs to Enhanced LTE-WLAN Aggregation (LWA)**
Source: RAN2

Decision: The document was **approved**.

10.7.15 Core part: Enh. LTE WLAN Radio Level Integration with IPsec Tunnel [LTE_WLAN_eLWIP-Core]

RP-171326 **Enhanced LTE WLAN Radio Level Integration with IPsec Tunnel (eLWIP) - Core Part**
Source: RAN3

Decision: The document was **approved**.

10.8 Closed REL-14 LTE & UMTS WIs (not spectrum related)

10.8.1 Multi-Band BS testing with three or more bands [MB_BS_test_3B]

10.8.2 Core part: Further Indoor Positioning Enh. for UTRA and LTE [UTRA_LTE_iPos_enh2-Core]

RP-171288 **RAN4 CRs to Core part: Further Indoor Positioning Enhancements for UTRA and LTE**
Source: RAN4

Decision: The document was **approved**.

10.8.3 Core part: Enh. of Dedicated Core Networks for UMTS and LTE [eDECOR-UTRA_LTE-Core]

RP-171237 **RAN2 CRs to Enhancements of Dedicated Core (DECOR) Networks for UMTS and LTE**
Source: RAN2

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1701 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.9 Closed REL-14 LTE WIs (spectrum related)

10.9.1 LTE 2.6 GHz FDD Suppl. DL band (2570-2620 MHz) and LTE CA (2DL/1UL) with Band 3 for region 1 [LTE_FDD_2600_CA_B3]

10.9.2 AWS-3/4 Band for LTE [LTE_AWS_3_4]

10.9.3 Citizens Broadband Radio Service 3.5GHz band for LTE in the US [LTE_TDD_3550_CBRS_US]

RP-171289 **RAN4 CRs to Citizens Broadband Radio Service (CBRS) 3.5GHz band for LTE in the United States**

Source: RAN4

Decision: The document was **approved**.

10.9.4 LTE Band 41 UE power class 2 operation [LTE_B41_UE_PC2-Core]

RP-171290 **RAN4 CRs to LTE Band 41 UE power class 2 operation**

Source: RAN4

Decision: The document was **approved**.

10.9.5 LTE Advanced inter-band CA Rel-14 for 3DL/3UL [LTE_CA_R14_3DL3UL]

10.9.6 Core part: Addition of 1.4 and 3 MHz Channel BW to E-UTRA operating band 65 for CGC operations in Region 1 [LTE_1980_2170_REG1_addBWs-Core]

10.9.7 Core part: Addition of band 25 and 26 to LTE MTC cat.0 [LC_MTC_LTE_cat0_B25_B26-Core]

RP-171291 **RAN4 CRs to Addition of band 25 and 26 to LTE MTC cat.0**

Source: RAN4

Decision: The document was **approved**.

10.9.8 Core part: Addition of bands 25 and 40 to LTE MTC cat.1 [LTE_MTCe2_L1_cat1_B25_B40-Core]

10.10 Closed REL-14 LTE SIs

10.11 Open REL-15 LTE WIs (not spectrum related)

10.11.1 Shortened TTI and processing time for LTE [LTE_sTTIandPT]

RP-170971 **Status report for WI Shortened TTI and processing time for LTE; rapporteur: Ericsson**

Source: RAN1

Discussion:

MCC: Perf. part % complete missing

Samsung Exhibit 1025, Page 1702 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **revised to RP-171429**.

RP-171444 **On completion of the sTTIandPT Work Item**
Source: Ericsson

Discussion:

proposals:

- Scope of sTTIandPT WI remains unchanged

- Extend the work item completion to RAN #78 (Dec)

- Transfer some of the TUs from HRLLC WI to sTTIandPT WI during Q3 and Q4

Huawei: RAN2 TU: agrees that more work needs to be done than what was indicated before but 6 times is a bit too much, suggests 1TU for Aug. and adding more later;

LG: worried how HRLLC work can be completed

Huawei: status report was submitted with target date Sep. and now it is shifted to Dec. although scope was unchanged; suggests to keep Sep. target and check the situation in Sep.17;

Ericsson: we took comments from Vodafone into account;

Nokia: suggests to make a realistic assessment how long the work will need, to complete by Sep. is not realistic;

Interdigital: agrees with Nokia and RAN2 can only work when RAN1 has completed their work

Mediatek: supports Ericsson, Nokia and Interdigital

RAN chair: it seems shifting to Dec.17 is more realistic (as this is also of interest for SA)

Huawei: is this now more RAN2 led? as RAN1 has no relation to SA

conclusion: no scope change of sTTIandPT agreed, Core part completion target is moved to Dec.17, TU split can be discussed further and will be seen in RP-171429

Decision: The document was **noted**.

RP-171429 **Status report for WI Shortened TTI and processing time for LTE; rapporteur: Ericsson**
Source: RAN1

(Replaces RP-170971)

Abstract:

modified RAN4 TU allocation

Discussion:

MCC: late submission; target date change;

conclusion: approved: Core: 65%, Dec.17; Perf.: 0%, June 18

Decision: The document was **noted**.

RP-171468 **Revised WID: Shortened TTI and processing time for LTE**
Source: Ericsson

Abstract:

last approved WID: RP-170113

Samsung Exhibit 1025, Page 1703 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

10.11.2 Core part: Signalling reduction to enable light connection for LTE [LTE_LIGHT_CON-Core]

RP-171070 Status report for WI: Core part: Signalling reduction to enable light connection for LTE, rapporteur: Huawei
Source: RAN2

Discussion:

MCC: this WI has no Perf. part; why does the status report have a % complete and target date for Perf. part?; target date change;

Decision: The document was **revised to RP-171469**.

RP-171469 Status report for WI: Core part: Signalling reduction to enable light connection for LTE, rapporteur: Huawei
Source: RAN2

(Replaces RP-171070)

Discussion:

conclusion: approved: Core: 79%, March 18;

Note: A Perf. part WI is created via RP-171459

Decision: The document was **noted**.

RP-171133 Scope of LTE connectivity to 5G-CN
Source: Huawei, HiSilicon

Discussion:

Huawei: does not belong under light connection and is withdrawn

Decision: The document was **withdrawn**.

RP-171436 Revised WID: Signalling reduction to enable light connection for LTE
Source: Huawei

Abstract:

last approved WID: RP-170788; note: With this WID revision a Perf. part is introduced

Discussion:

WID revision creates a Perf. part WI

Nokia: target dates out-of date

Vodafone: SA stopped the work on this?

Mediatek: why Dec.17?

Huawei: has chosen first available date

Mediatek: change it to June 18, RRC inactive in NR is supposed to complete in June 18 and this is here the LTE related work;

Ericsson: we need to wait for SA2 outcome first anyway

Samsung Exhibit 1025, Page 1704 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Huawei: if it does not matter, we can take Dec.17 for the moment

LG: no TU allocation for RAN2

Decision: The document was **revised to RP-171459**.

RP-171459 **Revised WID: Signalling reduction to enable light connection for LTE**
Source: Huawei

(Replaces RP-171436)

Abstract:

last approved WID: RP-170788

Discussion:

conclusion: completion March 18 is agreed for Core part and Perf. part,

feature is on hold until Sep.17 (SA2 needs to progress sufficiently)

Decision: The document was **approved**.

10.11.3 Further enh. to CoMP Operation for LTE [New WI: feCOMP_LTE]

RP-171030 **Status report of WI: Further enhancements to Coordinated Multi-Point (CoMP) Operation for LTE; rapporteur: Intel Corporation**
Source: RAN1

Discussion:

MCC: next time please remove confusing SI target date; target date change;

conclusion: approved: Core: 70%, March 18; Perf.: 0%, March 18

Decision: The document was **noted**.

RP-171031 **Revision of WI: Further enhancements to Coordinated Multi-Point (CoMP) Operation for LTE**
Source: Intel Corporation, ZTE

Abstract:

last approved WID: RP-170750; updating WI code

Decision: The document was **approved**.

10.11.4 Highly Reliable Low Latency Communication for LTE [New WI: LTE_HRLLC]

RP-170972 **Status report for WI Ultra Reliable Low Latency Communication for LTE; rapporteur: Ericsson**
Source: RAN1

Decision: The document was **revised to RP-171442**.

RP-171442 **Status report for WI Ultra Reliable Low Latency Communication for LTE; rapporteur: Ericsson**
Source: RAN1

(Replaces RP-170972)

Samsung Exhibit 1025, Page 1705 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Discussion:

MCC: late submission;

conclusion: approved: Core: 0%, June 18; Perf.: 0%, Dec.18

Decision: The document was **noted**.

RP-171489 **Revised WID: Ultra Reliable Low Latency Communication for LTE**
Source: Ericsson

Abstract:

last approved WID: RP-170796

Decision: The document was **approved**.

10.11.5 V2X phase 2 based on LTE [New WI: LTE_eV2X]

RP-170876 **Reply LS to NGMN_LS_170122 = RP-170049 to NGMN V2X Task-Force (SP-170278; to: NGMN V2X Task Force; cc: RAN, SA1, SA2, SA3; contact: LG Electronics)**
Source: SA

Abstract:

no RAN action requested

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170887 **Reply LS to S1-171461 = RP-170042 on eV2X Normative Requirements (5GAA_LS_S-170064; to: SA1; cc: SA, RAN, 5GAA WG1; contact: Intel)**
Source: 5GAA WG4

Abstract:

5GAA = 5G Automotive Association; no RAN action requested;

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

RP-170896 **Reply LS to RP-170841 on the support of Unicast and Groupcast transmission over PC5 for eV2X (S2-173610; to: RAN; cc: SA, SA1, SA3, RAN2; contact: LG Electronics)**
Source: SA2

Abstract:

no explicit RAN action requested

Discussion:

conclusion: no LS answer from RAN

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1706 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171068 **Status report for WI: V2X phase 2 based on LTE; rapporteur: Huawei**
Source: RAN1

Discussion:

conclusion: approved: Core: 15%, June 18; Perf.: 0%, Dec.18

Decision: The document was **noted**.

RP-171069 **Revision of WI: V2X phase 2 based on LTE**
Source: Huawei, HiSilicon

Abstract:

last approved WID: RP-170798; revision of title and WI acronym, addition of TR editor

Decision: The document was **approved**.

10.11.6 UE Positioning Accuracy Enh. for LTE [New WI: LCS_LTE_acc_enh]

RP-171008 **Status report of WI UE Positioning Accuracy Enhancements for LTE; rapporteur: Nokia**
Source: RAN2

Discussion:

Ericsson: UE-based positioning was added to the WID without online discussion. As discussed on the RAN reflector, there seems very little support for that objective and no progress in RAN2. We would like to discuss a down-scoping of that aspect.

Qualcomm: we consider it useful for NB-IOT

Sequans: also considers it useful

RAN chair: so we keep it for now?

Ericsson: then have it with 2nd priority as long as there is no operator support

Nokia: would be ok with this; completion date Dec.17 and TUs only shown until June; so suggests to revise the WID

conclusion: approved: Core: 10%, June 18; Perf.: 0%, June 18

Decision: The document was **noted**.

RP-171460 **Revised WID on UE Positioning Accuracy Enhancements for LTE**
Source: Nokia

Abstract:

last approved WI: RP-170813

Discussion:

was aprpoved unseen before but had wrong Excel sheet included

Decision: The document was **revised to RP-171508**.

RP-171508 **Revised WID on UE Positioning Accuracy Enhancements for LTE**
Source: Nokia

(Replaces RP-171460)

Abstract:

Samsung Exhibit 1025, Page 1707 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

last approved WI: RP-170813

Discussion:

MCC: TUs should only be updated in status reports

Decision: The document was **approved**.

10.11.7 Enh. for high capacity stationary wireless link and introduction of 1024 QAM for LTE DL [New WI: LTE_1024QAM_DL]

RP-171066 **Status report for WI: Enhancements for high capacity stationary wireless link and introduction of 1024 QAM for LTE DL; rapporteur: Huawei**

Source: RAN1

Discussion:

MCC: target date change;

conclusion: approved: Core: 20%, June 18; Perf.: 0%, June 18 (note: the target date of LTE_1024QAM_DL-Core was corrected from March 18 to June 18 after RAN #76 and confirmation from the rapporteur)

Decision: The document was **noted**.

RP-171036 **Revised WID: Enhancements for high capacity stationary wireless link and introduction of 1024 QAM for LTE**

Source: Qualcomm Incorporated, Huawei

Abstract:

rapporteur: Huawei; last approved WID: RP-170838

Decision: The document was **withdrawn**.

RP-171067 **Revision of WI: Enhancements for high capacity stationary wireless link and introduction of 1024 QAM for LTE DL**

Source: Huawei, Qualcomm

Abstract:

last approved WID: RP-170838; correction of target date for all core specifications to RAN#80 (June 2018)

Decision: The document was **approved**.

10.11.8 Enh. to LTE operation in unlicensed spectrum [New WI: LTE_unlic]

RP-171152 **Status report for WI: Enhancements to LTE operation in unlicensed spectrum; rapporteur: Nokia**

Source: RAN1

Discussion:

MCC: target date change (+9 months); Perf. part % complete not provided;

conclusion: approved: Core: 15%, June 18; Perf.: 0%, Dec.18

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1708 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.11.9 Core part: Further video enhancements for LTE [New WI: LTE_ViLTE_enh2-Core]

RP-170999 **Status report of WI: Core part: Further video enhancements for LTE; rapporteur: CMCC**
Source: RAN2

Abstract:

related WID: RP-170781

Decision: The document was **revised to RP-171400**.

RP-171400 **Status report of WI: Core part: Further video enhancements for LTE; rapporteur: CMCC**
Source: RAN2

(Replaces RP-170999)

Abstract:

late RAN2 comments included

Discussion:

MCC: late submission

conclusion: approved: 15%, Dec.17

Decision: The document was **noted**.

RP-170998 **Revision of WI: Further video enhancements for LTE**
Source: CMCC

Abstract:

last approved WID: RP-170781; to correct the title of the WID;

Decision: The document was **revised to RP-171392**.

RP-171392 **Revision of WI: Further video enhancements for LTE**
Source: CMCC

(Replaces RP-170998)

Abstract:

last approved WID: RP-170781;

Decision: The document was **approved**.

10.11.10 Core part: QoE Measurement Collection for streaming services in E-UTRAN [New WI: LTE_QMC_Streaming-Core]

RP-170954 **Status report of WI Core part: Quality of Experience (QoE) Measurement Collection for streaming services in E-UTRAN; rapporteur: China Unicom**
Source: RAN2

Discussion:

conclusion: approved: Core: 25%, Dec.17

Samsung Exhibit 1025, Page 1709 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **noted**.

RP-170956 **Revision of WI Quality of Experience (QoE) Measurement Collection for streaming services in E-UTRAN**

Source: China Unicom

Abstract:

last approved WID: RP-170786

Decision: The document was **approved**.

10.11.11 Enhancing LTE CA Utilization [New WI: LTE_euCA]

RP-171187 **Status report for WI: Enhancing LTE CA utilization; rapporteur: Nokia**
Source: RAN2

Discussion:

conclusion: approved: Core: 0%, June 18; Perf.: 0%, Dec.18

Decision: The document was **noted**.

10.11.12 Core part: LTE connectivity to 5G-CN [New WI: LTE_5GCN_connect-Core]

RP-171072 **Status report for WI: Core part: LTE connectivity to 5G-CN; rapporteur: Huawei**
Source: RAN2

Decision: The document was **revised to RP-171500**.

RP-171500 **Status report for WI: Core part: LTE connectivity to 5G-CN; rapporteur: Huawei**
Source: RAN2

(Replaces RP-171072)

Discussion:

MCC: late submission

conclusion: approved: Core: 5%, June 18

new Perf. part WI introduced in RP-171432

Decision: The document was **noted**.

RP-171073 **Revision of WID: LTE connectivity to 5G-CN**
Source: Huawei, HiSilicon

Abstract:

last approved WID: RP-170840

Discussion:

Mediatek: study is not completed, suggestion in SA is to put it on hold, we have not done any solution so far;

Ericsson: SA2 study is for EPC and not 5G-CN

RAN chair: does anyone disagree that this work needs to be added?

Samsung Exhibit 1025, Page 1710 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Nokia: RRC-inactive would be ok but what is LTE-inactive?

Samsung: we need to avoid to make the same mistake we did on light connection, SA work is not yet over, we would start parallel work, our preference would be not to rush;

Decision: The document was **revised to RP-171432**.

RP-171432 **Revision of WID: LTE connectivity to 5G-CN**
Source: Huawei, HiSilicon

(Replaces RP-171073)

Abstract:

last approved WID: RP-170840

Discussion:

MCC: this WID revision is introducing a new Perf. part WI

Decision: The document was **approved**.

10.11.13 WIs approved with working agreement at RAN #75

NOTE: If the working agreement (see http://www.3gpp.org/specifications-groups/working-agreements) is challenged by 29.05.2017, then RAN #76 will carry out a corresponding voting. Details about such a voting will then be announced via the RAN email reflector. In any case, corresponding status reports have to be provided for both WIs to RAN #76.

- working agreement #16 on http://www.3gpp.org/specifications-groups/working-agreements was not challenged

- this means the working agreement is confirmed (WID RP-170732 and RP-170852 + TUs from RP-170836 remain approved)

- no voting needed for this working agreement at RAN #76

RP-171188 **Considerations for the Release-15 NB-IoT and eMTC**
Source: KT Corp.

Abstract:

Discussions for IoT related WIs

Discussion:

RAN chair: item for early consideration

Decision: The document was **not treated**.

RP-171045 **Considerations on evolution of NB-IoT/eMTC**
Source: ZTE Corporation

Discussion:

proposal:

- In Rel-15, enhancement should focus on be enhancement of specific aspects of individual technology

- Support of both eMTC and NB-IoT mode and switching between two air interface should be based UE implementation.

Samsung Exhibit 1025, Page 1711 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- No specification optimization for dual mode operation in Rel-15

- For any future release, enhancement shall consider convergence to the final evolution path

- General enhancement should be adopted for both technologies with minor variations

- Differentiations targeting specific use case of each technology should be kept

RAN chair: item for early consideration

CMCC: optimization for dual mode operation in future REL?

Deutsche Telekom: last bullet of the proposals is unclear and not appreciated

Decision: The document was **noted**.

RP-171182 **NB-IoT and eMTC considerations**
Source: Deutsche Telekom AG

Abstract:

discussion

Discussion:

RAN chair: item for early consideration

Decision: The document was **revised to RP-171420**.

RP-171420 **NB-IoT and eMTC considerations**
Source: Deutsche Telekom AG

(Replaces RP-171182)

Discussion:

proposals:

- It is out of scope of the Rel-15 eMTC WID that the maximum supported UE channel bandwidth of a Rel-15 eMTC UE can be less than 6 PRB in UL and DL.

- It is out of scope of the Rel-15 NB-IoT WID that the maximum supported UE channel bandwidth of a Rel-15 NB-IoT UE can be more than 1 PRB in UL and DL.

- No new UE category for Rel-15 eMTC and NB-IoT is introduced.

- Reflect the above in revisions of the Rel-15 eMTC and NB-IoT WIDs.

Deutsche Telekom: additional supporters were added, contents is identical

Mediatek: supports the Tdoc

Qualcomm: needs some modifications, 2nd proposal was only raised by Huawei

RAN chair: first proposal can be revised, 2nd proposal not needed, 3rd bullet should be softened

RAN chair: seems we need to revise the WIDs for REL-15 eMTC and NB-IOT

Qualcomm: would have a problem to approve the way forward in RP-171420

conclusion: offline discussions to revise the WIDs in RP-171427 and RP-171428

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1712 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171467 **Way forward on NB-IoT and eMTC evolution and UE capability**
Source: Huawei

Abstract:

related to RP-171420

Discussion:

proposal:

Add to section 4.1 of the respective LTE_eMTC4 and NB-IoTenh2 WIDs as follows:

It is out of scope of the Rel-15 eMTC WID to introduce a eMTC capable only UE category with a maximum supported channel bandwidth of less than 6 PRB in UL and DL.

It is out of scope of the Rel-15 NB-IoT WID to introduce a NB-IoT capable only UE category with a maximum supported channel bandwidth of more than 1 PRB in UL and DL.

Delete the following note from the Rel-15 eMTC WID:

"Note: There is no intention to lower the minimum required UE capability compared to UE category M1 as part of this WI, i.e. the UE shall still support a PUSCH transmission of 6 PRBs."

conclusion: WIDs will be updated as proposed

Decision: The document was **endorsed**.

10.11.13.1 Even further enhanced MTC for LTE [New WI: LTE_eMTC4]

RP-171180 **Status report of WI Even further enhanced MTC for LTE; rapporteur: Ericsson**
Source: RAN1

Decision: The document was **revised to RP-171412**.

RP-171412 **Status report of WI Even further enhanced MTC for LTE; rapporteur: Ericsson**
Source: RAN1

(Replaces RP-171180)

Discussion:

MCC: late submission;

RAQN4 vice-chair (Huawei): TU change was granted

conclusion: approved: Core: 10%, June 18; Perf.: 0%, Dec.18

Decision: The document was **noted**.

RP-171190 **OTDOA enhancements for Rel-15 eMTC**
Source: Huawei, HiSilicon

Decision: The document was **revised to RP-171424**.

RP-171424 **OTDOA enhancements for Rel-15 eMTC**
Source: Huawei, HiSilicon

(Replaces RP-171190)

Discussion:

Samsung Exhibit 1025, Page 1713 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Proposal: Add the following objective to the Rel-15 eFeMTC WID:

- Specify PRS frequency hopping to support coherent detection of PRS over multiple narrowbands/widebands without an increase in the transmitted bandwidth of PRS, including associated RAN4 requirements. [RAN1, RAN4, RAN2]

Intel: sceptic that this can work

Ericsson: too early to introduce this, would need to be checked

Qualcomm: same view

conclusion: can come back on this later if more support

Decision: The document was **noted**.

RP-171183 **Revised WI: Even further enhanced MTC for LTE**
Source: Ericsson LM

Abstract:

last approved WID: RP-170732

Discussion:

RAN chair: after treatment of RP-171420 we need to revise the note in the WID

conclusion: obsolete bullet should be removed and note to be revised

Decision: The document was **revised to RP-171427**.

RP-171427 **Revised WI: Even further enhanced MTC for LTE**
Source: Ericsson LM

(Replaces RP-171183)

Abstract:

last approved WID: RP-170732

Discussion:

includes way forward RP-171467

Huawei: may come back to this depending on OTDOA offline discussion

Decision: The document was **approved**.

10.11.13.2 Further NB-IoT enhancements [New WI: NB_IOTenh2]

RP-171062 **Status report for WI: Further NB-IoT enhancements; rapporteur: Huawei**
Source: RAN1

Discussion:

conclusion: approved: Core: 8%, June 18; Perf.: 0%, Dec.18

Decision: The document was **noted**.

RP-171005 **Motivation for accelerating NB-IoT work in 2017**
Source: VEOLIA

Abstract:

Samsung Exhibit 1025, Page 1714 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Motivation to accelerate NB-IoT in particular for power consumption aspects to address Smart Water Meter use case. Will propose to organize NB-IoT ad hoc meeting in July.

Discussion:

RAN chair: item for early consideration

Decision: The document was **revised to RP-171396**.

RP-171396 **Motivation for accelerating NB-IoT work in 2017**
Source: VEOLIA

(Replaces RP-171005)

Discussion:

RAN chair: item for early consideration

Decision: The document was **revised to RP-171435**.

RP-171435 **Motivation for accelerating NB-IoT work in 2017**
Source: VEOLIA

(Replaces RP-171396)

Discussion:

Proposal 1 -- To prioritize R15 power consumption enhancements to be

completed by Dec 17 for early implementations

Deutsche Telekom: confirms that power consumption can be improved, supports that work is done in 3GPP and accelerated, signalling may affect ASN.1 so we can only freeze features that have no ASN.1 impact;

Vodafone: supports that Veolia brought up this topic and that power consumption need to be further improved, we should check first which functionalities need to be prioritized before we look into ASN.1 freeze aspects;

Ericsson: there are quite many enhancements that are proposed, there are certainly things that could be done more easily than others, so we could prioritize them in RAN2;

Huawei: we should check at RAN #76 what we could do to satisfies Veolia's requirements;

RAN 1 chair: having a step-by-step approach is possible?

Veolia: the market needs actually already a tighter time schedule so our dates here are relaxed already

Sprint: we have a serious problem with proposal 1 to prioritize this over other topics

RAN chair: having a list of points that can be prioritized together with corresponding required TUs would be useful

Vodafone: most of the points are already part of the REL-15 WI and we should prioritize within the WI and not prioritize over other WIs/SIs

conclusion: offline discussion to come up with a prioritization in RP-171440 (rapporteur: Huawei)

Proposal 2 -- Add NB--IoT RAN 1 / RAN 2 Ad Hoc Meetings in 2017

Nokia: prefers to better schedule the work and solve it during the normal meetings

Sprint: supports this

NEC: rather extending a normal meeting than having another trip to Sophia Antipolis

LG: not supporting to have the ad hoc

Huawei: supports to have an ad hoc as it may help progressing the prioritization

Samsung Exhibit 1025, Page 1715 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

AT&T: we are afraid that if we create a precedence case every WI will ask for an ad hoc for their topic

Nokia: supports AT&T, we saw in the past that too many meetings are actually doing the opposite of acceleration

RAN2 chair: we had no discussion of this topic in RAN2 and it looks a bit odd to schedule an ad hoc before we have treated the topic at least once

Veolia: we need to find a way to complete the work by Dec.17

Telstra: reminds that NB-IOT is having worse power consumption figures compared to non-3GPP technology and we lose market share if we do not address this problem

Sequans: does not support to have the ad hoc as for some companies there are not different people who attend the different meetings

RAN chair: suggests to proceed as planned until Aug. and review the TUs for LTE in Sep.17

Huawei: may be more easier to have an ad hoc in Oct./Nov.

conclusion: no extra ad hoc considered so far, we will revisit the situation at RAN #77 in Sep.17 and concentrate first on the prioritization (see RP-171440)

Proposal 3 -- Increase Time Units per meeting RAN1/RAN2

RAN2 chair: this is not a possible option after the planning we did last time

RAN1 chair: RAN1 is already fully loaded in the 3rd quarter

conclusion: proposal 3 is not agreed

Decision: The document was **noted**.

RP-171440 **Way forward on NB-IOT prioritization**
Source: Huawei

Discussion:

proposal:

Rel-15 NB-IoT WID can be updated as indicated

NEC: running CRs?

Huawei: like DraftCRs in RAN1

Veolia: depending on progress made, possibility of having ad-hoc meeting between Oct and Nov WG meetings will be presented then at RAN #77

conclusion: WID will be revised accordingly

Decision: The document was **endorsed**.

RP-171006 **Motivation for further enhancements in NB-IoT to address Smart Water Metering**
Source: VEOLIA

Abstract:

Motivation to add new features in NB-IoT to address the smart meter use case in particular the support of NB-IoT as multi-hop relay

Discussion:

RAN chair: item for early consideration

Samsung Exhibit 1025, Page 1716 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **revised to RP-171423**.

RP-171423 **Motivation for further enhancements in NB-IoT to address Smart Water Metering**
Source: VEOLIA

(Replaces RP-171006)

Discussion:

Proposal 1: To add in WI "NB_IOTenh2" the Support of NB--IoT as multi--hop relay

[RAN2, RAN1]

Ericsson: there are other options like REL-10 relay or small cell with a cable?

Veolia: adding further equipment is costly

Deutsche Telekom: intention is to add further functionality to the existing WI and not a new WI, correct:?

RAN chair: has the same understanding

Qualcomm: existing relay solution may be more complex, what is proposed could be an interesting longer term study;

Intel: sees some overlap with the wearables topic?

Telstra: a study is definitely needed and whatever the solution is it must be a low cost solution

LG: there is also some overlap with the MTC WI

RAN chair: we will not work on this in the 3 months, we do not need to take a decision now but we can use the next the 3 months to find a solution how to handle this;

Veolia: We will present at RAN #77 a revised proposal to address this topic taking into account all comments raised.

Huawei: what about an LS to RAN2 tasking them to check

Ericsson: SI is over, WI not having TUs and we will only treat LSs so wearables is not a proper place for this; also sees a fundamental difference to wearables

Decision: The document was **noted**.

RP-171063 **Revision of WI: Further NB-IoT enhancements; rapporteur: Huawei**
Source: Huawei, HiSilicon

Abstract:

last approved WID: RP-170852; addition of affected specs: TS 36.104 and TS 37.104 for the Core part and TS 36.141 and TS 37.141 for the Perf. part

Discussion:

Nokia: some more explanation needed; what would you use the counting for?

RAN chair: can discuss the counting further offline

Decision: The document was **revised to RP-171428**.

RP-171428 **Revision of WI: Further NB-IoT enhancements; rapporteur: Huawei**
Source: Huawei, HiSilicon

(Replaces RP-171063)

Abstract:

Samsung Exhibit 1025, Page 1717 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

last approved WID: RP-170852

Discussion:

includes changes from way forwards RP-171440 and RP-171467

Decision: The document was **approved**.

10.12 Open REL-15 LTE WIs (spectrum related)

10.12.1 450MHz E-UTRA FDD Band for LTE PPDR and PMR/PAMR in Europe [LTE450_Europe_PPDR]

RP-170911 **Status report of WI 450MHz E-UTRA FDD Band for LTE PPDR and PMR/PAMR in Europe; rapporteur: Airbus DS SLC**
Source: RAN4

Discussion:

conclusion: approved: Core: 75%, Sep.17; Perf.: 50%, Sep.17

Decision: The document was **noted**.

RP-170912 **TR 36.748 v1.0.0 for 450MHz E-UTRA FDD Band for LTE PPDR and PMR/PAMR in Europe**
36.748 v1.0.0
Source: Airbus DS SLC

Abstract:

RAN4 TR 36.748 is provided for information

Decision: The document was **noted**.

10.12.2 Core part: E-UTRA 700MHz in Europe for Broadband-PPDR-Core [LTE700_Europe_PPDR-Core]

RP-170910 **Status report of WI Core part: E-UTRA 700MHz in Europe for Broadband-PPDR; rapporteur: Airbus DS SLC**
Source: RAN4

Discussion:

conclusion: approved: Core:80%, Sep.17

Decision: The document was **noted**.

10.12.3 FDD operating band in the L-band for LTE [LTE_FDD_L_Band]

RP-171095 **Status Report of WI: FDD operating band in the L-band for LTE; rapporteur: NTT DOCOMO, INC.**
Source: RAN4

Decision: The document was **revised to RP-171402**.

RP-171402 **Status Report of WI: FDD operating band in the L-band for LTE; rapporteur: NTT DOCOMO, INC.**
Source: RAN4

Samsung Exhibit 1025, Page 1718 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

(Replaces RP-171095)

Abstract:

Excel list added

Discussion:

MCC: late submission, target date change

conclusion: approved: Core: 99%, Sep.17; Perf.: 99%, Sep.17

Decision: The document was **noted**.

RP-171096 **Revised Work Item on an FDD operating band in the L-band for LTE**
Source: NTT DOCOMO, INC.

(Replaces RP-162536)

Abstract:

last approved WID: RP-162536

Decision: The document was **revised to RP-171403**.

RP-171403 **Revised Work Item on an FDD operating band in the L-band for LTE**
Source: NTT DOCOMO, INC.

(Replaces RP-171096)

Abstract:

Excel list removed; last approved WID: RP-162536

Decision: The document was **approved**.

RP-171097 **TR 36.751 v1.0.0 on FDD operating band in the L-band for LTE; for information**
36.751 v1.0.0
Source: NTT DOCOMO, INC.

Abstract:

RAN4 TR 36.751 is provided for information

Decision: The document was **noted**.

10.12.4 TDD operating band in the L-band for LTE [LTE_TDD_L_Band]

RP-171079 **Status report for WI: TDD operating band in the L-band for LTE; rapporteur: Huawei**
Source: RAN4

Discussion:

MCC: target date change;

conclusion: approved: Core: 70%, Sep.17; Perf.: 0%, Sep.17

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1719 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10.12.5 LTE Extended 1.5 GHz SDL band (1427 – 1518 MHz) and LTE CA (2DL/1UL) with Band 20 [LTE_SDL_1500ext]

RP-171151 **Status Report of WI: LTE Extended 1.5 GHz SDL band (1427 – 1518 MHz) and LTE Carrier Aggregation (2DL/1UL) with Band 20; rapporteur: Qualcomm Incorporated**

Source: RAN4

Discussion:

MCC: late submission, target date change;

conclusion: approved: Core: 50%, Sep.17; Perf.: 0%, Sep.17

Decision: The document was **noted**.

RP-171389 **Revised WID: LTE Extended 1.5 GHz SDL band (1427 - 1518 MHz) and LTE CA (2DL/1UL) with Band 20**

Source: Orange

Abstract:

last approved WID: RP-162556; rapporteur: Qualcomm

Decision: The document was **approved**.

10.12.6 Core part: Add UE Power Class 2 to band 41 intra-band contiguous LTE CA [LTE_CA_C_B41_PC2-Core]

RP-171003 **Status_Report for WI Core part: Add UE Power Class 2 to band 41 intra-band contiguous LTE Carrier Aggregation; rapporteur: Sprint**

Source: RAN4

Discussion:

MCC: target date change;

Sprint: also rapporteur changed

conclusion: approved: Core: 50%, Dec.17

Decision: The document was **noted**.

RP-171004 **Revision of WI – Add UE Power Class 2 to band 41 intra-band contiguous LTE carrier aggregation**

Source: SPRINT Corporation

Abstract:

last approved WID: RP-162571

Decision: The document was **approved**.

10.12.7 Core part: Addition of Power Class 1 UE to bands B3/B20/B28 for LTE [LTE_HPUE_B3_B20_B28-Core]

RP-171078 **Status report for WI: Addition of power class 1 UE to B3/B20/B28 for LTE; rapporteur: Huawei**

Source: RAN4

Samsung Exhibit 1025, Page 1720 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Discussion:

MCC: status report has no Perf. part information and is claiming 100% complete although we are not approving any REL-15 CRs at RAN #76 and no CRs are submitted to RAN #76

NTT DOCOMO: is not 100% complete

Decision: The document was **revised to RP-171461**.

RP-171461 **Status report for WI: Addition of power class 1 UE to B3/B20/B28 for LTE; rapporteur: Huawei**
Source: RAN4

(Replaces RP-171078)

Discussion:

NEC: Perf. part missing?

Huawei: there is no Perf. part for this feature

conclusion: approved: Core: 99%, Sep.17

Decision: The document was **noted**.

10.12.8 450 MHz Band for LTE in Region 3 [New WI: LTE450_Reg3]

RP-170953 **Status report for WI 450 MHz Band for LTE in Region 3; rapporteur: China Unicom**
Source: RAN4

Discussion:

MCC: Perf. part target is missing, target date shift (by 1 year)?

Decision: The document was **revised to RP-171462**.

RP-171462 **Status report for WI 450 MHz Band for LTE in Region 3; rapporteur: China Unicom**
Source: RAN4

(Replaces RP-170953)

Discussion:

conclusion: approved: Core: 30%, Dec.17; Perf.: 0%, Dec.17

Decision: The document was **noted**.

RP-170952 **Revised WID on 450 MHz Band for LTE in Region 3**
Source: China Unicom

Abstract:

last approved WID: RP-170159

Decision: The document was **approved**.

10.12.9 US 600 MHz Band for LTE [New WI: LTE600_US]

RP-171141 **Status Report on WI US 600 MHz Band for LTE; rapporteur: Ericsson**
Source: RAN4

Samsung Exhibit 1025, Page 1721 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Abstract:

It reports the progress and the status of RAN4 activities for the definition of Band 71 (US 600 MHz band for LTE)

Discussion:

conclusion: approved: Core: 95%, Sep.17; Perf.: 95%, Sep.17

Decision: The document was **noted**.

RP-171142 **Revised WID on US 600 MHz Band for LTE**
Source: T-Mobile US, Ericsson

(Replaces RP-170740)

Abstract:

last approved WID: RP-170740; adding the frequency band ranges in the objective section, correcting e-mail address and reordering the list of affected specs

Decision: The document was **approved**.

10.12.10 Core part: V2X new band combinations for LTE [New WI: LTE_V2X_CA_bands-Core]

RP-170945 **Status report of WI on V2X new band combinations; rapporteur: LG Electronics**
Source: RAN4

Abstract:

Update status report for V2X_20A-47A was completed in RAN4 #83 meeting.

Discussion:

MCC: target date change (note: this is a basket WI going until the end of the REL);

conclusion: approved: Core: 20%, June 18

Decision: The document was **noted**.

RP-170944 **Revised WID on V2X new band combinations in rel-15**
Source: LG Electronics Inc.

Abstract:

last approved WID: RP-170752; to include new V2X band combinations for V2X_5A-47A and V2X_34A-47A.

Decision: The document was **approved**.

10.12.11 LAA/eLAA for the CBRS 3.5GHz band in the US [New WI: LTE_3550_CBRS_US_LAA]

RP-171331 **Status report for WI LAA/eLAA for the CBRS 3.5GHz band in the United States; rapporteur: AT&T**
Source: RAN4

Discussion:

MCC: late request;

conclusion: approved: Core: 50%, Dec.17; Perf.: 50%, Dec.17

Samsung Exhibit 1025, Page 1722 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **noted**.

10.13 Open REL-15 LTE & UMTS WIs (not spectrum related)

10.13.1 Enh. of BS RF and EMC requirements for AAS [AASenh_BS_LTE_UTRA]

RP-171075 **Status report for WI: Enhancements of Base Station (BS) RF and EMC requirements for Active Antenna System (AAS), rapporteur: Huawei**
Source: RAN4

Discussion:

conclusion: approved: Core: 60%, Dec.17; Perf.: 20%, June 18

Decision: The document was **noted**.

RP-171076 **Revision of WID: Enhancements of Base Station (BS) RF and EMC requirements for Active Antenna System (AAS)**
Source: Huawei, HiSilicon

Abstract:

last approved WID: RP-170844

Discussion:

Huawei: Nokia requested additional changes

Ericsson: would like to approve the TR only with Perf. part

Decision: The document was **revised to RP-171463**.

RP-171463 **Revision of WID: Enhancements of Base Station (BS) RF and EMC requirements for Active Antenna System (AAS)**
Source: Huawei, HiSilicon

(Replaces RP-171076)

Abstract:

last approved WID: RP-170844

Discussion:

Huawei: is withdrawn and will be brought next time

Decision: The document was **withdrawn**.

10.14 Open REL-15 LTE SIs (not spectrum related)

10.14.1 Study on further enh. to LTE D2D, UE to network relays for IoT and wearables [FS_feD2D_IoT_relay_wearable]

RP-171071 **Status report for SI: Study on further enhancements LTE Device to Device, UE to Network Relays for IoT and Wearables; rapporteur: Huawei**
Source: RAN2

Discussion:

Samsung Exhibit 1025, Page 1723 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved: 80%, Sep.17

Decision: The document was **noted**.

RP-171312 **TR 36.746 v1.0.0 on Study on further enhancements to LTE Device to Device (D2D), User Equipment (UE) to network relays for Internet of Things (IoT) and wearables; for information**
36.746 v1.0.0
Source: LG Electronics

Abstract:

late request; RAN2 TR 36.746 is provided for information

Decision: The document was **noted**.

10.14.2 Study on interference cancellation receiver for LTE BS [FS_LTE_IC_BS]

RP-170938 **Status report for SI: Study on interference cancellation receiver for LTE BS, rapporteur: China Telecom**
Source: RAN4

Discussion:

conclusion: approved: 100%, June 17; SI is completed

Decision: The document was **noted**.

RP-170937 **TR 36.766 v2.0.0 for Study on interference cancellation receiver for LTE BS; for approval**
36.766 v2.0.0
Source: China Telecom, Huawei

Abstract:

RAN4 TR 36.766 is provided for approval.

Decision: The document was **approved**.

10.14.3 Study on UL data compression in LTE [FS_LTE_UDC]

RP-171107 **Status Report for SI: Study on UL data compression in LTE; rapporteur: CATT**
Source: RAN2

Decision: The document was **revised to RP-171388**.

RP-171388 **Status Report for SI: Study on UL data compression in LTE; rapporteur: CATT**
Source: RAN2

(Replaces RP-171107)

Discussion:

MCC: late request;

original proposal: 100%, June 17

conclusion: after discussion of RP-171108 the SI will continue

Decision: The document was **revised to RP-171426**.

Samsung Exhibit 1025, Page 1724 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171426 **Status Report for SI: Study on UL data compression in LTE; rapporteur: CATT**
Source: RAN2

(Replaces RP-171388)

Discussion:

RAN2 chair: no TU change so RAN2 would not have no TUs, 1TU was expected

Decision: The document was **revised to RP-171464**.

RP-171464 **Status Report for SI: Study on UL data compression in LTE; rapporteur: CATT**
Source: RAN2

(Replaces RP-171426)

Discussion:

conclusion: approved: 90%, Sep.17

Decision: The document was **noted**.

RP-171139 **TR 36.754 v1.0.0 on Study on UL data compression for E-UTRA; for approval**
36.754 v1.0.0
Source: CATT

Abstract:

RAN2 TR 36.754 is provided for 1-step approval

Discussion:

Mediatek: we should approve the TR here as it is more than 80% complete and then have CRs to change it

RAN2 chair: is not what we do usually but ok

Decision: The document was **approved**.

RP-171140 **TR 36.754 v1.0.0 on Study on UL data compression for E-UTRA; for approval**
36.754 v1.0.0
Source: CATT

Abstract:

see RP-171139 instead

Decision: The document was **withdrawn**.

10.14.4 Study on SON for eCoMP for LTE [FS_LTE_SON_eCOMP]

RP-171011 **Status report of SI Study on SON for eCoMP for LTE; rapporteur: Nokia**
Source: RAN3

Discussion:

conclusion: approved: 100%, June 17; SI is completed

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1725 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171012 **TR 36.742 v2.0.0 on Study on SON for eCoMP for LTE; for approval**
36.742 v2.0.0
Source: Nokia, Alcatel-Lucent Shanghai Bell

Abstract:

RAN3 TR 36.742 is provided for approval

Decision: The document was **approved**.

10.14.5 Study on enhanced LTE Support for Aerial Vehicles [New SI: FS_LTE_Aerial]

RP-171053 **Status Report of SI Study on Enhanced LTE Support for Aerial Vehicles; rapporteur: NTT DOCOMO, INC.**
Source: RAN2

Discussion:

conclusion: approved: 15%, Dec.17

Decision: The document was **noted**.

RP-171050 **Revision of SID on Enhanced Support for Aerial Vehicles**
Source: NTT DOCOMO, INC.

Abstract:

last approved SID: RP-170779

Decision: The document was **approved**.

10.14.6 Study on Architecture Evolution for E-UTRAN [New SI: FS_LTE_arch_evo]

RP-171332 **Status report for SI Study on Architecture Evolution for E-UTRAN; rapporteur: China Unicom**
Source: RAN3

Discussion:

MCC: late request

conclusion: approved: 0%, Dec.17

Decision: The document was **noted**.

10.15 LTE UE capabilities/FGIs/IoT bits/UE categories

RP-171037 **Introduction of a new DL category**
Source: Qualcomm Incorporated

Discussion:

proposals:

- The DL peak data rates of the new UE category should be a multiple of 200Mbps

- The following new DL category should be added : Cat x: 2000Mbps DL

- The 2000Mbps DL category should be defined for Rel-14.

- The pairing with UL categories is TBD.

Samsung Exhibit 1025, Page 1726 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Mediatek: legacy carrier or green field spectrum?

RAN chair: suggests to discuss and decide in Sep.17

Qualcomm: as there is some operator support why not deciding already now

Qualcomm: providing band combinations was never a prerequisite for a category, we can rely on interested operators to bring them up

conclusion: we will come back to this in Sep.17

Decision: The document was **noted**.

RP-171247 **RAN2 CRs to Introduction of a new UL UE category for 300Mbps with 64QAM**
Source: RAN2

Abstract:

Endorsed by RAN2; moved from AI 11.2 to AI 10.15;

Discussion:

MCC: Acc. to RAN2 chair: new UL category for 300Mbps with UL 64 QAM; proposed and postponed at RAN#75 to enable RAN2 review of CRs;

RAN2 technically endorsed 36.331 and 36.306 CRs from Rel-14 (provided to RAN in CR pack RP-171247); RAN2 asks RAN to make final decision

Mediatek: wondering whether there is any RAN4 band combination already for this? It would require 4CC CA in UL;

Intel: it is already supported in core specs and it does not require to have a band combination already, there is no band combination for this but this may come later

Decision: The document was **approved**.

11 UMTS

NOTE: This agenda item covers REL-14/15 UMTS WIs/SIs. But UMTS UE conformance aspects are covered under AI13.

Maintenance of closed REL-8 to REL-13 WIs/SIs is covered under AI 14. Open WIs/SIs that affect UMTS and LTE have to be covered under AI 10.

11.1 New WI/SI proposals for UMTS

RP-171213 **Motivation for WI: Simplified HS-SCCH for UMTS**
Source: Ericsson

Decision: The document was **noted**.

RP-171214 **New WI proposal: Simplified HS-SCCH for UMTS**
Source: Ericsson

Abstract:

new WI for UMTS only; leading WG: RAN6; follow-up WI of REL-15 SI FS_UTRA_simple_HSSCCH started at RAN #75

Decision: The document was **revised to RP-171443**.

Samsung Exhibit 1025, Page 1727 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171443 **New WI proposal: Simplified HS-SCCH for UMTS**
Source: Ericsson

(Replaces RP-171214)

Abstract:

new WI for UMTS only; leading WG: RAN6; follow-up WI of REL-15 SI FS_UTRA_simple_HSSCCH started at RAN #75

Decision: The document was **approved**.

11.2 Small Technical Enhancements and Improvements for REL-14 [TEI14]

RP-171238 **RAN2 CRs to Small Technical Enhancements and Improvements for REL-14**
Source: RAN2

Decision: The document was **approved**.

11.3 Closed REL-14 UMTS WIs

11.3.1 Core part: RRC optimization for UMTS [UTRA_RRCopt-Core]

11.3.2 Core part: DTX/DRX enhancements in CELL_FACH [FACH_DTXDRX-Core]

11.3.3 Core part: Multi-Carrier Enhancements for UMTS [UTRA_MCe-Core]

RP-171327 **Multi-Carrier Enhancements for UMTS - Core part**
Source: RAN3

Decision: The document was **approved**.

11.3.4 Core part: QoE Measurement Collection for streaming services in UTRAN [UMTS_QMC_Streaming-Core]

RP-171239 **RAN2 CRs to Quality of Experience (QoE) Measurement Collection for streaming services in UTRAN**
Source: RAN2

Decision: The document was **approved**.

RP-171328 **Quality of Experience (QoE) Measurement Collection for streaming services in UTRAN**
Source: RAN3

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1728 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4 Closed REL-14 UMTS SIs

11.5 UMTS UE capabilities/IoT bits/UE categories

11.6 Open REL-15 UMTS WIs

11.6.1 Core part: DL interf. mitigation for UMTS [New WI: UTRA_DL_IM-Core]

RP-171134 **Status report of WI: Core part: DL interference mitigation for UMTS; rapporteur: Qualcomm**
Source: RAN2

Abstract:

100% complete

Discussion:

Qualcomm: Highlight the RAN2 agreement to standardize the feature starting from Rel-14, for RAN approval. (RAN2 Rel-14 CRs package is in RP-171240);

MCC: shifting this WI back from REL-15 into frozen REL-14 would be an exception (because it is for UMTS and there is consensus among the affected WG(s) and because we are freezing ASN.1 at this meeting and impacts were taken into account);

conclusion: approved: 100%, June 17; Core part is shifted back from REL-15 to REL-14 and is completed

Decision: The document was **noted**.

RP-171240 **RAN2 CRs to DL interference mitigation for UMTS**
Source: RAN2

Decision: The document was **approved**.

RP-171136 **Revision of WI: Core part: DL interference mitigation for UMTS**
Source: Qualcomm Incorporated

Abstract:

last approved WID: RP-170703; minor update: to fix WID acronym/code

Decision: The document was **approved**.

RP-171135 **Summary of WI: DL interference mitigation for UMTS**
Source: Qualcomm Incorporated

Abstract:

note: This is a Rel-15 WI and RAN #76 will not approve Rel-15 CRs.

Discussion:

Note: After RAN #76 decision, UTRA_DL_IM-Core is a REL-14 WI.

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1729 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.7 Open REL-15 UMTS SIs

11.7.1 Study on scheduling enhancements with CA for UMTS [New SI: FS_UTRA_CA_sched_enh]

RP-171064 **Status report for SI: Study on scheduling enhancements with carrier aggregation for UMTS; rapporteur: Huawei**
Source: RAN1

Discussion:

conclusion: approved: 100%, June 17; SI is completed

Decision: The document was **noted**.

RP-170990 **TR 25.708 V1.0.0 Study on Scheduling Enhancements with Carrier Aggregation for UMTS; for approval**
25.708 v1.0.0
Source: Huawei

Abstract:

RAN1 TR 25.708 is provided for 1-step approval

Decision: The document was **approved**.

RP-171065 **Revision of SI: Study on scheduling enhancements with carrier aggregation for UMTS**
Source: Huawei, HiSilicon

Abstract:

last approved SID: RP-170719; addition of TR number, correction of acronym

Decision: The document was **approved**.

11.7.2 Study on a simplified HS-SCCH for UMTS [New SI: FS_UTRA_simple_HSSCCH]

RP-171211 **Status report of SI Study on a simplified HS-SCCH for UMTS; rapporteur: Ericsson**
Source: RAN1

Discussion:

MCC: this SI was exceptionally approved after RAN #76 without target date and without new/affected spec, the TR is brought here for approval but requires a SID update beforehand to allocate a TR number;

conclusion: approved: 100%, June 17; SI is completed

Decision: The document was **noted**.

RP-171212 **Revised SI: Study on a simplified HS-SCCH for UMTS**
Source: Ericsson

Abstract:

last approved SID: RP-170725

Samsung Exhibit 1025, Page 1730 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **revised to RP-171477**.

RP-171477 **Revised SI: Study on a simplified HS-SCCH for UMTS**
Source: Ericsson

(Replaces RP-171212)

Abstract:

last approved SID: RP-170725

Discussion:

TR number 25.709 will be added

Decision: The document was **approved**.

RP-171316 **TR 25.709 v1.0.0 on Study on a simplified HS-SCCH for UMTS; for approval**
25.709 v1.0.0
Source: Ericsson

Abstract:

RAN1 TR 25.7XX is provided for 1-step approval;

Discussion:

MCC: The TR must be created via a SID revision in RP-171212 first

Decision: The document was **approved**.

12 GERAN

NOTE: This agenda item covers REL-14/15 GERAN WIs/SIs. But GERAN MS conformance aspects are covered under AI13. Maintenance of closed REL-8 to REL-13 WIs/SIs is covered under AI 14.6.

12.1 New WI/SI proposals for GERAN (led by RAN6)

12.2 Open REL-14 GERAN WIs

12.2.1 Positioning Enhancements for GERAN [ePOS_GERAN]

RP-170919 **Status report of WI Positioning Enhancements for GERAN; rapporteur: Ericsson**
Source: RAN6

Abstract:

Core part exception granted until June 17

Discussion:

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

RP-170923 **RAN6 agreed CRs for REL-14 WI: Positioning Enhancements for GERAN (ePOS_GERAN)**
Source: RAN6

Samsung Exhibit 1025, Page 1731 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

RP-171052 **Revised Work Item on Positioning Enhancements for GERAN**
Source: Ericsson LM

(Replaces RP-161260)

Abstract:

last approved WID: RP-161260; to update impacted specs as well as completion time to RAN#76.

Decision: The document was **approved**.

RP-170920 **Summary for WI Positioning Enhancements for GERAN**
Source: Ericsson LM

Decision: The document was **noted**.

12.2.2 Radio Interface Enhancements for Extended Coverage GSM for support of Cellular IoT [CIoT_EC_GSM_radio_enh]

RP-171320 **Status report for WI Radio Interface Enhancements for Extended Coverage GSM for support of Cellular Internet of Things; rapporteur: Nokia**
Source: RAN6

Abstract:

Core part exception granted until June 17

Discussion:

MCC: late request

conclusion: approved: Core: 100%, June 17; Perf.: 100%, June 17; Core and Perf. part WI are completed

Decision: The document was **noted**.

RP-170924 **RAN6 agreed CRs for REL-14 WI: Radio Interface Enhancements for Extended Coverage GSM for support of Cellular Internet of Things (CIoT_EC_GSM_radio_enh)**
Source: RAN6

Decision: The document was **approved**.

RP-171321 **WI summary for WI Radio Interface Enhancements for Extended Coverage GSM for support of Cellular Internet of Things**
Source: Nokia

Abstract:

late request

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1732 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

12.3 Small Technical Enhancements and Improvements for REL-14 [TEI14]

RP-170925 **RAN6 agreed CRs for REL-14 WI Small Technical Enhancements and Improvements for REL-14 (TEI14, eDecor)**
Source: RAN6

Decision: The document was **approved**.

12.4 Closed REL-14 GERAN WIs

12.4.1 Core part: Dedicated Core Networks for GERAN [DECOR_GERAN-Core]

RP-170926 **RAN6 agreed CR for the REL-14 WI Dedicated Core Networks for GERAN (DECOR_GERAN-Core)**
Source: RAN6

Decision: The document was **approved**.

12.5 Closed REL-14 GERAN SIs

13 New and open RAN5 UE Conformance testing WIs and SIs

NOTE: For closed WIs/SIs and TEIx_Test with x<14 see agenda item 14.

13.1 New WI/SI proposals for UE conformance testing (led by RAN5)

RP-170931 **New WID on UE Conformance Test Aspects - Addition of 1.4 and 3 MHz Channel Bandwidth to E-UTRA operating band 65 for CGC (Complementary Ground Component) operations in Region 1**
Source: Dish Network

Abstract:

new WI for LTE; leading WG: RAN5; tested: LTE_1980_2170_REG1_addBWs-Core; to update the 3GPP RAN WG5 RF, RRM and protocol test specifications for Band 65, to include 1.4MHz and 3MHz channel bandwidths.

Decision: The document was **approved**.

RP-171057 **New WI Proposal: UE Conformance Test Aspects – EIEI (Evolution to and Interworking with eCall in IMS)**
Source: Qualcomm Incorporated

Abstract:

new WI for LTE; leading WG: RAN5; tested: REL-14 WI EIEI-CT

Decision: The document was **approved**.

RP-171058 **New WI Proposal: UE Conformance Test Aspects – Requirements for a new UE category 1bis with single receiver based on category 1 for LTE**
Source: Qualcomm Incorporated

Abstract:

new WI for LTE; leading WG: RAN5; tested: LTE_UE_cat_1RX-Core

Samsung Exhibit 1025, Page 1733 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

RP-171106 **New WID: UE Conformance Test Aspects- Voice Enhancement for LTE**
Source: CATT, CMCC

Abstract:

new WI for LTE; leading WG: RAN5; tested: only voice aspects of REL-14 WI LTE_VoLTE_ViLTE_enh-Core ?

Decision: The document was **revised to RP-171385**.

RP-171385 **New WID: UE Conformance Test Aspects- Voice and Video Enhancement for LTE**
Source: CATT, CMCC

(Replaces RP-171106)

Abstract:

new WI for LTE; leading WG: RAN5; tested: REL-14 WI LTE_VoLTE_ViLTE_enh-Core; WI code to be used: LTE_VoLTE_ViLTE_enh-UEConTest

Decision: The document was **approved**.

RP-171130 **New WI Proposal: UE Conformance Test Aspects –Support for LTE-based V2X Services**
Source: Huawei, CATT

Abstract:

new WI for LTE only; leading WG: RAN5; tested: REL-14 WI LTE_V2X-Core; WI code to be used: LTE_V2X-UEConTest; WID endorsed by RAN5 in R5-173042; note: There are already CRs submitted to RAN #76 for this WI in RP-171391

Decision: The document was **approved**.

RP-171391 **RAN5 agreed non TTCN CR(s) WI MS Conformance Test Aspects - Enhancements on LTE-based V2X Services (LTE_V2X-UEConTest)**
Source: RAN5

Discussion:

MCC: A WI for LTE_V2X-UEConTest does not yet exist, it is proposed in RP-171130

Note: It turned out after RAN #76 that the CR Pack does not include the indicated CRs, so 1 week email discussion was scheduled to approve the revised CR pack RP-171510 including the corresponding CRs. So the status of RP-171391 is changed from "approved" to "revised in RP-171510".

Decision: The document was **revised to RP-171510**.

RP-171510 **RAN5 agreed non TTCN CR(s) WI MS Conformance Test Aspects - Enhancements on LTE-based V2X Services (LTE_V2X-UEConTest)**
Source: RAN5

(Replaces RP-171391)

Discussion:

Note: Approved in email discussion [76-03] after RAN #76 (9-16.6.2018) as revision of CR pack RP-171391.

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1734 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171155 **New WID on: UE Conformance Test Aspects - Enhancements of Dedicated Core Networks for UTRA and LTE**

Source: Ericsson

Abstract:

new test WI for UTRA and LTE; leading WG: RAN5; tested: REL-14 WI eDECOR-UTRA_LTE-Core

Decision: The document was **approved**.

RP-171154 **New WID on: UE Conformance Test Aspects – 5G system with NR and LTE**

Source: Ericsson, CMCC

Abstract:

new test WI for 5G system with NR and LTE; leading WG: RAN5; tested: REL-15 WI 5GS_Ph1-CT, REL-15 WI NR_newRAT-Core and REL-15 WI LTE_5GCN_connect-Core;

Decision: The document was **approved**.

13.2 Open Rel-5 WIs

13.2.1 UE Conformance Test Aspects – IMS for Converged IP Communications [IMS_CONV_IP_COM-UEConTest]

RP-171153 **Status report for UE Conformance Test Aspects - IMS for Converged IP Communications; rapporteur: ROHDE & SCHWARZ**

Source: RAN5

Abstract:

12 test cases planned, current status is: 0 out of 12 test cases completed. 4 test cases started.

Discussion:

conclusion: approved: 20%, Dec.17

Decision: The document was **noted**.

RP-171334 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – IMS for Converged IP Communications**

(IMS_CONV_IP_COM-UEConTest)

Source: RAN5

Decision: The document was **approved**.

13.3 Open Rel-12 WIs

13.3.1 UE Conf. Test Aspects – LTE D2D Proximity Services [LTE_D2D_Prox-UEConTest]

RP-171055 **Status report of WI: UE Conformance Test aspects - LTE Device–to-Device Proximity Services; rapporteur: Qualcomm**

Source: RAN5

Discussion:

Samsung Exhibit 1025, Page 1735 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved: 100%, June 17; WI is completed

Decision: The document was **noted**.

RP-171335 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – UE Conformance Test Aspects – LTE Device-to-Device Proximity Services (LTE_D2D_PROX-UEConTest)**
Source: RAN5

Decision: The document was **approved**.

13.3.2 UE Conf. Test Aspects - E-UTRA Small cell enh. - Physical layer aspects [LTE_SC_enh_L1-UEConTest]

RP-171085 **Status report for WI: UE Conformance Test Aspects - E-UTRA small cell enhancements - Physical layer aspects; rapporteur: Huawei**
Source: RAN5

Discussion:

conclusion: approved: 100%, June 17; WI is completed

Decision: The document was **noted**.

RP-171336 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - E-UTRA Small cell enhancements - Physical layer aspects (LTE_SC_enh_L1-UEConTest)**
Source: RAN5

Decision: The document was **approved**.

13.3.3 UE Conf. Test Aspects - Dual connectivity for LTE [LTE_SC_enh_dualC-UEConTest]

RP-171157 **Status report for WI UE Conformance Test Aspects - Dual connectivity for LTE; rapporteur: Ericsson**
Source: RAN5

Abstract:

Test: 93%, Sep. 17 (+3 months)

Discussion:

MCC: target date change; RAN #77 is in Sep.17 and not in Aug.17;

conclusion: approved: 93%, Sep.17

Decision: The document was **noted**.

RP-171337 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Dual connectivity for LTE (LTE_SC_enh_dualC-UEConTest)**
Source: RAN5

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1736 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

13.3.4 UE Conf. Test Aspects - Further Enh. to LTE TDD for DL-UL Interf. Management and Traffic Adaptation [LTE_TDD_eIMTA-UEConTest]

RP-171105 **Status report for WI: UE Conformance Test Aspects - Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation; rapporteur: CATT**
Source: RAN5

Discussion:

MCC: WI was at 60% at RAN #75;

conclusion: approved: 60%, Dec.17

Decision: The document was **noted**.

RP-171338 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation (LTE_TDD_eIMTA-UEConTest)**
Source: RAN5

Decision: The document was **withdrawn**.

13.3.5 UE Conf. Test Aspects - Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA [LTE_UTRA_IncMon-UEConTest]

RP-171158 **Status report for WI UE Conformance Test Aspects - Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA; rapporteur: Ericsson**
Source: RAN5

Discussion:

MCC: target date change;

conclusion: approved: 12%, Dec.17

Decision: The document was **noted**.

RP-171339 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects: Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA (LTE_UTRA_IncMon-UEConTest)**
Source: RAN5

Decision: The document was **approved**.

13.4 Open Rel-13 WIs

13.4.1 UE Conf. Test Aspects - Rel-13 LTE CA configurations [LTE_CA_Rel13-UEConTest]

RP-171159 **Status report for WI UE Conformance Test Aspects - Rel-13 CA configurations; rapporteur: Ericsson**
Source: RAN5

Abstract:

includes all Rel-13 CA configurations associated with the 138 RAN4 Rel-13 CA WIs. The completion per CA configuration is provided by the attached RAN5 work plan attached to the SR (35 CA configurations completed).

Discussion:

Samsung Exhibit 1025, Page 1737 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved: 59%. Dec.17

Decision: The document was **noted**.

RP-171340 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Rel-13 LTE CA configurations (LTE_CA_Rel13-UEConTest) (Batch 1)**
Source: RAN5

Decision: The document was **approved**.

RP-171341 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Rel-13 LTE CA configurations (LTE_CA_Rel13-UEConTest) (Batch 2)**
Source: RAN5

Decision: The document was **approved**.

RP-171342 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Rel-13 LTE CA configurations (LTE_CA_Rel13-UEConTest) (Batch 3)**
Source: RAN5

Decision: The document was **approved**.

13.4.2 UE Conf. Test Aspects - LTE DL 4 Rx antenna ports [LTE_4Rx_AP_DL-UEConTest]

RP-171160 **Status report for WI UE Conformance Test Aspects - LTE DL 4 Rx antenna ports; rapporteur: Ericsson**
Source: RAN5

Discussion:

MCC: target date change;

conclusion: approved: 85%, Sep.17

Decision: The document was **noted**.

RP-171343 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - LTE DL 4 Rx antenna ports (LTE_4Rx_AP_DL-UEConTest)**
Source: RAN5

Discussion:

MCC: it turned out that R5-173055 which is included in RP-171343 was actually withdrawn in RAN5 and should therefore not be part of this CR pack;

conclusion: partially approved, i.e. all CRs of RP-171343 are approved except R5-173055 which is withdrawn

Decision: The document was **partially approved**.

13.4.3 UE Conf. Test Aspects - Licensed-Assisted Access using LTE [LTE_LAA-UEConTest]

RP-171056 **Status report of WI: UE Conformance Test Aspects - Licensed-Assisted Access using LTE; rapporteur: Qualcomm**
Source: RAN5

Samsung Exhibit 1025, Page 1738 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Discussion:

MCC: target date change;

conclusion: approved: 90%, Sep.17

Decision: The document was **noted**.

RP-171344 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Licensed-Assisted Access using LTE (LTE_LAA-UEConTest)**
Source: RAN5

Decision: The document was **approved**.

13.4.4 UE Conf. Test Aspects - Further LTE Physical Layer Enh. for MTC [LTE_MTCe2_L1-UEConTest]

RP-171161 **Status report for WI UE Conformance Test Aspects – Further LTE Physical Layer Enhancements for MTC; rapporteur: Ericsson**
Source: RAN5

Abstract:

work is split into 3 phases. Phase 1 (CE Mode A, FDD) is 97% completed. Phase 2 (CE Mode B, TDD) is 85% completed. Phase 3: Control Plane IoT optimization etc is 55% completed.

Discussion:

MCC: target date change; RAN #77 is in Sep.17 and not in Aug. 17;

conclusion: approved: 90%, Sep.17

Decision: The document was **noted**.

RP-171345 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Further LTE Physical Layer Enhancements for MTC (LTE_MTCe2_L1-UEConTest) (Batch 1)**
Source: RAN5

Decision: The document was **approved**.

RP-171346 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Further LTE Physical Layer Enhancements for MTC (LTE_MTCe2_L1-UEConTest) (Batch 2)**
Source: RAN5

Decision: The document was **approved**.

RP-171347 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Further LTE Physical Layer Enhancements for MTC (LTE_MTCe2_L1-UEConTest) (Batch 3)**
Source: RAN5

Decision: The document was **approved**.

RP-171348 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Further LTE Physical Layer Enhancements for MTC (LTE_MTCe2_L1-UEConTest) (Batch 4)**
Source: RAN5

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1739 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171156 **Revised WID: UE Conformance Test Aspects – Further LTE Physical Layer Enhancements for MTC**

Source: Ericsson

Abstract:

last approved WID: RP-160765

Decision: The document was **approved**.

13.4.5 UE Conf. Test Aspects - WLAN/3GPP Radio Level Integration and Interworking Enh. [LTE_WLAN_radio-UEConTest]

RP-170914 **Status Report of WI UE Conformance Test Aspects - WLAN/3GPP Radio Level Integration and Interworking Enhancements; rapporteur: Intel Corporation (UK) Ltd.**

Source: RAN5

Discussion:

conclusion: approved: 32%, Sep.17

Decision: The document was **noted**.

RP-171349 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - WLAN/3GPP Radio Level Integration and Interworking Enhancement Interworking (LTE_WLAN_radio-UEConTest)**

Source: RAN5

Decision: The document was **approved**.

13.4.6 UE Conf. Test Aspects - Narrowband IoT [NB_IOT-UEConTest]

RP-171001 **Status report of WI: UE Conformance Test Aspects - Narrowband IoT; rapporteur: CMCC**

Source: RAN5

Abstract:

related WID: RP-160047

Discussion:

MCC: target date change; RAN4 had a huge number of corrections at RAN #76;

conclusion: approved: 95%, Sep.17

Decision: The document was **noted**.

RP-171350 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Narrowband Internet of Things (NB-IOT) (NB_IOT-UEConTest) (Batch 1)**

Source: RAN5

Decision: The document was **approved**.

RP-171351 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Narrowband Internet of Things (NB-IOT) (NB_IOT-UEConTest) (Batch 2)**

Source: RAN5

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1740 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171352 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Narrowband Internet of Things (NB-IOT) (NB_IOT-UEConTest) (Batch 3)**
Source: RAN5

Decision: The document was **approved**.

RP-171353 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Narrowband Internet of Things (NB-IOT) (NB_IOT-UEConTest) (Batch 4)**
Source: RAN5

Decision: The document was **withdrawn**.

13.4.7 UE Conf. Test Aspects - LTE CA Enh. Beyond 5 Carriers: PUCCH on Scell [LTE_CA_enh_b5C_PUCCH-UEConTest]

RP-171087 **Status report for WI: LTE Carrier Aggregation Enhancement Beyond 5 Carriers - PUCCH on Scell; rapporteur: Huawei**
Source: RAN5

Discussion:

MCC: target date change;

conclusion: approved: 8%, March 18

Decision: The document was **noted**.

13.4.8 UE Conf. Test Aspects - Support for Mission Critical Push To Talk over LTE [New WI: MCPTT-ConTest]

RP-170947 **Status Report of UE Conformance Test Aspects - Support for Mission Critical Push To Talk over LTE [MCPTT-ConTest]; rapporteur: U.S. Department of Commerce**
Source: RAN5

Discussion:

MCC: late submission;

conclusion: approved: 30%, Dec.17

Decision: The document was **noted**.

13.4.9 UE Conf. Test Aspects - Interference Mitigation for DL Control Channels of LTE [New WI: LTE_IM_DLCCH-UEConTest]

RP-170975 **Status Report of WI: UE Conformance Test Aspects – Interference Mitigation for Downlink Control Channels of LTE; rapporteur: Intel Corporation**
Source: RAN5

Discussion:

MCC: target date unclear: Dec.17 (RAN #78) or March 18 (RAN #79) ?

Decision: The document was **revised to RP-171319**.

Samsung Exhibit 1025, Page 1741 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171319 **Status Report of WI: UE Conformance Test Aspects – Interference Mitigation for Downlink Control Channels of LTE; rapporteur: Intel Corporation**
Source: RAN5

(Replaces RP-170975)

Abstract:

revision of RP-170975 to include also RAN5 WP

Discussion:

MCC: late request;

conclusion: approved: 5%, March 18

Decision: The document was **noted**.

13.5 Open Rel-14 WIs

13.5.1 UE Conf. Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom [LTE_UTRA_TRP_TRS-UEConTest]

RP-170936 **Status report for WI UE Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom; rapporteur: ZTE**
Source: RAN5

Discussion:

conclusion: approved: 78%, Sep.17

Decision: The document was **noted**.

RP-171354 **RAN5 agreed non TTCN CR(s) WI MS Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom (LTE_UTRA_TRP_TRS-UEConTest)**
Source: RAN5

Decision: The document was **approved**.

13.5.2 UE Conf. Test Aspects – Rel-14 CA configurations [LTE_CA_R14-UEConTest]

RP-171162 **Status report for WI UE Conformance Test Aspects - Rel-14 CA configurations; rapporteur: Ericsson**
Source: RAN5

Abstract:

includes all Rel-14 CA associated with the RAN4 Rel-14 bucket CA WIs (currently 739 Rel-14 CA configurations included in the RAN5 work plan, +233 added based on RP#75 added Rel-14 CAs). The completion per CA configuration is provided by the attached RAN5 work plan attached to the SR (26 Rel-14 CA configurations completed).

Discussion:

conclusion: approved: 12%, March 18

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1742 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171355 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Rel-14 CA configurations (LTE_CA_R14-UEConTest)**
Source: RAN5

Decision: The document was **approved**.

13.5.3 UE Conf. Test Aspects - Radiated Performance of Multiple-antenna Receivers in the LTE UE [LTE_MIMO_OTA-UEConTest]

RP-170974 **Status Report of WI: UE Conformance Test Aspects – Radiated Performance of Multiple-antenna Receivers in the LTE UE; rapporteur: Intel Corporation**
Source: RAN5

Discussion:

MCC: target date shift by 9 months;

conclusion: approved: 27%, March 18

Decision: The document was **noted**.

RP-171356 **RAN5 agreed non TTCN CR(s) WI MS Conformance Test Aspects - x (LTE_MIMO_OTA-UEConTest)**
Source: RAN5

Decision: The document was **approved**.

RP-170986 **Revision of WI UE Conformance Test Aspects – Radiated Performance of Multiple-antenna Receivers in the UE**
Source: Intel Corporation (UK) Ltd

Abstract:

last approved WID: RP-161474

Decision: The document was **approved**.

RP-170988 **WI exception request for UE Conformance Test Aspects – Radiated Performance of Multiple-antenna Receivers in the UE**
Source: Intel Corporation (UK) Ltd

Discussion:

MCC: exception requests are not used for RAN5 WIs

Decision: The document was **withdrawn**.

13.5.4 UE Conf. Test Aspects - Support for V2V services based on LTE sidelink [LTE_SL_V2V-UEConTest]

RP-171086 **Status report for WI: Support for V2V services based on LTE sidelink; rapporteur: Huawei**
Source: RAN5

Discussion:

MCC: WI was 15% complete at RAN #75;

Samsung Exhibit 1025, Page 1743 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved: 15%, Sep.17

Decision: The document was **noted**.

RP-171357 **RAN5 agreed non TTCN CR(s) WI MS Conformance Test Aspects - Support for V2V services based on LTE sidelink (LTE_SL_V2V-UEConTest)**
Source: RAN5

Decision: The document was **approved**.

13.5.5 UE Conf. Test Aspects - Enhanced LAA for LTE [LTE_eLAA-UEConTest]

RP-170915 **Status Report**
Source: Intel Corporation (UK) Ltd

Abstract:

moved from AI 13.4.5 to AI 13.5.5

Discussion:

see RP-170916 instead

Decision: The document was **withdrawn**.

RP-170916 **Status Report of WI UE Conformance Test Aspects - Enhanced LAA for LTE [LTE_eLAA_UEConTest]; rapporteur: Intel Corporation (UK) Ltd**
Source: RAN5

Discussion:

conclusion: approved: 6%, Sep.17

Decision: The document was **noted**.

RP-171358 **RAN5 agreed non TTCN CR(s) WI MS Conformance Test Aspects -Enhanced LAA for LTE (LTE_eLAA-UEConTest)**
Source: RAN5

Decision: The document was **withdrawn**.

13.5.6 UE Conf. Test Aspects – CBRS 3.5GHz Band for LTE in the US (Band 48) [LTE_TDD_3550_CBRS_US-UEConTest]

RP-171313 **Status report of WI UE Conformance Test Aspects - Citizens Broadband Radio Service (CBRS) 3.5GHz Band for LTE in the United States (Band 48); rapporteur: Nokia**
Source: RAN5

Discussion:

MCC: late request

conclusion: approved: 100%, June 17; WI is completed

Decision: The document was **noted**.

Samsung Exhibit 1025, Page 1744 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171359 **RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – Citizens Broadband Radio Service (CBRS) 3.5GHz Band for LTE in the United States (Band 48) (LTE_TDD_3550_CBRS_US-UEConTest)**

Source: RAN5

Decision: The document was **approved**.

13.5.7 UE Conf. Test Aspects - LTE 2.6 GHz FDD SDL band (2570-2620 MHz) and LTE CA (2DL/1UL) with Band 3 for Region 1 (Band 69) [New WI: LTE_FDD_2600_CA_B3-UEConTest]

RP-170950 **Status Report for WI UE Conformance Test Aspects - LTE 2.6 GHz FDD SDL band (2570-2620 MHz) and LTE Carrier Aggregation (2DL/1UL) with Band 3 for Region 1 (Band 69); rapporteur: Bureau Veritas, Orange**

Source: RAN5

Abstract:

WI code LTE_FDD_2600_CA_B3-UEConTest missing in workplan so WI code dummy is temporarily used

Discussion:

conclusion: approved: 43%, Dec.17

Decision: The document was **noted**.

RP-171360 **RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – LTE 2.6 GHz FDD SDL band (2570-2620 MHz) and LTE Carrier Aggregation (2DL/1UL) with Band 3 for Region 1 (Band 69)**

(LTE_FDD_2600_CA_B3-UEConTest)

Source: RAN5

Abstract:

WI code LTE_FDD_2600_CA_B3-UEConTest missing in workplan so WI code dummy is temporarily used

Decision: The document was **approved**.

13.5.8 UE Conf. Test Aspects - RAT Independent Further Indoor Positioning Enh. for LTE [New WI: LTE_iPos_enh2_RI-UEConTest]

RP-170949 **Status report of WI UE Conformance Test Aspects - RAT Independent Further Indoor Positioning Enhancements for LTE; rapporteur: NextNav**

Source: RAN5

Abstract:

Core part was completed in Dec.2016. Perf part is 100% complete in Jun. 2017.

Discussion:

conclusion: approved: 24%, Dec.17

Decision: The document was **noted**.

RP-171378 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – RAT Independent Further Indoor Positioning Enhancements for LTE**

Samsung Exhibit 1025, Page 1745 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

(LTE_iPos_enh2_RI-UEConTest)
Source: RAN5

Decision: The document was **approved**.

13.5.9 UE Conf. Test Aspects - SRS switching between LTE component carriers [New WI: LTE_SRS_switch-UEConTest]

RP-171088 Status report for WI: UE Conformance Test Aspects - SRS (sounding reference signal) switching between LTE component carriers; rapporteur: Huawei
Source: RAN5

Discussion:

conclusion: approved: 5%, March 18

Decision: The document was **noted**.

RP-171379 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – SRS (sounding reference signal) switching between LTE component carriers

(LTE_SRS_switch-UEConTest)
Source: RAN5

Decision: The document was **approved**.

13.5.10 UE Conf. Test Aspects - QoE Measurement Collection for streaming services in UTRAN [New WI: UMTS_QMC_Streaming-UEConTest]

RP-171089 Status report for WI: UE Conformance Test Aspects - Quality of Experience (QoE) Measurement Collection for streaming services in UTRAN; rapporteur: Huawei
Source: RAN5

Discussion:

conclusion: approved: 20%, Dec.17

Decision: The document was **noted**.

RP-171380 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – Quality of Experience (QoE) Measurement Collection for streaming services in UTRAN

(UMTS_QMC_Streaming-UEConTest)
Source: RAN5

Decision: The document was **approved**.

13.5.11 UE Conf. Test Aspects - Perf. enh for high speed scenario in LTE [New WI: LTE_high_speed-UEConTest]

RP-171000 Status report of WI: UE Conformance Test Aspects - Performance enhancements for high speed scenario in LTE, rapporteur: CMCC
Source: RAN5

Abstract:

Samsung Exhibit 1025, Page 1746 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

related WID: RP-170367

Discussion:

conclusion: approved: 5%, June 18

Decision: The document was **noted**.

RP-171381 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – Performance enhancements for high speed scenario in LTE**

(LTE_high_speed-UEConTest)
Source: RAN5

Decision: The document was **approved**.

13.5.12 UE Conf. Test Aspects - New band support for Rel-14 NB-IoT [New WI: NB_IOT_R14_bands-UEConTest]

RP-171163 **Status report for WI UE Conformance Test Aspects - New band support for Rel-14 NB-IoT; rapporteur: Ericsson**
Source: RAN5

Discussion:

conclusion: approved: 30%, Dec.17

Decision: The document was **noted**.

RP-171382 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – New band support for Rel-14 NB-IoT**

(NB_IOT_R14_bands-UEConTest)
Source: RAN5

Decision: The document was **approved**.

13.5.13 UE Conf. Test Aspects - 4 Rx antenna ports with CA for LTE DL [New WI: LTE_4Rx_AP_DL_CA-UEConTest]

RP-171164 **Status report for WI UE Conformance Test Aspects - 4 Rx antenna ports with CA for LTE DL; rapporteur: Ericsson**
Source: RAN5

Abstract:

Test: 5%, Mar. 18

Discussion:

conclusion: approved: 5%, March 18

Decision: The document was **noted**.

RP-171383 **RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – 4 Rx antenna ports with CA for LTE DL**

(LTE_4Rx_AP_DL_CA-UEConTest)
Source: RAN5

Samsung Exhibit 1025, Page 1747 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

13.5.14 Test - (Small) Technical Enhancements and Improvements for Rel-14 [TEI14_Test]

RP-171384 **RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-14 Conformance Testing (TEI14_Test)**
Source: RAN5

Decision: The document was **approved**.

14 Maintenance for closed WIs/SIs for REL-13 and earlier

NOTE: REL-4, REL-5, REL-6 and REL-7 were closed after RAN #65,

i.e. no CRs to specifications of these releases will be considered anymore.

14.1 TSG RAN WG1

14.1.1 Approval of CRs to closed Rel-8 WIs and WIs of previous releases

14.1.2 Approval of CRs to closed Rel-9 WIs (incl. TEI9)

14.1.3 Approval of CRs to closed Rel-10 WIs (incl. TEI10)

14.1.4 Approval of CRs to closed Rel-11 WIs (incl. TEI11)

14.1.5 Approval of CRs to closed Rel-12 WIs (incl. TEI12)

14.1.6 Approval of CRs to closed Rel-13 WIs (incl. TEI13)

RP-171193 **Maintenance of Rel-13 LTE carrier aggregation enhancement beyond 5 carriers**
Source: RAN1

Decision: The document was **approved**.

RP-171196 **Maintenance of Rel-13 Further LTE Physical Layer Enhancements for MTC**
Source: RAN1

Decision: The document was **approved**.

RP-171197 **Maintenance of Rel-13 NB-IoT feature**
Source: RAN1

Decision: The document was **approved**.

RP-171198 **Corrections for Rel-13 (36.211/36213)**
Source: RAN1

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1748 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-171209 **Maintenance of Rel-13 Elevation Beamforming/Full-Dimension (FD) MIMO for LTE**
Source: RAN1

Decision: The document was **approved**.

14.1.7 Approval of linked CR packages led by RAN WG1

RP-171099 **Correction on the power control of NPRACH in 36.213 Rel-13**
36.213 CR-0943 Cat: F (Rel-13) v13.5.0
Source: Huawei, HiSilicon

Abstract:

company CR related to RAN1 email discussion [89-01] On uplink power control for Rel-13 NB-IoT; moved from AI 10.3.14 to AI 14.1.7; this CR was not handled in a RAN1 Tdoc

Decision: The document was **withdrawn**.

RP-171098 **Correction on the power control of NPRACH in 36.213 Rel-14**
36.213 CR-0944 Cat: A (Rel-14) v14.2.0
Source: Huawei, HiSilicon

Abstract:

company CR related to RAN1 email discussion [89-01] on uplink power control for Rel-13 NB-IoT; moved from AI 10.3.14 to AI 14.1.7; this CR was not handled in a RAN1 Tdoc

Decision: The document was **withdrawn**.

RP-171101 **Correction on the power control of NPRACH in 36.321 Rel-13**
36.321 CR-1134 Cat: F (Rel-13) v13.5.0
Source: Huawei, HiSilicon

Abstract:

company CR related to RAN1 email discussion [89-01] On uplink power control for Rel-13 NB-IoT; moved from AI 10.3.14 to AI 14.1.7; this CR was not handled in a RAN2 Tdoc

Decision: The document was **withdrawn**.

RP-171100 **Correction on the power control of NPRACH in 36.321 Rel-14**
36.321 CR-1133 Cat: A (Rel-14) v14.2.0
Source: Huawei, HiSilicon

Abstract:

company CR related to RAN1 email discussion [89-01] On uplink power control for Rel-13 NB-IoT; moved from AI 10.3.14 to AI 14.1.7; this CR was not handled in a RAN2 Tdoc

Decision: The document was **withdrawn**.

RP-171103 **Correction on the power control of NPRACH in 36.331 Rel-13**
36.331 CR-2960 Cat: F (Rel-13) v13.5.0
Source: Huawei, HiSilicon

Abstract:

company CR related to RAN1 email discussion [89-01] On uplink power control for Rel-13 NB-IoT; moved from AI 10.3.14 to AI 14.1.7; this CR was not handled in a RAN2 Tdoc

Samsung Exhibit 1025, Page 1749 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **withdrawn**.

RP-171102 **Correction on the power control of NPRACH in 36.331 Rel-14**
36.331 CR-2959 Cat: A (Rel-14) v14.2.0
Source: Huawei, HiSilicon

Abstract:

company CR related to RAN1 email discussion [89-01] On uplink power control for Rel-13 NB-IoT; moved from AI 10.3.14 to AI 14.1.7; this CR was not handled in a RAN2 Tdoc

Decision: The document was **withdrawn**.

14.2 TSG RAN WG2

14.2.1 Approval of CRs to closed Rel-8 WIs and WIs of previous releases

RP-171241 **RAN2 CRs to Approval of CRs to closed Rel-8 Wis and Wis of previous releases**
Source: RAN2

Decision: The document was **approved**.

14.2.2 Approval of CRs to closed Rel-9 WIs (incl. TEI9)

14.2.3 Approval of CRs to closed Rel-10 WIs (incl. TEI10)

14.2.4 Approval of CRs to closed Rel-11 WIs (incl. TEI11)

14.2.5 Approval of CRs to closed Rel-12 WIs (incl. TEI12)

RP-171242 **RAN2 CRs to Approval of CRs to closed Rel-12 WIs (incl. TEI12)**
Source: RAN2

Decision: The document was **approved**.

RP-171179 **Entry-Level UE Support UL 64QAM**
Source: MediaTek Inc.

Discussion:

Proposal 1: RAN Plenary meeting approves the CRs to enable UL64QAM in Cat-4 devices

Decision: The document was **noted**.

RP-171248 **RAN2 CRs to Entry-Level UE Support UL 64QAM**
Source: RAN2

Abstract:

Endorsed by RAN2;

Discussion:

MCC: Acc. to RAN2 chairman:

Samsung Exhibit 1025, Page 1750 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

new UE category combination to enable UE category 4 with UL 64 QAM: purpose to enable UL 64 QAM to be supported by a lower DL category than currently possible;

RAN2 technically endorsed 36.331 and 36.306 CRs from Rel-12 (provided to RAN in CR pack RP-171248);

RAN asked to make decision on the need and the starting release of the CRs

MCC: Why do CR titles talk about UL 64 QAM while CRs are for DL? It is rather: introduction of a new DL UE cat.4 supporting UL 64 QAM with UL UE cat.5;

Any relation with RP-171247 CRs (which introduced UL UE cat.21)?

Decision: The document was **approved**.

14.2.6 Approval of CRs to closed Rel-13 WIs (incl. TEI13)

RP-171243 **RAN2 CRs to Approval of CRs to closed Rel-13 WIs (incl. TEI13), part 1**
Source: RAN2

Decision: The document was **approved**.

RP-171244 **RAN2 CRs to Approval of CRs to closed Rel-13 WIs (incl. TEI13), part 2**
Source: RAN2

Decision: The document was **approved**.

RP-171245 **RAN2 CRs to Approval of CRs to closed Rel-13 WIs (incl. TEI13), part 3**
Source: RAN2

Decision: The document was **approved**.

14.2.7 Approval of linked CR packages led by RAN WG2

14.3 TSG RAN WG3

14.3.1 Approval of CRs to closed Rel-8 WIs and WIs of previous releases

14.3.2 Approval of CRs to closed Rel-9 WIs (incl. TEI9)

14.3.3 Approval of CRs to closed Rel-10 WIs (incl. TEI10)

14.3.4 Approval of CRs to closed Rel-11 WIs (incl. TEI11)

14.3.5 Approval of CRs to closed Rel-12 WIs (incl. TEI12)

14.3.6 Approval of CRs to closed Rel-13 WIs (incl. TEI13)

RP-171329 **CRs to closed Rel-13 WIs (incl. TEI13)**
Source: RAN3

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1751 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

14.3.7 Approval of linked CR packages led by RAN WG3

14.4 TSG RAN WG4

14.4.1 Approval of CRs to closed Rel-8 WIs and WIs of previous releases

RP-171292 **RAN4 CRs to TEI8**
Source: RAN4

Decision: The document was **approved**.

14.4.2 Approval of CRs to closed Rel-9 WIs (incl. TEI9)

RP-171293 **RAN4 CRs to closed Rel-9 WIs (incl. TEI9)**
Source: RAN4

Discussion:

conclusion: only R4-1706065 was approved, all other CRs were packed by accident in this CR pack and they are reissued in CR pack RP-171395

Decision: The document was **partially approved**.

14.4.3 Approval of CRs to closed Rel-10 WIs (incl. TEI10)

RP-171395 **RAN4 agreed CRs to Rel-10 WI Carrier Aggregation for LTE**
Source: RAN4

Decision: The document was **approved**.

RP-171294 **RAN4 CRs to closed Rel-10 WIs (incl. TEI10)**
Source: RAN4

Decision: The document was **approved**.

14.4.4 Approval of CRs to closed Rel-11 WIs (incl. TEI11)

RP-171295 **RAN4 CRs to TEI11**
Source: RAN4

Decision: The document was **approved**.

14.4.5 Approval of CRs to closed Rel-12 WIs (incl. TEI12)

RP-171296 **RAN4 CRs to closed Rel-12 WIs (incl. TEI12)**
Source: RAN4

Decision: The document was **approved**.

RP-171297 **RAN4 CRs to TEI12**
Source: RAN4

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1752 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

14.4.6 Approval of CRs to closed Rel-13 WIs (incl. TEI13)

RP-171298 **RAN4 CRs to closed Rel-13 WIs**
Source: RAN4

Decision: The document was **approved**.

RP-171299 **RAN4 CRs to closed Rel-13 WIs: NB_IOT part1**
Source: RAN4

Discussion:

MCC: 45 essential RAN4 corrections to REL-13 WI NB_IOT completed in Dec.16 ?

Decision: The document was **approved**.

RP-171300 **RAN4 CRs to closed Rel-13 WIs: NB_IOT part2**
Source: RAN4

Discussion:

MCC: 45 essential RAN4 corrections to REL-13 WI NB_IOT completed in Dec.16 ?

Decision: The document was **approved**.

RP-171301 **RAN4 CRs to closed Rel-13 WIs: NB_IOT part3**
Source: RAN4

Discussion:

MCC: 45 essential RAN4 corrections to REL-13 WI NB_IOT completed in Dec.16 ?

Note: RP-171301 was originally approved during RAN #76 but it turned out after RAN #76 that R4-1704264 of RP-171301 was actually superseded by R4-1706040 in RP-171267. Therefore the status of RP-171301 was corrected from "approved" to "partially appproved".

Decision: The document was **partially approved**.

RP-171302 **RAN4 CRs to closed Rel-13 WIs: NB_IOT part4**
Source: RAN4

Discussion:

MCC: 45 essential RAN4 corrections to REL-13 WI NB_IOT completed in Dec.16 ?

Decision: The document was **approved**.

RP-171303 **RAN4 CRs to closed Rel-13 WIs: NB_IOT part5**
Source: RAN4

Discussion:

MCC: 45 essential RAN4 corrections to REL-13 WI NB_IOT completed in Dec.16 ?

Decision: The document was **approved**.

RP-171304 **RAN4 CRs to closed Rel-13 WIs: LTE DL 4 Rx antenna ports**
Source: RAN4

Samsung Exhibit 1025, Page 1753 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

RP-171305 **RAN4 CRs to closed Rel-13 WIs: Base Station (BS) RF requirements for Active Antenna System (AAS) - Core part**

Source: RAN4

Decision: The document was **approved**.

RP-171306 **RAN4 CRs to closed Rel-13 WIs: Base Station (BS) RF requirements for Active Antenna System (AAS) - Perf. Part**

Source: RAN4

Decision: The document was **approved**.

RP-171307 **RAN4 CRs to closed Rel-13 WIs: Licensed-Assisted Access using LTE**

Source: RAN4

Decision: The document was **approved**.

RP-171308 **RAN4 CRs to closed Rel-13 WIs: Further LTE Physical Layer Enhancements for MTC - Core part**

Source: RAN4

Discussion:

Note: It turned out after RAN #76, that RP-171308 includes a CR that is superseded already by a higher revision (also included in RP-171308), this means the status of RP-171308 was corrected from approved to partially approved because the CR R4-1704251 is withdrawn (WG status corrected to "revised").

Decision: The document was **partially approved**.

RP-171309 **RAN4 CRs to closed Rel-13 WIs: Further LTE Physical Layer Enhancements for MTC - Perf. part Part 1**

Source: RAN4

Decision: The document was **approved**.

RP-171310 **RAN4 CRs to closed Rel-13 WIs: Further LTE Physical Layer Enhancements for MTC - Perf. part Part 2**

Source: RAN4

Decision: The document was **approved**.

RP-171311 **RAN4 CRs to closed Rel-13 WIs: TEI13**

Source: RAN4

Decision: The document was **approved**.

Samsung Exhibit 1025, Page 1754 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

14.4.7 Approval of linked CR packages led by RAN WG4

14.5 TSG RAN WG5

14.5.1 Approval of CRs to closed REL-10 WIs (incl. TEI10_Test) and WIs of previous releases

RP-171361 **RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel 99 Conformance Testing(TEI_Test)**
Source: RAN5

Decision: The document was **approved**.

RP-171362 **RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-7 Conformance Testing(TEI7_Test)**
Source: RAN5

Decision: The document was **approved**.

RP-171363 **RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 1)**
Source: RAN5

Decision: The document was **approved**.

RP-171364 **RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 2)**
Source: RAN5

Decision: The document was **withdrawn**.

RP-171365 **RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-9 Conformance Testing(TEI9_Test)**
Source: RAN5

Decision: The document was **approved**.

RP-171374 **RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test)**
Source: RAN5

Decision: The document was **approved**.

14.5.2 Approval of CRs to closed REL-11 WIs (incl. TEI11_Test)

RP-171368 **CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A**
34.123-3 v13.2.0
Source: RAN5

Discussion:

Note: It turned out after RAN #76, that RP-171368 was approved without containing CR R5s170413. Therefore an email approval was organized after RAN #76 (2-9.8.17) to approve this CR in the revision of RP-171368 in RP-171512.

Samsung Exhibit 1025, Page 1755 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **revised to RP-171512**.

RP-171512 **CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A**
34.123-3 v13.2.0
Source: RAN5

(Replaces RP-171368)

Discussion:

Note: Approved in email approval 2-9.8.2018 as revision of CR pack RP-171368.

Decision: The document was **approved**.

RP-171375 **RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-11 Conformance Testing (TEI11_Test)**
Source: RAN5

Decision: The document was **approved**.

14.5.3 Approval of CRs to closed REL-12 WIs (incl. TEI12_Test)

RP-171376 **RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-12 Conformance Testing (TEI12_Test)**
Source: RAN5

Decision: The document was **approved**.

14.5.4 Approval of CRs to closed REL-13 WIs (incl. TEI13_Test)

RP-171366 **CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (prose), Annex A**
34.229-3 v13.2.0
Source: RAN5

Decision: The document was **approved**.

RP-171367 **CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (TTCN), Annex A**
34.229-3 v13.2.0
Source: RAN5

Decision: The document was **approved**.

RP-171369 **CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (TTCN), Annex A**
34.123-3 v13.2.0
Source: RAN5

Decision: The document was **approved**.

RP-171370 **CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (prose), Annex A**
36.523-3 v13.2.0
Source: RAN5

Samsung Exhibit 1025, Page 1756 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

RP-171371 **CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (TTCN), Annex A**
36.523-3 v13.2.0
Source: RAN5

Decision: The document was **approved**.

RP-171372 **CR to 37.751-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (prose), Annex A**
37.571-4 v13.2.0
Source: RAN5

Decision: The document was **approved**.

RP-171373 **CR to 37.571-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (TTCN), Annex A**
37.571-4 v13.2.0
Source: RAN5

Decision: The document was **approved**.

RP-171377 **RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-13 Conformance Testing (TEI13_Test)**
Source: RAN5

Decision: The document was **approved**.

14.5.5 Approval of linked CR packages led by RAN WG5

14.6 TSG RAN WG6

14.6.1 Approval of CRs to closed Rel-8 WIs and WIs of previous releases

14.6.2 Approval of CRs to closed Rel-9 WIs (incl. TEI9)

14.6.3 Approval of CRs to closed Rel-10 WIs (incl. TEI10)

14.6.4 Approval of CRs to closed Rel-11 WIs (incl. TEI11)

14.6.5 Approval of CRs to closed Rel-12 WIs (incl. TEI12)

14.6.6 Approval of CRs to closed Rel-13 WIs (incl. TEI13)

RP-170927 **RAN6 agreed CRs for REL-13 WI Core Part: Extended DRX (eDRX) for GSM (eDRX_GSM)**
Source: RAN6

Decision: The document was **approved**.

RP-170928 **RAN6 agreed CRs for REL-13 WI: Extended Coverage GSM (EC-GSM) for support of Cellular Internet of Things (CIoT_EC_GSM)**
Source: RAN6

Samsung Exhibit 1025, Page 1757 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Decision: The document was **approved**.

14.6.7 Approval of linked CR packages led by RAN WG6

14.7 Closed SIs for REL-13 and earlier

RP-171202 **Maintenance to TR36.873 - Study on 3D channel model for LTE**
Source: RAN1

Abstract:

moved from AI 14.1.5 to AI 14.7

Decision: The document was **approved**.

15 Inter WG/TSG-related discussions & decisions

RP-171470 **Agenda for joint RAN - SA session during TSG #76**
Source: RAN chairman (Nokia), SA chairman (Samsung)

Decision: The document was **noted**.

RP-171481 **Minutes for joint RAN - SA session during TSG #76**
Source: ETSI MCC

Decision: The document was **revised to RP-171501**.

RP-171501 **Minutes for joint RAN - SA session during TSG #76**
Source: ETSI MCC

(Replaces RP-171481)

Discussion:

this revision was provided by email discussion [76-02] after RAN #76;

Note: SA chairman clarified after TSG #76:

- SA2 WID SP-170535 was updated by SA #76 in SP-170583 to include only low latency aspects

- LS SP-170569 was sent from SA #76 to SA2 regarding this update including two bullet points:

  - SA did not agree to start any work on high reliability features for EPC

  - SA would also like to note that any solution developed to meet the new objective added to EDCE5 should be designed so that it can also be used in the future to support LTE_URLLC, LTE_sTTIandPT.

Decision: The document was **noted**.

16 Terms of Reference (ToR)

17 Project management

RP-170874 **3GPP Work Plan review at Plenary #76**
Source: ETSI MCC

Samsung Exhibit 1025, Page 1758 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Discussion:

RAN chair: ASN.1 REL-14 is frozen at RAN #76

Decision: The document was **noted**.

RP-171458 **Multiple meeting check-ins from a single computer**
Source: ETSI MCC

Discussion:

Qualcomm: MCC will contact the companies involved in this?

specs manager: will inform all WGs about the process and also modify the email you get for registration and send an email to the corresponding companies and official companies (if persons were not there, we will revise the voting rights)

Qualcomm: for those who were there and replying this, we would prefer to make public who were they

RAN chair: maybe we need to think about this a bit more

Huawei: is supporting MCC activities on this, not sure about the Qualcomm's last proposal as the updated registration list will be made available

MCC: does not plan to reveal the people who will reply that they were there (for this time)

Decision: The document was **noted**.

RP-171478 **Status of time budgets for RAN1/2/3/4/6 REL-14 & beyond WIs/SIs after RAN #76**
Source: RAN1/RAN2/RAN3/RAN4/RAN6 chairmen

Discussion:

RAN chair: Tdoc will be provided early next week

conclusion: 1 week email review of this document

Decision: The document was endorsed (by email).

18 Future meeting schedule

RP-171189 **Proposal to control the workload at RAN#77**
Source: Huawei

Discussion:

proposal:

- allow approval of new LTE WIs for RAN1/2/3/4 at RAN#77 within the available TU
- consider reducing the online time used at RAN#77:
- option 1: retain a 4 day-TSG but close earlier each day when possible (e.g. 2 or 3 pm)
- option 2: shorten RAN#77 to 3 days, e.g. Mon-Wed or Tue-Thu or Wed-Fri

RAN chair: thought that we knew this problem when we scheduled the ad hoc, shortening by 1 day is not an option, closing earlier is always possible if we make good progress but Sep. RAN #77 will probably more busy;

Nokia: not in favour of shortening

RAN chair: we could try to schedule slots for RAN1 topics

Samsung Exhibit 1025, Page 1759 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Samsung: if we keep agenda item for new items, you will get more inputs so better remove them when no inputs are expected

conclusion: RAN chairman will try to schedule RAN #77 to maximize preparation time for RAN1 delegates and we will not allow new NR WIs/SIs to be submitted to RAN #77

Decision: The document was **noted**.

RAN meeting schedule 2010 - 2019:

MEETING	DATES	LOCATION	HOST
RAN #47	16 March – 19 March 2010	Vienna, Austria	EF3
RAN #48	1 June – 4 June 2010	Seoul, Korea	TTA
RAN #49	14 Sep. – 17 Sep. 2010	San Antonio, USA	NAF3
RAN #50	7 Dec. – 10 Dec. 2010	Istanbul, Turkey	EF3
RAN #51 @	15 March – 18 March 2011	Kansas City, USA	Sprint Nextel
RAN #52	31 May – 3 June 2011	Bratislava, Slovakia	EF3
RAN #53	13 Sep. – 16 Sep. 2011	Fukuoka, Japan	ARIB & TTC
RAN #54	6 Dec. – 9 Dec. 2011	Berlin, Germany	EF3
RAN #55	28 Feb. – 2 March 2012	Xiamen, China	ZTE, CMCC
REL-12 workshop ***	11 June - 12 June 2012	Ljubljana, Slovenia	EF3
RAN #56	13 June – 15 June 2012	Ljubljana, Slovenia	EF3
RAN #57	4 Sep. – 7 Sep. 2012	Chicago, USA	NAF3
RAN #58	4 Dec. – 7 Dec. 2012	Barcelona, Spain	EF3
RAN #59 @	26 Feb. – 1 March 2013	Vienna, Austria	EF3
RAN #60	11 June – 14 June 2013	Oranjestad, Aruba	NAF3
RAN #61	3 Sep. – 6 Sep. 2013	Porto, Portugal	EF3
RAN #62	3 Dec. – 6 Dec. 2013	Busan, Korea	TTA
RAN #63 **	3 March – 6 March 2014	Fukuoka, Japan	ARIB & TTC
RAN #64	10 June – 13 June 2014	Sophia Antipolis, France	ETSI
RAN workshop LTE-U	13 June 2014	Sophia Antipolis, France	ETSI
RAN #65	9 Sep. – 12 Sep. 2014	Edinburgh, Scotland	EF3
RAN #66 **	8 Dec. – 11 Dec. 2014	Maui, USA	NAF3
RAN #67 ** @	9 March – 12 March 2015	Shanghai, China	Huawei
RAN #68 **	15 June – 18 June 2015	Malmö, Sweden	EF3
workshop LAA	29 Aug. 2015	Beijing, China	Huawei
RAN #69 **	14 Sep. – 16 Sep. 2015	Phoenix, USA	NAF3
workshop 5G	17 Sep. – 18 Sep. 2015	Phoenix, USA	NAF3
RAN #70 **	7 Dec. – 10 Dec. 2015	Sitges, Spain	EF3
5G Req. ad hoc	28 Jan. - 29 Jan. 2016	Barcelona, Spain	EF3
RAN #71 **	7 March – 10 March 2016	Göteborg, Sweden	EF3
RAN #72 **	13 June – 16 June 2016	Busan, Korea	TTA
RAN #73 **	19 Sep. – 22 Sep. 2016	New Orleans, USA	NAF3
RAN #74 **	5 Dec. – 8 Dec. 2016	Vienna, Austria	EF3
RAN #75 ** @	6 March - 9 March 2017	Dubrovnik, Croatia	EF3
**RAN #76 **	**5 June - 8 June 2017**	**West Palm Beach, USA**	**NAF3**
RAN #77 **	11 Sep. - 14 Sep. 2017	Sapporo, Japan	ARIB & TTC
RAN #78 **	18 Dec. - 21 Dec. 2017	Lisbon, Portugal	EF3
RAN #79 **	19 March – 22 March 2018	tbd, India	IF3
RAN #80 **	11 June – 14 June 2018	tbd, North America	NAF3
RAN #81 **	10 Sep. – 13 Sep. 2018	Gold Coast, Australia	Telstra
RAN #82 **	10 Dec. – 13 Dec. 2018	Sorrento, Italy	EF3
RAN #83 ** @	18 March - 21 March 2019	tbd, China	Huawei
RAN #84 **	3 June - 6 June 2019	tbd, North America	NAF3
RAN #85 **	16 Sep. - 19 Sep. 2019	tbd, North America	NAF3
RAN #86 **	9 Dec. - 12 Dec. 2019	tbd, Europe	EF3

Samsung Exhibit 1025, Page 1760 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

***: RAN Workshop on REL-12 and onwards

**: 1 week TSG i.e. in same week with CT and SA, therefore RAN starting on Monday (compare RP-131328)

@: elections

19 Any other business

RAN chair: for RAN #77: will try to finish RAN1 parts by Thu noon

20 Closing of the meeting

The TSG RAN chairman Balazs Bertenyi (Nokia) thanked the delegates for participating and contributing to RAN meeting #76, he thanked the host for organizing the meeting and he closed the meeting on Thursday June 8th, 2017 at 12:35.

Samsung Exhibit 1025, Page 1761 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex A:
List of participants

The list of participants of this RAN meeting #76 is attached to this report.

Total number of participants: 248 (registered before the meeting: 308)

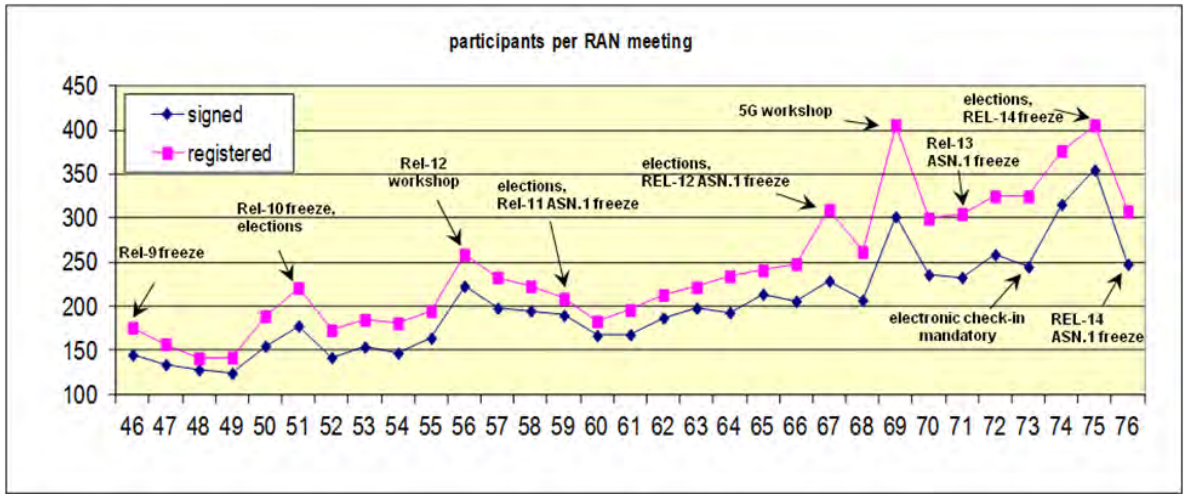


Fig. A-1: Participants per RAN meeting (registered beforehand and actual participants who signed) (1 week TSG: #63, #66 and further meetings)

Samsung Exhibit 1025, Page 1762 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex B:
List of Tdocs

The list of Tdocs of this RAN meeting #76 is attached to this report.

Total number of Tdocs: 657 (RP-170856 - RP-171512) of which 632 Tdocs are available, i.e. 25 are not available and they are withdrawn.

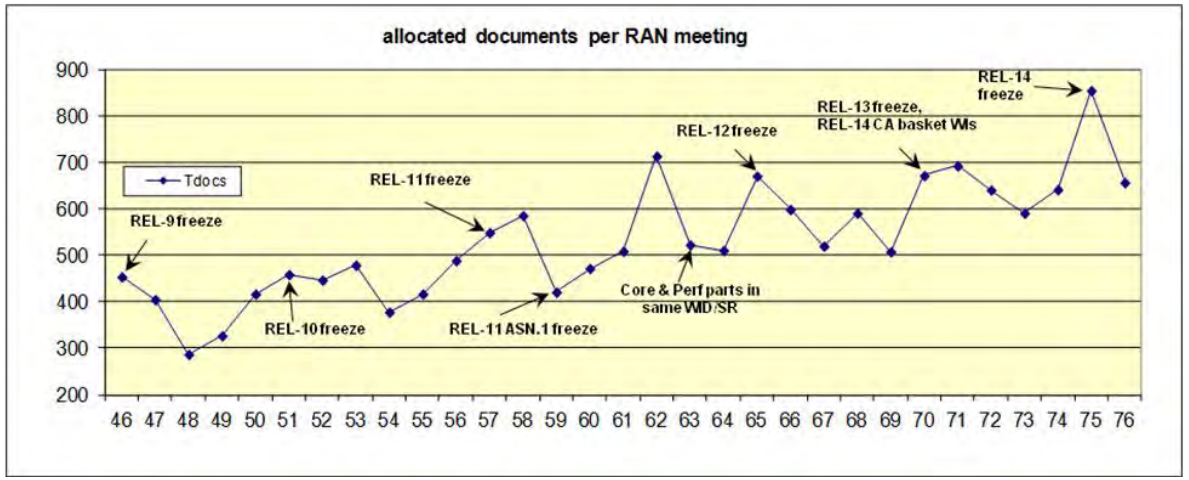


Fig. B-1: Number of allocated Tdocs per RAN meeting

Samsung Exhibit 1025, Page 1763 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex C:
Incoming liaison statements (LSin)

In total 31 LSs/LTIs were received for RAN #76 (1 of them, RP-170905, was received during the meeting). All 31 LSs/LTIs were treated.

Document	Original	Title	From	Decision	Reply in
RP-170875	NGP(17)000038	LS requesting support for defining Next Generation Protocols (NGP(17)000038; to: RAN, CT, SA, IETF; cc: -; contact: Vodafone)	ETSI ISG NGP	noted	
RP-170876	SP-170278	Reply LS to NGMN_LS_170122 = RP-170049 to NGMN V2X Task-Force (SP-170278; to: NGMN V2X Task Force; cc: RAN, SA1, SA2, SA3; contact: LG Electronics)	SA	noted	
RP-170877	IEEE_802_LMSC_LS170322	LS to related to PD & ED issues (IEEE_802_LMSC_LS170322; to: RAN, RAN1, RAN4; cc: -; contact: Chairman IEEE 802 LMSC)	IEEE 802 LMSC	replied to	RP-171482
RP-170878	IEEE_802_LMSC_LS170322b	LS on IEEE 802 response to 3GPP RAN1 LS dated November 2016 (R1-1613770) (IEEE_802_LMSC_LS170322b; to: RAN, RAN1; cc: IEEE 802.11 WG, IEEE 802.19 Coexistence WG; contact: Chairman IEEE 802 LMSC)	IEEE 802 LMSC	noted	
RP-170879	MEC(17)000231	LS on ETSI ISG MEC (Multi access Edge Computing) Phase 2 (MEC(17)000231; to: RAN, SA; cc: -; contact: Vodafone)	ETSI ISG MEC	noted	
RP-170880	ITU_T_SG20_LS33	LS on the new structure of ITU-T SG20 (ITU_T_SG20_LS33; to: RAN, SA, ISO/TC 122, ISO/TC 204, ISO/IEC JTC 1/SC 6, ISO/IEC JTC 1/SC 31, ISO/IEC JTC 1/WG 7, ISO/IEC JTC 1/WG 10, ISO/IEC JTC 1/WG 11, GS1 EPCglobal, EC/IERC, ETSI, CEN, OMA, YRP, Ecma International, GISFI, TIA, GSC MSTF, OGC, oneM2M, ISO/IEC JTC 1/SC 29/WG11, Augmented Reality (AR) standards, W3C, IETF, IEEE-SA, ANSI, BSI, CCSA, CDP, CEDARE, CEN/CENELEC/ETSI SSCC CG, CIC, CITEL, DIN, DKE (DIN/VDE), ETSI TC EE, ETSI TC Smart M2M, GSMA, IEC/SEG1, IEC/TC 100, IEC/TC 111, IEEE, ISO/TC 268/SC 1, MOHURD, SAC, AENOR, ISO/TC 184/SC5, AIOTI WG3; cc: -; contact: Telecommunications Regulatory Authority UAE)	ITU-T SG20	noted	
RP-170881	R2-1703968	Reply LS to C3-171255 = RP-170038 on RAN-Assisted Codec Adaptation (R2-1703968; to: CT3, SA4; cc: RAN3, RAN, SA2; contact: Ericsson)	RAN2	noted	
RP-170882	R4-1704402	Reply LS to ECC_PT1_LS_160915 = RP-161968 and ECC_PT1_LS_170120b = RP-170037 on Suitability of technical conditions of ECC DEC (11) 06 for 5G (R4-1704402; to: ECC PT1; cc: RAN, ETSI TC ERM; contact: Ericsson)	RAN4	noted	
RP-170883	R3-171272	Response LS to SP-160457 = RP-161378 on Progress on Security for LWIP (R3-171272; to: SA, SA3; cc: RAN; contact: Nokia)	RAN3	noted	
RP-170884	R3-171401	Reply LS to S2-171611 = RP-170035 on N2 and N3 reference points for 5G system (R3-171401; to: SA2; cc: SA, RAN, CT, CT4, CT1, SA3, RAN2; contact: Qualcomm)	RAN3	noted	
RP-170885	S4-170430	Reply LS to R2-1703968 = RP-170881 and C3-171255 = RP-170038 on RAN-Assisted Codec Adaptation (S4-170430; to: RAN2, CT3; cc: RAN3, SA2, RAN; contact: Intel)	SA4	noted	

Samsung Exhibit 1025, Page 1764 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Document	Original	Title	From	Decision	Reply in
RP-170886	IEEE 802.11-16/1574r3	LS on Requesting status and technical information on WLAN integration in 3GPP NextGen System (IEEE 802.11-16/1574r3; to: SA, SA1, SA2, SA3; cc: IEEE 802 EC, IEEE 802.1 WG, RAN; contact: InterDigital)	IEEE 802.11 WG	noted	
RP-170887	5GAA_LS_S-170064	Reply LS to S1-171461 = RP-170042 on eV2X Normative Requirements (5GAA_LS_S-170064; to: SA1; cc: SA, RAN, 5GAA WG1; contact: Intel)	5GAA WG4	noted	
RP-170888	R2-1706003	LS on EUTRAN sharing enhancement (R2-1706003; to: SA2, RAN3, RAN, SA; cc: -; contact: Ericsson)	RAN2	noted	
RP-170889	S1-172425	LS on Closed Subscriber Group in 5GS (S1-172425; to: SA2, SA3, RAN; cc: -; contact: Qualcomm)	SA1	replied to	RP-171479
RP-170890	ATU_LS_170516	LS on Standardisation of a new E-UTRA band (ATU_LS_170516; to: RAN, RAN4; cc: -; contact: ATU Secretary General)	ATU (African Telecommunications Union)	replied to	RP-171507
RP-170891	NGP(17)000038r2	LS requesting support for defining Next Generation Protocols (NGP(17)000038r2; to: RAN, CT, SA, IETF; cc: -; contact: Vodafone)	ETSI ISG NGP	noted	
RP-170892	NGMN_LS_170511	LS on NGMN Paper on 5G End-to-end Architecture Framework (NGMN_LS_170511; to: SA2; cc: SA, RAN; contact: Vodafone)	NGMN	noted	
RP-170893	R1-1709854	Response LS to IEEE_802_LMSC_LS170322b = RP-170878 regarding LAA (R1-1709854; to: IEEE 802 LMSC, RAN; cc: -; contact: Qualcomm)	RAN1	noted	
RP-170894	R1-1709855	Response to IEEE_802_LMSC_LS170322 = RP-170877 related to PD and ED issues (R1-1709855; to: IEEE 802 LMSC, RAN; cc: -; contact: Qualcomm)	RAN1	noted	
RP-170895	R4-1705922	LS on MIMO OTA progress (R4-1705922; to: GCF CAG, GCF PAG, CTIA MOSG, CCSA; cc: RAN5, RAN; contact: Intel)	RAN4	noted	
RP-170896	S2-173610	Reply LS to RP-170841 on the support of Unicast and Groupcast transmission over PC5 for eV2X (S2-173610; to: RAN; cc: SA, SA1, SA3, RAN2; contact: LG Electronics)	SA2	noted	
RP-170897	S2-173686	LS on EPC QoS aspects for TSG RAN's lower latency features (S2-173686; to: RAN, SA; cc: SA1, CT; contact: Vodafone)	SA2	replied to	RP-171473
RP-170898	S2-173700	LS on Emergency Support in NR (S2-173700; to: RAN; cc: SA, RAN1, RAN2, RAN3; contact: Nokia)	SA2	replied to	RP-171434
RP-170899	S2-173701	Reply LS to R2-1706003 = RP-170888 on EUTRAN sharing enhancement (S2-173701; to: RAN2, RAN, SA, SA5; cc: RAN3; contact: Ericsson)	SA2	noted	
RP-170900	ITU-R WP4C/TEMP/73	LS on ADJACENT BAND COMPATIBILITY STUDIES OF IMT-ADVANCED SYSTEMS IN THE MOBILE SERVICE IN THE BAND BELOW 1 518 MHz WITH RESPECT TO SYSTEMS IN THE MOBILE-SATELLITE SERVICE IN THE FREQUENCY BAND 1 518-1 525 MHz (ITU-R WP4C/TEMP/73; to: RAN; cc: ITU-R WP5D; contact: ITU)	ITU-R WP4C	noted	
RP-170901	R2-1706141	LS on UE categories for NR and LTE-NR Dual Connectivity (R2-1706141; to: RAN, RAN1; cc: RAN4; contact: NTT DOCOMO)	RAN2	replied to	RP-171480
RP-170902	R3-172026	Reply to LS R2-1706003 = RP-170888 on EUTRAN sharing enhancement (R3-172026; to: RAN2, RAN; cc: SA2, SA; contact: Ericsson)	RAN3	noted	
RP-170903	R2-1706195	Reply LS to R1-1709716 on monitoring of partial NPDCCH search spaces (R2-1706195; to: RAN1; cc: RAN; contact: Huawei)	RAN2	noted	

Samsung Exhibit 1025, Page 1765 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Document	Original	Title	From	Decision	Reply in
RP-170904	NGMN_LS_170602	LS on Test Results of Technology Building Blocks phase of the Trial and Testing Initiative (NGMN_LS_170602; to: RAN, SA; cc: -; contact: KT)	NGMN	noted	
RP-170905	ITU-R WP5A/TEMP/141(Rev.1)	LS on the revision of Recommendation ITU-R M.2084-0 (ITU-R WP5A/TEMP/141(Rev.1); to: 3GPP, 5G Automotive Association, 79 GHz Project, ARIB, AWG, C2C-CC, CCSA, ETSI ERM-TG37, ETSI ERM-TGSRR, ETSI TC ERM, ETSI TC ERM TG 37, ETSI TC ITS, GSA, IEEE, IETF ITS,	ITU-R WP5A	noted	

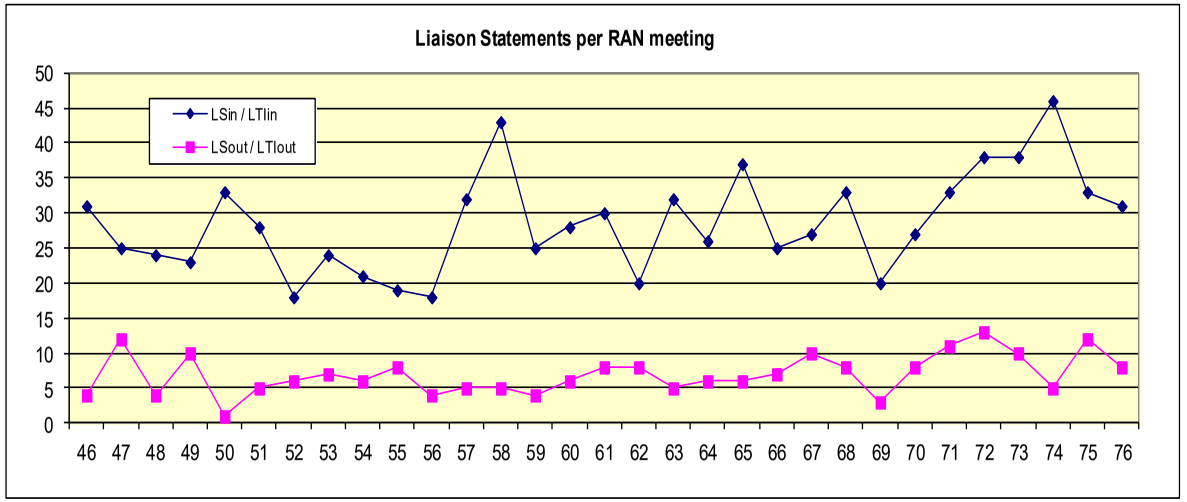


Fig. C-1: Number of incoming/outgoing Liason Statements (LS) and Letter to ITU (LTI) per RAN meeting

Samsung Exhibit 1025, Page 1766 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex D:
Outgoing liaison statements (LSout)

Only final outgoing LSs are listed here. 8 outgoing LSs/LTIs of RAN #76 (0 of them approved by email):

Document	Title	To	Cc	reply to i/c LS
RP-171434	Reply to S2-173700 = RP-170898 on Emergency Support in NR (to: SA2; cc: SA, RAN1, RAN2, RAN3; contact: T-Mobile)	SA2	SA, RAN1, RAN2, RAN3	S2-173700 = RP-170898
RP-171473	Reply LS to S2-173686 = RP-170897 on EPC QoS aspects for TSG RAN's lower latency features (to: SA2; cc: SA, SA1, CT; contact: Nokia)	SA2	SA, SA1, CT	S2-173686 = RP-170897
RP-171479	Reply LS to S1-172425 = RP-1710889 on Closed Subscriber Group in 5GS (to: SA1, RAN2; cc: SA2, SA3, RAN3; cc: -; contact: Qualcomm)	SA1, RAN2	SA2, SA3, RAN3	S1-172425 = RP-1710889
RP-171480	Reply to R2-1706141 = RP-170901 on UE categories for NR and LTE-NR Dual Connectivity (to: RAN2, RAN1; cc: RAN4; contact: NTT DOCOMO)	RAN2, RAN1	RAN4	R2-1706141 = RP-170901
RP-171482	Response LS to IEEE_802_LMSC_LS170322 = RP-170877 related to PD and ED issues (to: IEEE 802 LMSC; cc: RAN1, RAN4; contact: Qualcomm)	IEEE 802 LMSC	RAN1, RAN4	IEEE_802_LMSC_LS170322 = RP-170877
RP-171497	LS on NR Edge Computing (to: SA2; cc: SA, RAN2, RAN3; contact: Nokia)	SA2	SA, RAN2, RAN3	
RP-171498	LS on Termination of NG, Xn-C, S1-U and X2 interfaces (to: RAN3; cc: -; contact: Deutsche Telekom)	RAN3		
RP-171507	Reply LS to ATU_LS_170516 = RP-170890 on standardisation of a new E-UTRA band from ATU (to: ATU; cc: RAN4; contact: Huawei)	ATU (African Telecommunications Union)	RAN4	ATU_LS_170516 = RP-170890

***: uses Letter to ITU template (LTI)

Samsung Exhibit 1025, Page 1767 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex E:
List of Change Requests (CRs)

1615 CRs (incl. cat.A CRs) were handled at RAN #76 and 1584 CRs were approved.

A corresponding list of all CRs is included in the attached Tdoc list.

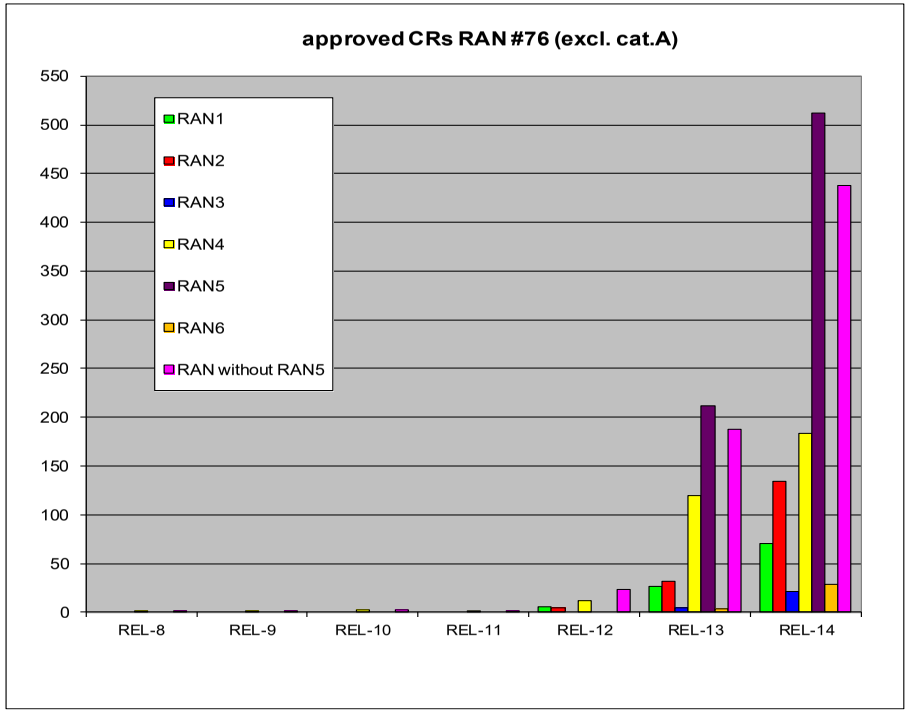


Fig. E-1: Approved CRs (excluding category A CRs) of RAN #75 per WG and release

Samsung Exhibit 1025, Page 1768 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

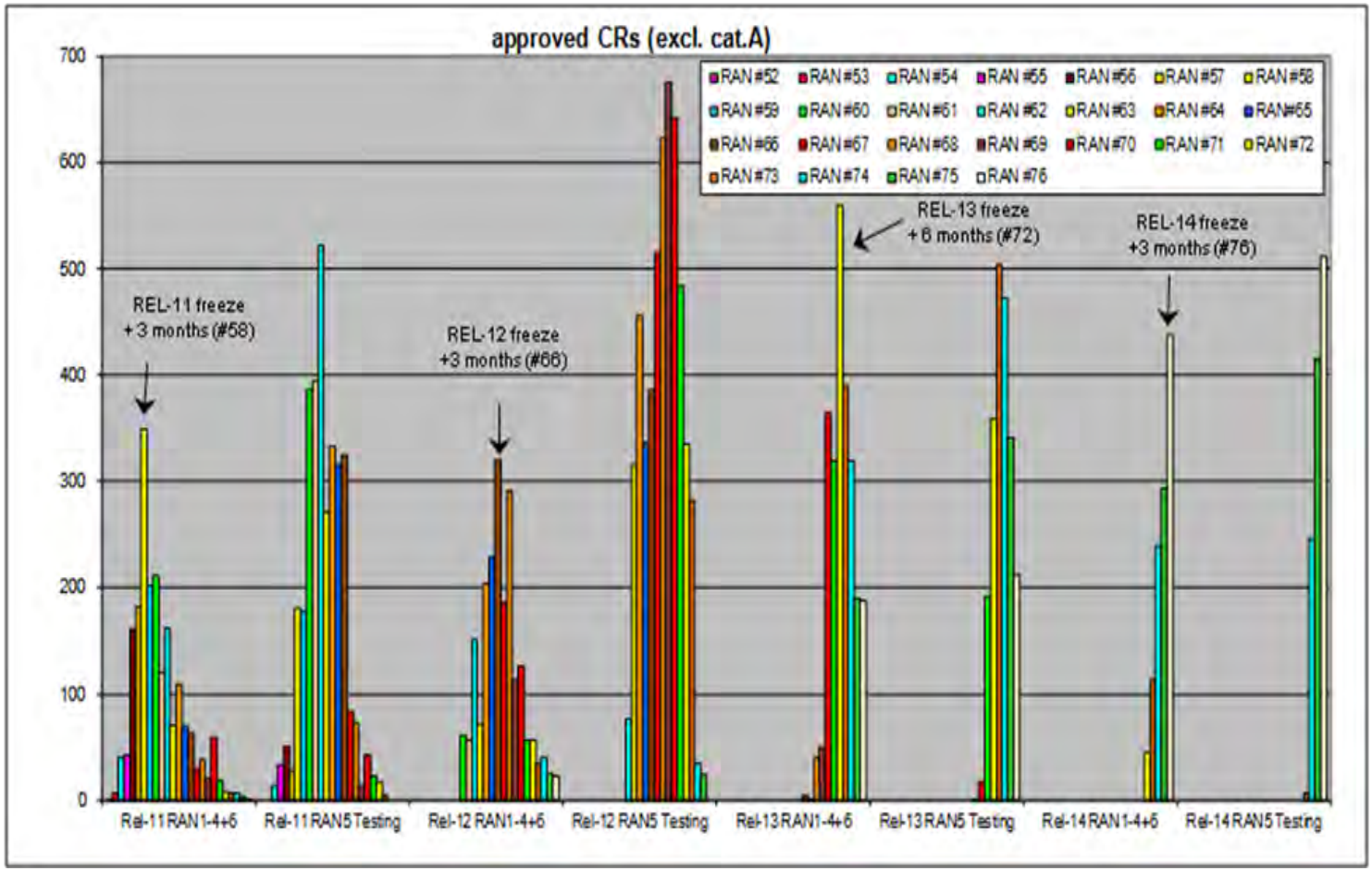


Fig. E-2: Approved CRs (<u>excluding</u> category A CRs) of this and previous RAN meetings per release
<u>REL freeze</u>: REL-8: RAN #42, REL-9: RAN #46, REL-10: RAN #51, REL-11: RAN #57, REL-12: RAN #65, REL-13: RAN #70, REL-14: RAN #75
<u>ASN.1 freeze</u>: REL-8: RAN #43 (713 CRs* at #43), REL-9: RAN #47 (355 CRs* at #47), REL-10: RAN #52 (409 CRs* at #52) (apart from Un: #53), REL-11: RAN #59 (349 CRs* at #58), REL-12: RAN #67 (320 CRs* at #66), REL-13: RAN #71 (apart from NB-IOT: #72) (559 CRs* at #72), REL-14: RAN #76 (438 CRs* at #76)
***: peak number of CRs in this release (excl. cat.A and testing CRs)**

Samsung Exhibit 1025, Page 1769 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

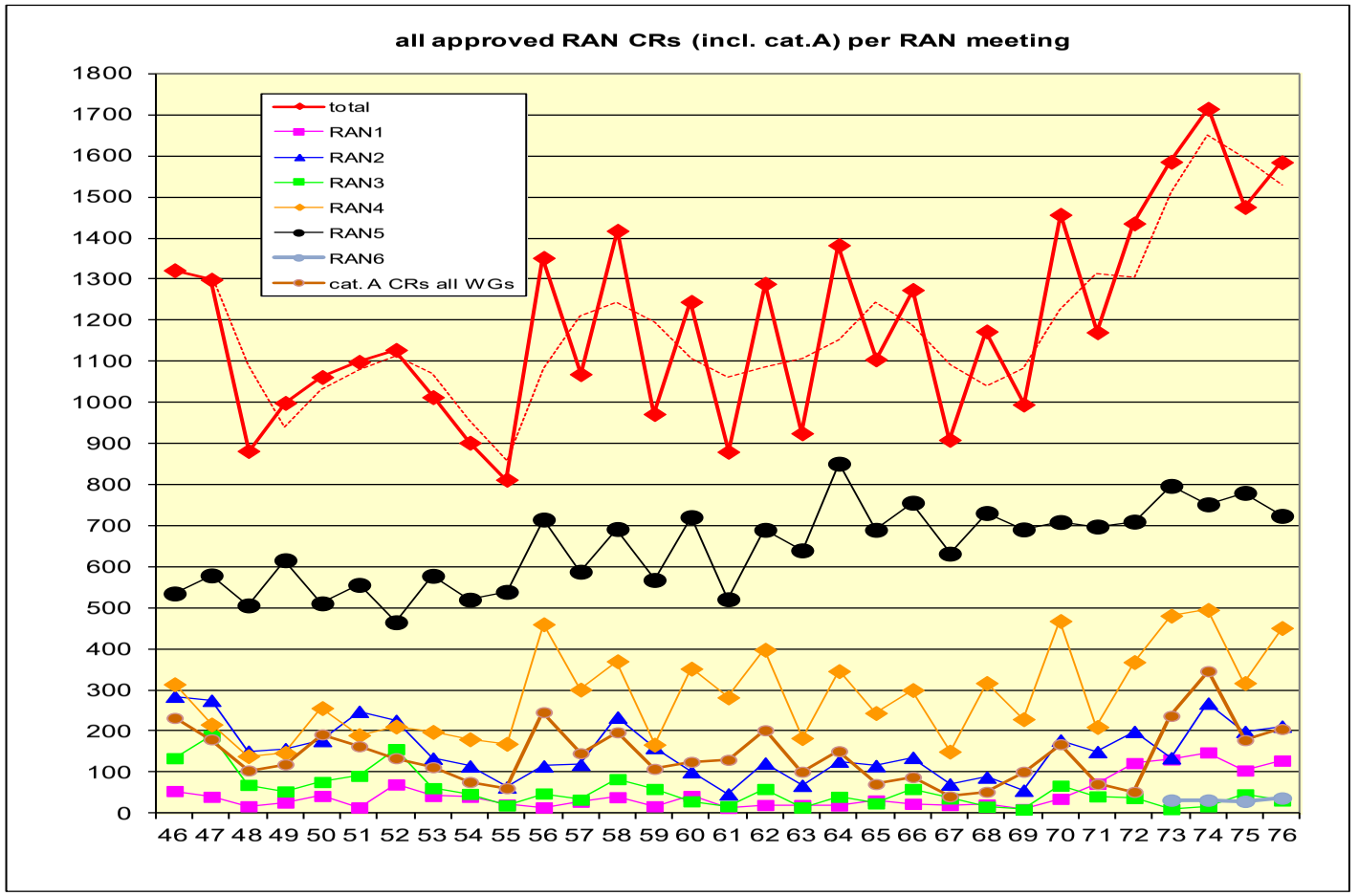


Fig. E-3: Approved CRs (all releases <u>including</u> category A CRs) per RAN WG and per RAN meeting
<u>REL freeze</u>: REL-8: RAN #42, REL-9: RAN #46, REL-10: RAN #51, REL-11: RAN #57, REL-12: RAN #65, REL-13: RAN #70, REL-14: RAN #75
<u>ASN.1 freeze</u>: REL-8: RAN #43 (713 CRs* at #43), REL-9: RAN #47 (355 CRs* at #47), REL-10: RAN #52 (409 CRs* at #52) (apart from Un: #53), REL-11: RAN #59 (349 CRs* at #58), REL-12: RAN #67 (320 CRs* at #66), REL-13: RAN #71 (apart from NB-IOT: #72) (559 CRs* at #72), REL-14: RAN #76 (438 CRs* at #76)
***: peak number of CRs in this release (excl. cat.A)**

Samsung Exhibit 1025, Page 1770 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex F:
Summary of RAN work items (WI) and study items (SI)

An overview of recent RAN work items and study items (starting from REL-9 and including the new WIs & SIs approved at this meeting) is attached to this report.

This overview is used as input for the 3GPP workplan which lists all 3GPP work and study items.

NOTE: REL-4, REL-5, REL-6 and REL-7 were closed after RAN #65, i.e. no CRs to specifications of these releases will be considered anymore.

REL-7:		
REL-7 stage 1 freeze:	Sep.05	TSG #29
REL-7 stage 2 freeze:	Sep. 06	TSG #33
REL-7 freeze:	March 07	TSG #35
REL-7 ASN.1 freeze:	March 08	TSG #39
REL-8:	7 quarters	
REL-8 stage 1 freeze:	Dec.07	TSG #38
REL-8 stage 2 freeze:	June 08	TSG #40
REL-8 freeze:	Dec.08	TSG #42
REL-8 ASN.1 freeze:	March 09	TSG #43
REL-9:	4 quarters	
REL-9 stage 1 freeze:	Dec.08	TSG #42
REL-9 stage 2 freeze:	June 09	TSG #44
REL-9 freeze:	Dec.09	TSG #46
REL-9 ASN.1 freeze:	March 10	TSG #47
REL-10:	5 quarters	
REL-10 stage 1 freeze:	March 10	TSG #47
REL-10 stage 2 freeze:	Sep.10	TSG #49
REL-10 freeze:	March 11	TSG #51
REL-10 ASN.1 freeze:	June 11	TSG #52 (apart from Un for Relays: frozen in Sep.11 at TSG #53)
REL-11:	6 quarters	
REL-11 stage 1 freeze:	Sep.11	TSG #53
REL-11 stage 2 freeze:	March 12	TSG #55
REL-11 freeze:	Sep.12	TSG #57
REL-11 ASN.1 freeze:	March 13	TSG #59

Samsung Exhibit 1025, Page 1771 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

REL-12:	8 quarters	
REL-12 stage 1 freeze:	March 13	TSG #59
REL-12 stage 2 freeze:	Dec.13	TSG #62
REL-12 freeze:	Sep.14	TSG #65
REL-12 ASN.1 freeze:	March 15	TSG #67

REL-13:	5 quarters	
REL-13 stage 1 freeze:	Sep.14	TSG #65
REL-13 stage 2 freeze:	June 15	TSG #68
REL-13 freeze:	Dec.15	TSG #70
REL-13 ASN.1 freeze:	March 16	TSG #71 (apart from NB-IoT aspects in 36.331: frozen in June 16 at RAN #72)

REL-14:	5 quarters	
REL-14 stage 1 freeze:	March 16	TSG #71
REL-14 stage 2 freeze:	Sep.16	TSG #73
REL-14 freeze:	March 17	TSG #75**
REL-14 ASN.1 freeze:	June 17	TSG #76**

**: These target dates were endorsed by SA #69 (in connection with proposal SP-150564), and with RP-152228 the REL-14 freeze date was confirmed.

REL-15:	5 quarters	
REL-15 stage 1 freeze:	June 17	TSG #76
REL-15 stage 2 freeze:	Dec.17	TSG #78 (planned)
REL-15 freeze:	June 18	TSG #80 (planned), see RP-152228
REL-15 ASN.1 freeze:	Sep.18	TSG #81 (planned)

note: Acc. to RP-170741: completion of stage 3 for Non-Standalone (NSA) 5G-NR eMBB (incl. low latency support) with Option 3 targeted for Dec.17

REL-16:	6 quarters	
REL-16 stage 1 freeze:	Dec.18	TSG #82 (planned)
REL-16 stage 2 freeze:	June 19	TSG #84 (planned)
REL-16 freeze:	Dec.19	TSG #86 (planned), see RP-152228
REL-16 ASN.1 freeze:	March 20	TSG #87 (planned)

Samsung Exhibit 1025, Page 1772 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

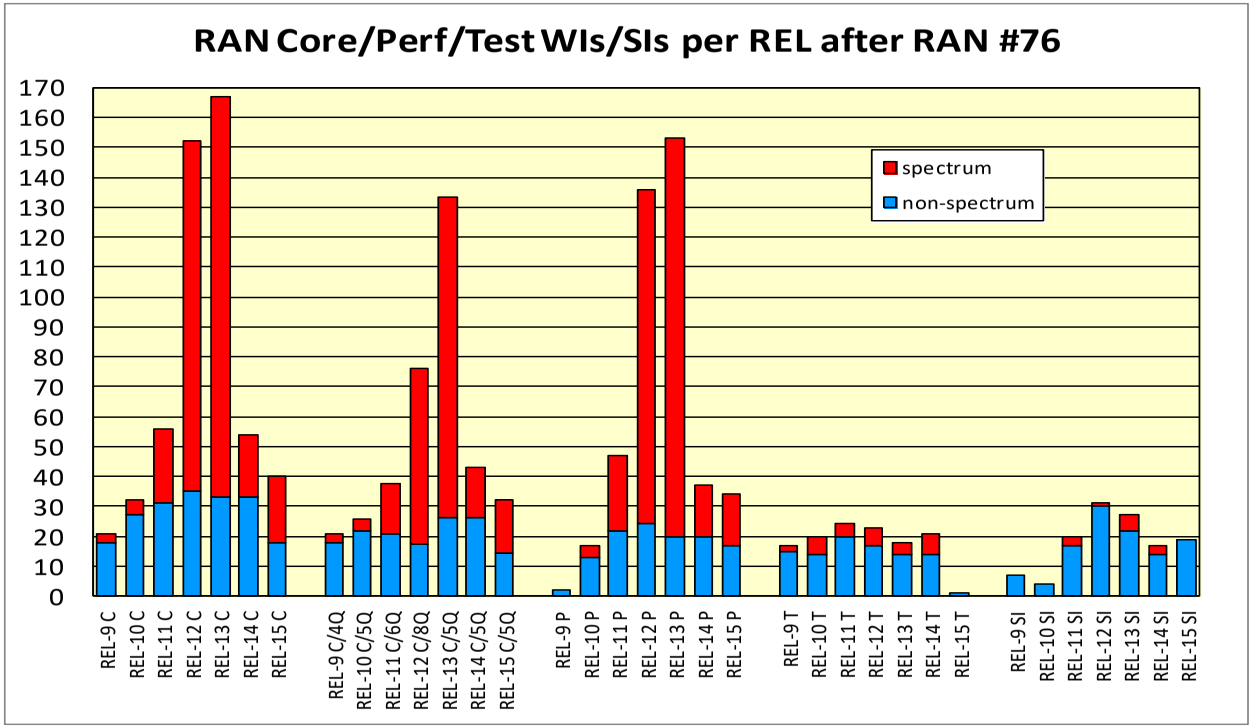


Fig. F-1: Statistics of all approved RAN WIs/SIs of REL-9/10//11/12/13/14/15 split into spectrum and non-spectrum related topics (<u>including</u> already completed WIs/SIs)
Note: For REL-15 the planned freeze in June 18 was used in this figure.

Samsung Exhibit 1025, Page 1773 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

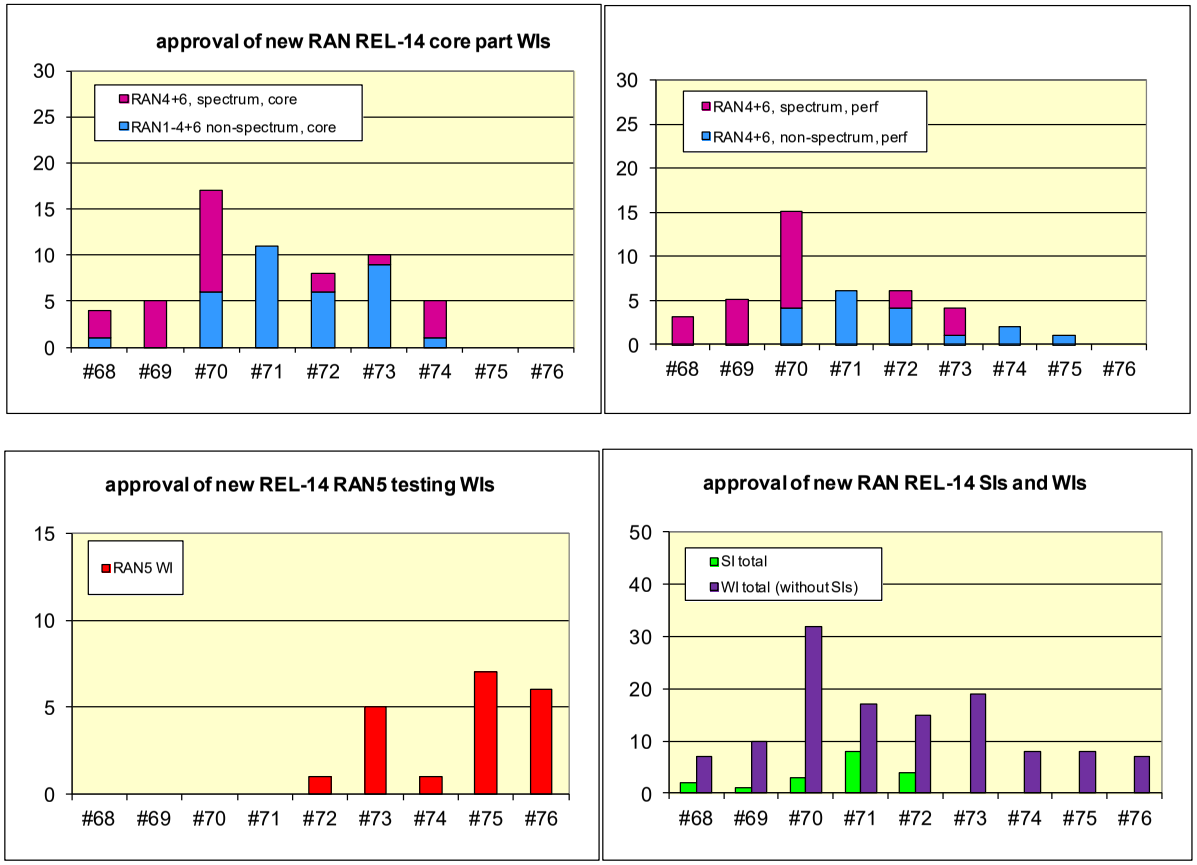


Fig. F-3: Overview of <u>new</u> REL-14 WIs and SIs per RAN meeting
REL-13 freeze: RAN #70 (Dec.15), ASN.1 freeze: RAN #71 (March 16);
REL-14 freeze: RAN #75 (March 17), ASN.1 freeze: RAN #76 (June 17);
(including WIs shifted from REL-13 to REL-14)

Samsung Exhibit 1025, Page 1774 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

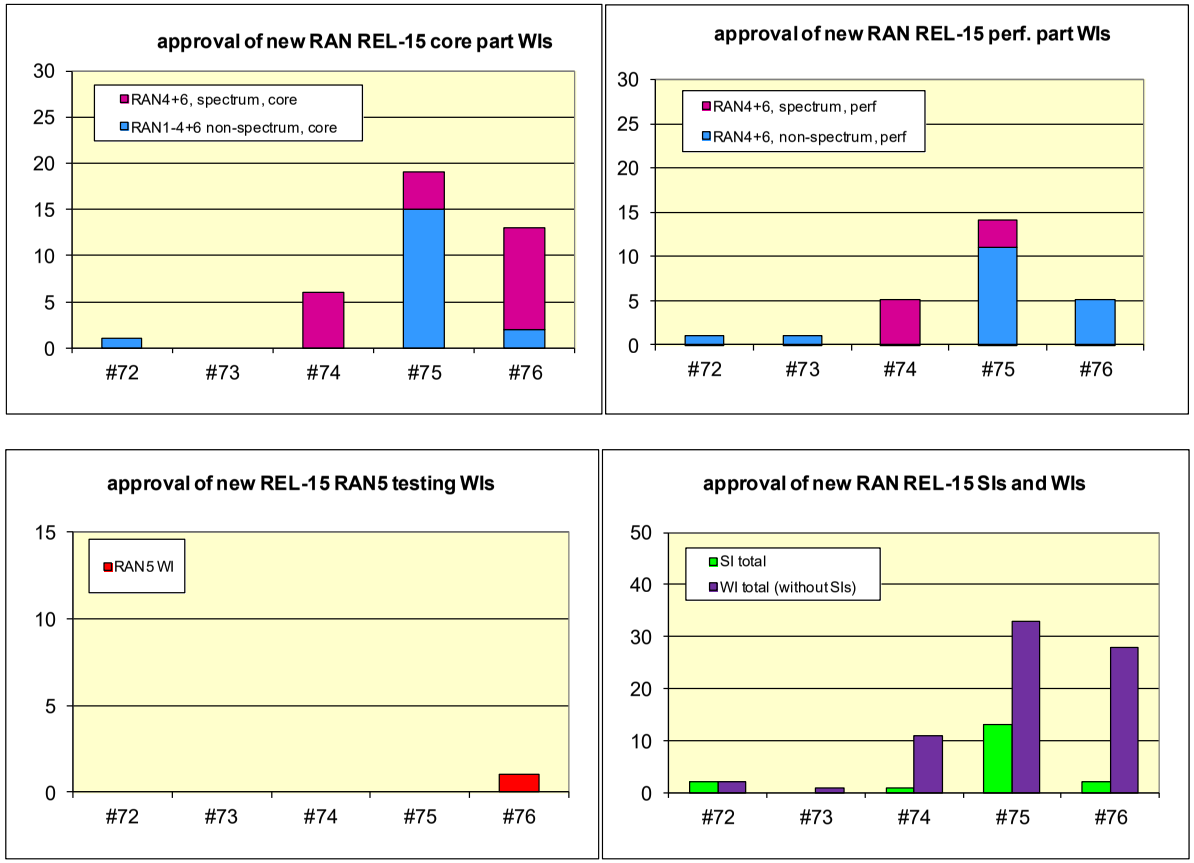


Fig. F-3: Overview of <u>new</u> REL-15 WIs and SIs per RAN meeting
REL-14 freeze: RAN #75 (March 17), ASN.1 freeze: RAN #76 (June 17);
REL-15 freeze: planned for RAN #80 (June 18), ASN.1 freeze: planned for RAN #81 (Sep.18);
(including WIs shifted from REL-14 to REL-15)

Samsung Exhibit 1025, Page 1775 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex G:
RAN email discussions between RAN #76 and RAN #77:

1 week email discussions after RAN #76:

[76-01] **Time budget summary**
Goal: to endorse TU summary RP-171478 as outcome of RAN #76
Rapporteur: RAN1/2/3/4/6 chairmen, RAN1 chairman to take the lead.
Timeline: until Mon 19.06.2017 CoB
conclusion: Email discussion was kicked off by the RAN1 chairman on 13.06.2017.
The endorsed time budget overview was sent out on 20.06.2017.
Note: It was spotted later that the WID in cell F60 (LCS_LTE_acc_enh-Core) and F61 (LCS_LTE_acc_enh-Perf) is incorrect and should be RP-171508.
This will be fixed after RAN #77 in the next version.

[76-02] **Report of joint RAN-SA session during RAN #76**
Goal: finalize the report in RP-171501
Rapporteur: MCC
Timeline: until Fri 16.06.2017 noon CEST
conclusion: Email discussion was kicked off by MCC on 09.06.2017 with a first draft in RP-171481.
The final version RP-171501 was provided on 16.06.2017 and it is "noted" (no need for any approval).

[76-03] **RAN5 CR Pack RP-171510**
Goal: to approve RAN5 CR Pack RP-171510 as revision of RP-171391 where CRs were missing
Rapporteur: MCC
Timeline: until Fri 16.06.2017 noon CEST
conclusion: Email discussion was kicked off by MCC on 09.06.2017 with a draft version of RP-171510.
CRpack RP-171510 was approved by email on 16.06.2017.

Email discussions until RAN#76:

[76-04] **Non-terrestrial networks, pCR to Section 6 (Doppler and propagation delay)**
Goal: discuss pCR RP-171449 to RAN TR 38.811 in order to come to a revision of the pCR to be submitted to RAN #77.
Rapporteur: Thales
Timeline: Latest by RAN#77 submission deadline, exact close to be defined by rapporteur.
conclusion: Email discussion was kicked off by Thales on 16.06.2017.
A corresponding pCR to TR 38.811 was provided to RAN #77 in RP-171578.

Samsung Exhibit 1025, Page 1776 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

[76-05] **IMT2020 submission**
Goal: generate overview Tdoc for RAN #77 with time schedule and submission content for 3GPP's IMT2020 submission.
Rapporteur: Telecom Italia
Timeline: Latest by RAN#77 submission deadline, exact close to be defined by rapporteur.
conclusion: Email discussion was kicked off by Telecom Italia on 10.08.2017.
A corresponding email discussion summary was provided to RAN #77 in RP-171584.

[76-06] **UE category for NR Option 3**
Goal: discuss the target peak data rates for LTE-NR DC and NR standalone (see RP-171480)
Rapporteur: NTT Docomo
Timeline: Latest by RAN#77 submission deadline, exact close to be defined by rapporteur.
conclusion: Email discussion was kicked off by NTT DOCOMO on 02.08.2017.
A corresponding email discussion summary was provided to RAN #77 in RP-171576.

Additional email discussions:

1. R2-1705852 (REL-14 cat.F CR 2887 rev 1 to TS 36.331 v14.2.1)
   motivation: R2-1705852 was agreed by email in RAN2 but not submitted to RAN #76, as the CR has bigger ASN.1 impacts and REL-14 was frozen at RAN #76 a 1 week email approval was carried out.
   conclusion: Email discussion was kicked off by MCC on 05.07.2017 explaining the background and providing R2-1705852 via the RAN reflector.
   R2-1705852 was approved by email in CRpack RP-171511 on 13.07.2017.

2. RAN5 CRpack RP-171368 and R5s170413 (REL-13 cat.F CR 3599 rev - to TS 34.123-3 v13.2.0)
   motivation: RAN5 CRpack RP-171368 was originally approved by RAN #76 but it was empty and did not include CR R5s170413, so 1 week email approval was carried out
   conclusion: Email discussion was kicked off by MCC on 02.08.2017 explaining the background and providing CRpack RP-171512 (including R5s170413) via the RAN reflector. No objections were raised by 09.08.2017 and RP-171512 was then approved by email.

3. Study on evaluation methodology of new V2X use cases for LTE and NR
   motivation: Objective of the SI (RP-171093): "2. Identify the regulatory requirements and design considerations of potential operation of direct communications between vehicles in spectrum allocated to ITS beyond 6GHz in different regions, considering at least 63-64GHz (allocated for ITS in Europe) and 76-81GHz depending on regulatory decision [RAN, starting email discussion after RAN#76]."
   conclusion: Email discussion was kicked off by LG Electronics on 21.08.2017.
   An email discussion summary is provided to RAN #77 in RP-171619.

Samsung Exhibit 1025, Page 1777 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex H:
Actions decided by RAN #76

Nothing to report.

ACTION_ITEM_1:	Removal of references to TS 44.118 and TS 44.160 (Rel-12 and onwards)
for:	RAN1/RAN2/RAN3/RAN4/RAN5/RAN6
task:	WGs are tasked to check that their TRs/TSs (Rel-12 and onwards) are not referencing TS 44.118 and TS 44.160. If there is a reference, they have to provide corresponding CRs to RAN #77 to remove these references as it is intended to withdraw TS 44.118 and TS 44.160 at RAN #77.
completion date:	RAN #77 in Sep. 2017

Samsung Exhibit 1025, Page 1778 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex I: History

Document history		
Date	**TSG RAN Tdoc**	**Subject**
08.06.2017	-	Draft report of RAN #76 provided directly after RAN #76
08.09.2017	RP-171516	Draft report of RAN #76 v1.0 provided for approval to RAN #77

In case of comments/questions/corrections please contact:

Author: **Dr. Joern Krause (3GPP TSG RAN MCC Support)**

ETSI Mobile Competence Centre (MCC)
Tel. +33-492-94 4261
email: Joern.Krause@etsi.org

Samsung Exhibit 1025, Page 1779 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	REL	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	WG status	WG	Workitem	Meeting-1st-Level	
25.104	0949	1	Rel-14	F	RP-171282	R4-1704049	approved	CR on BS for protection of V2X UE in TS 25.104	14.1.0	agreed	R4	LTE_V2X-C	RP-76	
25.105	0318	1	Rel-13	F	RP-171307	R4-1704021	approved	CR on LAA BS for TS 25.105	13.1.0	agreed	R4	LTE_LAA-C	RP-76	wrong CR number on CR cover
25.141	0785	-	Rel-14	B	RP-171255	R4-1703579	approved	CR on eLAA BS for TS 25.141	14.1.0	agreed	R4	LTE_eLAA-	RP-76	
25.141	0979	1	Rel-14	F	RP-171282	R4-1704056	approved	CR on BS for protection of V2X UE in TS 25.141	14.1.0	agreed	R4	LTE_V2X-P	RP-76	
25.300	0056	2	Rel-14	B	RP-171240	R2-1705949	approved	Introduction of DL interference mitigation	14.2.0	agreed	R2	UTRA_DL_	RP-76	
25.306	0517	6	Rel-14	A	RP-171242	R2-1704735	approved	Unclear naming of feature “Dual cell E-DCH operation”	14.2.0	agreed	R2	TEI12, EDC	RP-76	
25.306	0518	6	Rel-12	F	RP-171242	R2-1704737	approved	Unclear naming of feature “Dual cell E-DCH operation”	12.8.0	agreed	R2	TEI12, EDC	RP-76	
25.306	0519	6	Rel-13	A	RP-171242	R2-1704736	approved	Unclear naming of feature “Dual cell E-DCH operation”	13.2.0	agreed	R2	TEI12, EDC	RP-76	
25.331	5932	1	Rel-14	F	RP-171239	R2-1704738	approved	Corrections of QoE measurements	14.2.0	agreed	R2	UMTS_QM(	RP-76	
25.331	5933	5	Rel-14	F	RP-171239	R2-1706201	approved	Clarified behaviour for transmission of “Container for application layer measurement reporting”	14.2.0	agreed	R2	UMTS_QM(	RP-76	
25.331	5935	2	Rel-14	B	RP-171240	R2-1705948	approved	Introduction of DL interference mitigation for UMTS	14.2.0	agreed	R2	UTRA_DL_	RP-76	
25.331	5939	-	Rel-14	D	RP-171238	R2-1705380	approved	Rapporteur corrections	14.2.0	agreed	R2	TEI14	RP-76	
25.331	5940	2	Rel-14	F	RP-171238	R2-1706194	approved	RRC Specification Update After ASN1 Review	14.2.0	agreed	R2	TEI14	RP-76	
25.413	1318	-	Rel-14	F	RP-171328	R3-171176	approved	QoE correction	14.0.0	agreed	R3	UMTS_QM(	RP-76	
25.413	1320	2	Rel-14	F	RP-171328	R3-171377	approved	QoE enhancement during SRNS relocation	14.0.0	agreed	R3	UMTS_QM(	RP-76	
25.413	1321	2	Rel-14	F	RP-171328	R3-171378	approved	Introduction of UE Application Layer Measurement Capability	14.0.0	agreed	R3	UMTS_QM(	RP-76	
25.423	1896	1	Rel-14	D	RP-171324	R3-171488	approved	Rapporteurs review of 25.423 Editorials	14.0.0	agreed	R3	TEI14	RP-76	
25.423	1897	1	Rel-14	F	RP-171327	R3-171911	approved	Correction of the abnormal case in Dual Cell E-DCH operation enhancements configuration	14.0.0	agreed	R3	UTRA_MC(	RP-76	
25.433	2093	2	Rel-14	D	RP-171324	R3-172025	approved	Rapporteur review	14.0.0	agreed	R3	TEI14	RP-76	
25.433	2094	1	Rel-14	F	RP-171327	R3-171912	approved	Correction on Dual Cell E-DCH operation enhancements	14.0.0	agreed	R3	UTRA_MC(	RP-76	
34.108	0996	1	Rel-14	F	RP-171380	R5-172979	approved	Addition of the HPD or DASH streaming service entry in Table Example of linkage between RABs and	14.0.0	agreed	R5	UMTS_QM(	RP-76	
34.121-1	1646	1	Rel-14	F	RP-171374	R5-173336	approved	Correction to Table 4.0B Dual band 4C-HSDPA configurations	14.1.0	agreed	R5	TEI10_Test	RP-76	
34.121-2	0173	1	Rel-14	F	RP-171363	R5-173337	approved	Correction to Table 4.1-1.	14.0.0	agreed	R5	TEI8_Test	RP-76	
34.123-1	3892	1	Rel-14	F	RP-171380	R5-172978	approved	Introduction of 8.4.1.53 Measurement Control and Report: Application Layer Data Measurement	14.0.0	agreed	R5	UMTS_QM(	RP-76	
34.123-1	3893	-	Rel-14	F	RP-171363	R5-172667	approved	Corrections to SS testcase 15.9.2	14.0.0	agreed	R5	TEI8_Test	RP-76	
34.123-1	3894	1	Rel-14	F	RP-171361	R5-173019	approved	Corrections to Rel-99 testcase 12.2.1.2	14.0.0	agreed	R5	TEI_Test	RP-76	
34.123-1	3895	-	Rel-14	F	RP-171361	R5-172782	approved	Restoration of the test case title of 8.3.7.2	14.0.0	agreed	R5	TEI_Test	RP-76	
34.123-3	3589	1	Rel-13	B	RP-171369	R5s170387	approved	Addition of 3G SIMTC testcase 12.2.1.16 to UTRAN testsuite	13.2.0	agreed	R5s	TEI11_Test	RP-76	
34.123-3	3590	1	Rel-13	B	RP-171369	R5s170388	approved	Addition of 3G SIMTC testcase 9.4.11 to UTRAN testsuite	13.2.0	agreed	R5s	TEI11_Test	RP-76	
34.123-3	3591	-	Rel-13	F	RP-171369	R5s170262	approved	Correction to NAS testcase for Release 12 UE	13.2.0	agreed	R5s	TEI_Test	RP-76	
34.123-3	3593	-	Rel-13	F	RP-171369	R5s170322	approved	Correction to ETWS testcase 8.1.1.19	13.2.0	agreed	R5s	TEI8_Test	RP-76	
34.123-3	3594	-	Rel-13	F	RP-171369	R5s170323	approved	Correction to Rel-8 E-RACH test cases	13.2.0	agreed	R5s	TEI8_Test	RP-76	
34.123-3	3595	-	Rel-13	F	RP-171369	R5s170324	approved	Correction to DC-HSU testcases	13.2.0	agreed	R5s	TEI9_Test	RP-76	
34.123-3	3596	-	Rel-13	F	RP-171369	R5s170329	approved	Correction to SS NITZ testcase 15.9.2	13.2.0	agreed	R5s	TEI8_Test	RP-76	
34.123-3	3598	-	Rel-13	F	RP-171361	R5-172047	approved	Routine maintenance for TS 34.123-3	13.2.0	agreed	R5	TEI_Test	RP-76	
34.123-3	3599	-	Rel-13	F	RP-171512	R5s170413	approved	Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A	13.2.0	agreed	R5s	TEI11_Test	RP-76	was approved by email after RAN #76
34.229-1	1073	-	Rel-13	F	RP-171365	R5-172032	approved	Removal of IMS test case 19.5.8	13.2.0	agreed	R5	TEI9_Test	RP-76	
34.229-1	1075	1	Rel-13	F	RP-171365	R5-173022	approved	Corrections to GCF WI-154 IMS emergency test case 19.5.10	13.2.0	agreed	R5	TEI9_Test	RP-76	
34.229-1	1076	-	Rel-13	F	RP-171365	R5-172067	approved	Corrections to IMS emergency with roaming test cases	13.2.0	agreed	R5	TEI9_Test	RP-76	
34.229-1	1077	-	Rel-13	F	RP-171376	R5-172068	approved	Editorial correction to 183 Session Progress message in A.2.3	13.2.0	agreed	R5	TEI12_Test	RP-76	
34.229-1	1078	-	Rel-13	F	RP-171376	R5-172069	approved	Correction to generic test procedure defined in Annex C.44	13.2.0	agreed	R5	TEI12_Test	RP-76	
34.229-1	1080	-	Rel-13	F	RP-171363	R5-172104	approved	Small corrections to 17.1	13.2.0	agreed	R5	TEI8_Test	RP-76	
34.229-1	1081	-	Rel-13	F	RP-171375	R5-172118	approved	Corrections to C.40	13.2.0	agreed	R5	TEI11_Test	RP-76	
34.229-1	1082	1	Rel-13	F	RP-171375	R5-172928	approved	Corrections to G.17.1	13.2.0	agreed	R5	TEI11_Test	RP-76	
34.229-1	1083	1	Rel-13	F	RP-171375	R5-172929	approved	Corrections to G.17.2	13.2.0	agreed	R5	TEI11_Test	RP-76	
34.229-1	1084	-	Rel-13	F	RP-171376	R5-172121	approved	Correcting step reference in C.45	13.2.0	agreed	R5	TEI12_Test	RP-76	
34.229-1	1085	1	Rel-13	F	RP-171363	R5-173026	approved	Removing grace period from From and To headers	13.2.0	agreed	R5	TEI8_Test	RP-76	
34.229-1	1086	-	Rel-13	F	RP-171375	R5-172125	approved	Re-removing EN in G.15.10.4	13.2.0	agreed	R5	TEI11_Test	RP-76	
34.229-1	1087	-	Rel-13	F	RP-171363	R5-172126	approved	Aligning values for bandwidth modifier RR	13.2.0	agreed	R5	TEI8_Test,	RP-76	
34.229-1	1088	1	Rel-13	F	RP-171363	R5-172930	approved	Corrections to telephone-event in DL messages	13.2.0	agreed	R5	TEI8_Test,	RP-76	
34.229-1	1089	1	Rel-13	F	RP-171363	R5-172931	approved	Corrections to telephone-event in UL messages	13.2.0	agreed	R5	TEI8_Test,	RP-76	
34.229-1	1090	1	Rel-13	F	RP-171375	R5-172932	approved	Update annex C.11a and C.26a	13.2.0	agreed	R5	TEI11_Test	RP-76	
34.229-1	1091	1	Rel-13	F	RP-171375	R5-172933	approved	Update test case G.12.1 and G.12.2	13.2.0	agreed	R5	TEI11_Test	RP-76	
34.229-1	1092	1	Rel-13	F	RP-171334	R5-172947	approved	Populating Annex I including new test cases I.8.1a-d	13.2.0	agreed	R5	IMS_CONV	RP-76	
34.229-1	1093	-	Rel-13	F	RP-171363	R5-172294	approved	More editorial corrections to C.20	13.2.0	agreed	R5	TEI8_Test	RP-76	
34.229-1	1094	-	Rel-13	F	RP-171375	R5-172296	approved	Corrections to G.15.7	13.2.0	agreed	R5	TEI11_Test	RP-76	
34.229-1	1095	1	Rel-13	F	RP-171363	R5-173024	approved	Add session timer requirement	13.2.0	agreed	R5	TEI8_Test	RP-76	
34.229-1	1096	-	Rel-13	F	RP-171365	R5-172412	approved	Correction to A.2.1 regarding Via header	13.2.0	agreed	R5	TEI9_Test	RP-76	
34.229-1	1098	1	Rel-13	F	RP-171365	R5-172934	approved	Correction to A.2.8 regarding security headers	13.2.0	agreed	R5	TEI9_Test	RP-76	
34.229-1	1099	-	Rel-13	F	RP-171375	R5-172421	approved	Corrections to registration tests for MTSI over WLAN	13.2.0	agreed	R5	TEI11_Test	RP-76	
34.229-1	1100	-	Rel-13	F	RP-171376	R5-172423	approved	Corrections to Fixed Access Originating test cases	13.2.0	agreed	R5	TEI12_Test	RP-76	
34.229-1	1102	1	Rel-13	F	RP-171365	R5-172935	approved	Corrections to IMS Emergency test case 19.4.1	13.2.0	agreed	R5	TEI9_Test	RP-76	
34.229-1	1105	-	Rel-13	F	RP-171363	R5-173021	approved	Corrections to audio feature tag and addition grace period	13.2.0	agreed	R5	TEI8_Test	RP-76	
34.229-2	0207	-	Rel-13	F	RP-171365	R5-172033	approved	Removal of applicability of IMS test case 19.5.8	13.2.0	agreed	R5	TEI9_Test	RP-76	
34.229-2	0208	1	Rel-13	F	RP-171377	R5-172954	approved	Maintenance of 34.229-2 for XML conversion	13.2.0	agreed	R5	TEI13_Test	RP-76	
34.229-2	0210	1	Rel-13	F	RP-171363	R5-173025	approved	Add applicability for session timer	13.2.0	agreed	R5	TEI8_Test	RP-76	
34.229-2	0211	-	Rel-13	F	RP-171376	R5-172424	approved	Corrections to test cases H.12.2 and H.15.7 titles	13.2.0	agreed	R5	TEI12_Test	RP-76	
34.229-3	0479	1	Rel-13	F	RP-171367	R5s170377	approved	Correction to function fl_SS_CallForward	13.2.0	agreed	R5s	TEI8_Test	RP-76	
34.229-3	0480	1	Rel-13	F	RP-171367	R5s170378	approved	Correction to GCF WI-154 emergency call TC 19.5.8	13.2.0	agreed	R5s	TEI9_Test	RP-76	
34.229-3	0481	1	Rel-13	F	RP-171367	R5s170417	approved	Introduction of PIXIT for SPI calculation	13.2.0	agreed	R5s	TEI8_Test	RP-76	
34.229-3	0483	1	Rel-13	B	RP-171367	R5s170390	approved	Addition of IMS test case 8.15	13.2.0	agreed	R5s	TEI10_Test	RP-76	
34.229-3	0484	1	Rel-13	F	RP-171367	R5s170391	approved	Correction to Remove security context procedure	13.2.0	agreed	R5s	TEI8_Test	RP-76	
34.229-3	0485	1	Rel-13	F	RP-171367	R5s170418	approved	Corrections to 180 Ringing	13.2.0	agreed	R5s	TEI8_Test	RP-76	

Samsung Exhibit 1025, Page 1780 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

34.229-3	0486	-	Rel-13	F	RP-171367	R5s170228	approved	Correction to Annex C.11, C.26, C.45 and C.51	13.2.0	agreed		R5s	TEI8_Test	RP-76				
34.229-3	0487	-	Rel-13	F	RP-171367	R5s170231	approved	Corrections to IMS test case 12.2a	13.2.0	agreed		R5s	TEI8_Test	RP-76				
34.229-3	0488	-	Rel-13	F	RP-171367	R5s170232	approved	Further corrections to IMS test case 12.26	13.2.0	agreed		R5s	TEI12_Test	RP-76				
34.229-3	0489	-	Rel-13	F	RP-171367	R5s170297	approved	Correction for IMS authentication test cases 9.x	13.2.0	agreed		R5s	TEI8_Test	RP-76				
34.229-3	0490	-	Rel-13	F	RP-171367	R5s170299	approved	Correction for IMS video call test cases	13.2.0	agreed		R5s	TEI8_Test	RP-76				
34.229-3	0491	-	Rel-13	F	RP-171367	R5s170305	approved	Correction to SessionID in IMS signalling procedures	13.2.0	agreed		R5s	TEI8_Test	RP-76				
34.229-3	0493	-	Rel-13	F	RP-171367	R5s170327	approved	Correction for IMS emergency call test cases	13.2.0	agreed		R5s	TEI9_Test	RP-76				
34.229-3	0494	-	Rel-13	F	RP-171363	R5-172048	approved	Routine maintenance for TS 34.229-3	13.2.0	agreed		R5	TEI8_Test	RP-76				
34.229-3	0495	-	Rel-13	F	RP-171367	R5s170336	approved	Correction for IMS EVS test cases	13.2.0	agreed		R5s	TEI12_Test	RP-76				
34.229-3	0496	-	Rel-13	F	RP-171367	R5s170344	approved	Correction to GCF WI-198 IMS MTSI video Test Case 17.1	13.2.0	agreed		R5s	TEI8_Test	RP-76				
34.229-3	0497	-	Rel-13	F	RP-171367	R5s170346	approved	Correction to function fl_IMS_Server_SecurityContextCloseTCP	13.2.0	agreed		R5s	TEI8_Test	RP-76				
34.229-3	0500	-	Rel-13	F	RP-171366	R5s170415	approved	Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (prose), Annex A	13.2.0	agreed		R5s	TEI10_Test	RP-76				
36.101	4298	-	Rel-13	F	RP-171304	R4-1702753	approved	Correction to 4Tx/4Rx Cell-specific reference signals in Table 8.10.1.1.7-1	13.7.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4299	-	Rel-14	A	RP-171304	R4-1702754	approved	Correction to 4Tx/4Rx Cell-specific reference signals in Table 8.10.1.1.7-1	14.3.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4302	1	Rel-14	F	RP-171269	R4-1704062	approved	Introduction of Band 18 UE category 1bis into TS36.101	14.3.0	agreed		R4	LTE_UE_ca	RP-76				
36.101	4304	1	Rel-14	F	RP-171257	R4-1704192	approved	eHST RF: Practical and consistent model definition for HST-SFN scenario (Rel-14)	14.3.0	agreed		R4	LTE_high_s	RP-76				
36.101	4305	-	Rel-13	F	RP-171308	R4-1702902	approved	Correction to UL and DL Reference Channels for Cat M1 UE	13.7.0	agreed		R4	LTE_MTCe	RP-76				
36.101	4306	-	Rel-14	A	RP-171308	R4-1702903	approved	Correction to UL and DL Reference Channels for Cat M1 UE	14.3.0	agreed		R4	LTE_MTCe	RP-76				
36.101	4307	-	Rel-12	F	RP-171296	R4-1703023	approved	Corrections for D2D FRCs	12.15.0	agreed		R4	TEI12	RP-76				
36.101	4308	-	Rel-13	A	RP-171296	R4-1703024	approved	Corrections for D2D FRCs	13.7.0	agreed		R4	TEI12	RP-76				
36.101	4309	-	Rel-14	A	RP-171296	R4-1703025	approved	Corrections for D2D FRCs	14.3.0	agreed		R4	TEI12	RP-76				
36.101	4313	3	Rel-14	B	RP-171279	R4-1704061	approved	Introduction of new bands for NB-IoT in 36.101	14.3.0	agreed		R4	NB_IOT_R1	RP-76				
36.101	4314	1	Rel-14	F	RP-171269	R4-1704126	approved	CR for correction for CQI test for Cat.1 UE with single Rx antenna	14.3.0	agreed		R4	LTE_UE_ca	RP-76				
36.101	4316	1	Rel-12	F	RP-171395	R4-1704019	approved	Correction to SEM table for intra-band 2UL CA	12.15.0	agreed		R4	LTE_CA-Co	RP-76				
36.101	4317	-	Rel-13	A	RP-171395	R4-1703209	approved	Correction to SEM table for intra-band 2UL CA	13.7.0	agreed		R4	LTE_CA-Co	RP-76	wrong Tdoc number on CR cover			
36.101	4318	-	Rel-14	A	RP-171395	R4-1703210	approved	Correction to SEM table for intra-band 2UL CA	14.3.0	agreed		R4	LTE_CA-Co	RP-76				
36.101	4319	1	Rel-13	F	RP-171310	R4-1704212	approved	Cleanup of eMTC UE demodulation requirements (Rel-13)	13.7.0	agreed		R4	LTE_MTCe	RP-76				
36.101	4320	-	Rel-14	A	RP-171310	R4-1703222	approved	Cleanup of eMTC UE demodulation requirements (Rel-14)	14.3.0	agreed		R4	LTE_MTCe	RP-76				
36.101	4321	-	Rel-13	F	RP-171311	R4-1703270	approved	Correction for FD-MIMO demodulation test (R13)	13.7.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4322	1	Rel-14	A	RP-171311	R4-1704201	approved	Correction for FD-MIMO demodulation test (R14)	14.3.0	agreed		R4	TEI13	RP-76				
36.101	4327	1	Rel-14	F	RP-171278	R4-1704094	approved	CR on correction for multiple MSD requirements for dual uplink CA UE	14.3.0	agreed		R4	LTE_CA_R	RP-76				
36.101	4329	1	Rel-14	F	RP-171282	R4-1704050	approved	CR on correction for V2X con-current operation	14.3.0	agreed		R4	LTE_V2X-C	RP-76				
36.101	4332	1	Rel-14	B	RP-171268	R4-1704208	approved	CR for introducing requirements for normal demodulation tests for 4Rx CA in Rel-14	14.3.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4333	-	Rel-14	B	RP-171268	R4-1703414	approved	CR for introducing for TDD-FDD DC normal demodulation tests for 4Rx CA in Rel-14	14.3.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4334	1	Rel-14	B	RP-171268	R4-1704209	approved	CR for introducing new IRC tests for 4Rx CA in Rel-14	14.3.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4336	1	Rel-14	F	RP-171268	R4-1704210	approved	CR for fixing errors of 4Rx CA in Rel-14	14.3.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4339	-	Rel-14	F	RP-171285	R4-1703441	approved	CR for correction of eLAA UE RF requirements	14.3.0	agreed		R4	LTE_eLAA	RP-76				
36.101	4356	1	Rel-14	F	RP-171307	R4-1704162	approved	CR for LAA extension for PDSCH performance with multiple CCs in unlicensed bands	14.3.0	agreed		R4	LTE_LAA-P	RP-76				
36.101	4357	-	Rel-13	F	RP-171301	R4-1703757	approved	Correction of NPDSCH and NPDCCH	13.7.0	agreed		R4	NB_IOT-Pe	RP-76				
36.101	4358	-	Rel-14	A	RP-171301	R4-1703758	approved	Correction of NPDSCH and NPDCCH	14.3.0	agreed		R4	NB_IOT-Pe	RP-76				
36.101	4359	-	Rel-13	F	RP-171304	R4-1703763	approved	Maintenance CR for 4Rx WI (Rel-13)	13.7.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4360	-	Rel-14	A	RP-171304	R4-1703764	approved	Maintenance CR for 4Rx WI (Rel-14)	14.3.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4367	-	Rel-14	F	RP-171310	R4-1703793	approved	CR for PDSCH fixed reference channel (Rel-14)	14.3.0	agreed		R4	LTE_MTCe	RP-76				
36.101	4372	1	Rel-13	F	RP-171304	R4-1704279	approved	CR on 4-RX TM9 MU-MIMO performance requirements (Rel-13)	13.7.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4373	-	Rel-14	A	RP-171304	R4-1703964	approved	CR on 4-RX TM9 MU-MIMO performance requirements (Rel-14)	14.3.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4374	-	Rel-13	F	RP-171298	R4-1703965	approved	CR on PDCCH/PCFICH DL Control Channel IM Type A TDD test case correction (Rel-13)	13.7.0	agreed		R4	LTE_IM_DL	RP-76				
36.101	4375	-	Rel-14	A	RP-171298	R4-1703966	approved	CR on PDCCH/PCFICH DL Control Channel IM Type A TDD test case correction (Rel-14)	14.3.0	agreed		R4	LTE_IM_DL	RP-76				
36.101	4379	1	Rel-14	B	RP-171048	-	approved	Addition of Band 28 UE category 1bis into TS 36.101	14.3.0	-		R4	LTE_UE_ca	RP-76	wrong rev and CR cat. on CR cover			
36.101	4380	1	Rel-14	F	RP-171282	R4-1705879	approved	CR on applicability of V2X contiguous intraband multi-carrier operation requirements.	14.3.0	agreed		R4	LTE_V2X-C	RP-76				
36.101	4381	1	Rel-13	F	RP-171296	R4-1706011	approved	Corrections of Table 8.7.5.1-2 and Table 8.7.5.2-27	13.7.0	agreed		R4	LTE_CA_TE	RP-76				
36.101	4382	-	Rel-13	F	RP-171309	R4-1704583	approved	Correction to Table A.4-1 and A.4-16 for Cat M1.	13.7.0	agreed		R4	LTE_MTCe	RP-76				
36.101	4383	-	Rel-14	A	RP-171309	R4-1704584	approved	Correction to Table A.4-1 and A.4-16 for CatM1.	14.3.0	agreed		R4	LTE_MTCe	RP-76				
36.101	4384	2	Rel-13	F	RP-171310	R4-1706202	approved	Correction to minimum requirement for CatM1 Single-Layer Spatial Multiplexing	13.7.0	agreed		R4	LTE_MTCe	RP-76				
36.101	4385	-	Rel-14	A	RP-171310	R4-1704586	approved	Correction to minimum requirement for CatM1 Single-Layer Spatial Multiplexing	14.3.0	agreed		R4	LTE_MTCe	RP-76				
36.101	4388	-	Rel-13	F	RP-171300	R4-1704624	approved	CR for demodulation of NB-IoT correction (Rel.13)	13.7.0	agreed		R4	NB_IOT-Pe	RP-76				
36.101	4389	-	Rel-14	A	RP-171300	R4-1704625	approved	CR for demodulation of NB-IoT correction (Rel.14)	14.3.0	agreed		R4	NB_IOT-Pe	RP-76				
36.101	4390	-	Rel-13	F	RP-171307	R4-1704629	approved	CR for LAA TDD test case correction (Rel.13)	13.7.0	agreed		R4	LTE_LAA-P	RP-76				
36.101	4391	-	Rel-14	A	RP-171307	R4-1704630	approved	CR for LAA TDD test case correction (Rel.14)	14.3.0	agreed		R4	LTE_LAA-P	RP-76				
36.101	4395	-	Rel-13	F	RP-171395	R4-1704679	approved	Correction to the table of intra-band non-contiguous CA with one uplink configuration for reference sens	13.7.0	agreed		R4	LTE_CA-Co	RP-76				
36.101	4396	-	Rel-14	A	RP-171395	R4-1704680	approved	Correction to the table of intra-band non-contiguous CA with one uplink configuration for reference sens	14.3.0	agreed		R4	LTE_CA-Co	RP-76				
36.101	4397	-	Rel-14	F	RP-171395	R4-1704681	approved	Correction to the table of intra-band non-contiguous CA with one uplink configuration for reference sens	14.3.0	agreed		R4	LTE_CA-Co	RP-76				
36.101	4398	1	Rel-14	B	RP-171263	R4-1705905	approved	CR on performance requirements for MUST Case 1 and Case 2	14.3.0	agreed		R4	LTE_MUST	RP-76				
36.101	4399	1	Rel-14	B	RP-171263	R4-1705950	approved	CR on performance requirements for MUST Case 3	14.3.0	agreed		R4	LTE_MUST	RP-76				
36.101	4400	-	Rel-14	B	RP-171263	R4-1704730	approved	CR on Fixed Reference Channels for MUST	14.3.0	agreed		R4	LTE_MUST	RP-76				
36.101	4401	1	Rel-14	B	RP-171263	R4-1705956	approved	CR on applicability rule for MUST Case 3	14.3.0	agreed		R4	LTE_MUST	RP-76				
36.101	4403	-	Rel-12	F	RP-171297	R4-1704742	approved	Correction of N_RB_agg for CA_41C in Table 7.3.1A-1	12.15.0	agreed		R4	TEI12	RP-76				
36.101	4404	-	Rel-13	F	RP-171297	R4-1704744	approved	Correction of N_RB_agg for CA_41C and CA_7C in Table 7.3.1A-1	13.7.0	agreed		R4	TEI12	RP-76				
36.101	4405	-	Rel-14	A	RP-171297	R4-1704745	approved	Correction of N_RB_agg for CA_41C and CA_7C in Table 7.3.1A-1	14.3.0	agreed		R4	TEI12	RP-76				
36.101	4410	-	Rel-12	F	RP-171296	R4-1704752	approved	Correction to Mapping of CQI Index to Modulation coding scheme for 256QAM	12.15.0	agreed		R4	LTE_SC_er	RP-76				
36.101	4411	-	Rel-13	A	RP-171296	R4-1704753	approved	Correction to Mapping of CQI Index to Modulation coding scheme for 256QAM	13.7.0	agreed		R4	LTE_SC_er	RP-76				
36.101	4412	-	Rel-14	A	RP-171296	R4-1704754	approved	Correction to Mapping of CQI Index to Modulation coding scheme for 256QAM	14.3.0	agreed		R4	LTE_SC_er	RP-76				
36.101	4413	1	Rel-13	F	RP-171304	R4-1706193	approved	CR for correction of 4RX demodulation requirements (Rel-13)	13.7.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4414	-	Rel-14	A	RP-171304	R4-1704757	approved	CR for correction of 4RX demodulation requirements (Rel-14)	14.3.0	agreed		R4	LTE_4Rx_A	RP-76				
36.101	4417	-	Rel-14	B	RP-171278	R4-1704856	approved	Introduction of new 3DL/2UL CA band combinations in rel-14	14.3.0	agreed		R4	LTE_CA_R	RP-76				

36.101	4418	-	Rel-14	B	RP-171278	R4-1704860	approved	Introduction of new 4DL/2UL CA band combination in Rel-14	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.101	4419	1	Rel-14	F	RP-171290	R4-1705864	approved	Correction on the additional SE for Band 41 UE in rel-14	14.3.0	agreed	R4	LTE_B41_U	RP-76
36.101	4420	-	Rel-14	F	RP-171282	R4-1706089	approved	CR on V2X Pumax for non-concurrent operaion	14.3.0	agreed	R4	LTE_V2X-C	RP-76
36.101	4423	1	Rel-13	F	RP-171311	R4-1706210	approved	Correction of test points for Single-antenna port performance TDD FDD CA	13.7.0	agreed	R4	TEI13	RP-76
36.101	4424	-	Rel-14	A	RP-171311	R4-1704874	approved	Correction of test points for Single-antenna port performance TDD FDD CA	14.3.0	agreed	R4	TEI13	RP-76
36.101	4425	1	Rel-14	B	RP-171272	R4-1706099	approved	Introduction of additional band combinations for Intra-band CA	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.101	4426	2	Rel-14	B	RP-171275	R4-1706287	approved	Introduction of Rel-14 4DL/1UL combinations in 36.101	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.101	4428	-	Rel-14	F	RP-171282	R4-1704927	approved	Clean ups of TS36.101 for V2X requirements	14.3.0	agreed	R4	LTE_V2X-C	RP-76
36.101	4432	1	Rel-14	B	RP-171256	R4-1703949	approved	CR for V2V Performance Requirements	14.3.0	agreed	R4	LTE_SL_V2	RP-76
36.101	4433	-	Rel-14	B	RP-171261	R4-1704968	approved	CR to 36.101: Introduction of FeMBMS numerologies	14.3.0	agreed	R4	MBMS_LTE	RP-76
36.101	4435	1	Rel-14	F	RP-171285	R4-1706088	approved	Correction to A-MPR tables and in-band emissions for eLAA	14.3.0	agreed	R4	LTE_eLAA-	RP-76
36.101	4436	-	Rel-13	D	RP-171304	R4-1705137	approved	CR for FRC overview table for 4 layer SDR tests (R13)	13.7.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4437	-	Rel-14	A	RP-171304	R4-1705138	approved	CR for FRC overview table for 4 layer SDR tests (R14)	14.3.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4438	-	Rel-14	D	RP-171289	R4-1705139	approved	Maintenance CR for demodulation and CQI tests for Cat.1bis UE	14.3.0	agreed	R4	LTE_UE_ca	RP-76
36.101	4439	2	Rel-13	D	RP-171307	R4-1706021	approved	Maintenance CR for LAA demodulation tests	13.7.0	agreed	R4	LTE_LAA-P	RP-76
36.101	4440	1	Rel-14	A	RP-171307	R4-1705943	approved	Maintenance CR for LAA demodulation tests	14.3.0	agreed	R4	LTE_LAA-P	RP-76
36.101	4441	-	Rel-14	F	RP-171274	R4-1705144	approved	Correction on uplink limitation of 3DL CA BA-11A-28A	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.101	4442	-	Rel-14	F	RP-171282	R4-1705181	approved	Some corrections on V2X in TS 36.101	14.3.0	agreed	R4	LTE_V2X-C	RP-76
36.101	4443	-	Rel-14	B	RP-171273	R4-1705195	approved	Introduction of completed R14 2DL band combinations to TS 36.101	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.101	4444	-	Rel-14	B	RP-171274	R4-1705214	approved	Introduction of completed R14 3DL band combinations to TS 36.101	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.101	4445	1	Rel-13	F	RP-171304	R4-1705866	approved	4Rx REFSENS requirements spec improvement for 36.101	13.7.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4446	1	Rel-14	F	RP-171304	R4-1706077	approved	4Rx REFSENS requirements spec improvement for 36.101	14.3.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4447	-	Rel-13	F	RP-171311	R4-1705353	approved	CR for adding TDD 4 DL CA bandwidth combination for CQI CA tests in Rel-13	13.7.0	agreed	R4	TEI13	RP-76
36.101	4448	-	Rel-14	A	RP-171311	R4-1705354	approved	CR for adding TDD 4 DL CA bandwidth combination for CQI CA tests in Rel-14	14.3.0	agreed	R4	TEI13	RP-76
36.101	4449	1	Rel-13	F	RP-171304	R4-1706181	approved	CR for adding applicability rule for MU TM9 4Rx tests in Rel-13	13.7.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4450	-	Rel-14	A	RP-171304	R4-1705356	approved	CR for adding applicability rule for MU TM9 4Rx tests in Rel-14	14.3.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4451	1	Rel-14	F	RP-171288	R4-1706180	approved	CR for updating applicability rule for SDR CA tests for 4Rx CA in Rel-14	14.3.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4452	1	Rel-14	B	RP-171288	R4-1706177	approved	CR for further updating IRC tests for 4Rx CA in Rel-14	14.3.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4453	1	Rel-14	B	RP-171288	R4-1706198	approved	CR for introducing applicability rule for 256QAM and higher layer tests for 4Rx CA	14.3.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4454	1	Rel-14	B	RP-171288	R4-1706199	approved	CR for introducing 256QAM tests for 4Rx CA in Rel-14	14.3.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4455	1	Rel-14	B	RP-171288	R4-1706200	approved	CR for introducing high layers tests for 4Rx CA in Rel-14	14.3.0	agreed	R4	LTE_4Rx_A	RP-76
36.101	4457	-	Rel-14	F	RP-171277	R4-1705376	approved	Correction CR on 2UL CA for CA_2A-66A	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.101	4458	-	Rel-14	B	RP-171277	R4-1705377	approved	Introduction of completed R14 2DL2UL band combinations to TS 36.101	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.101	4460	-	Rel-14	F	RP-171299	R4-1705399	approved	Channel Raster For Multiple Standalone NB-IoT Carriers (TS 36.101)	14.3.0	agreed	R4	NB_IOT-Co	RP-76
36.101	4461	-	Rel-14	B	RP-171276	R4-1705444	approved	5DL UE CR	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.101	4462	-	Rel-14	B	RP-171287	R4-1705446	approved	CA bandwidth class Class B 256-QAM non-contigous resource allocation MPR	14.3.0	agreed	R4	LTE_UL_Cs	RP-76
36.101	4463	-	Rel-14	F	RP-171280	R4-1705447	approved	Corrections to CA configurations and bandwidth combination sets	14.3.0	agreed	R4	TEI14	RP-76
36.101	4464	-	Rel-14	F	RP-171300	R4-1705455	approved	NB1/NB2 OOB note 3 correction	14.3.0	agreed	R4	NB_IOT-Co	RP-76
36.101	4465	1	Rel-14	F	RP-171285	R4-1705662	approved	Removing notes in two tables in UE spec wrt applicability of UL and DL requirements for band 46	14.3.0	agreed	R4	LTE_eLAA-	RP-76
36.101	4466	-	Rel-13	F	RP-171311	R4-1705528	approved	Correction on TDD-FDD CSI test cases (R13)	13.7.0	agreed	R4	TEI13	RP-76
36.101	4467	-	Rel-14	A	RP-171311	R4-1705529	approved	Correction on TDD-FDD CSI test cases (R14)	14.3.0	agreed	R4	TEI13	RP-76
36.101	4468	1	Rel-14	F	RP-171257	R4-1706029	approved	Clean up the requirements for UE enhancement in SFN scenario	14.3.0	agreed	R4	LTE_high_s	RP-76
36.101	4469	1	Rel-14	B	RP-171256	R4-1706206	approved	CR for V2V FRCs	14.3.0	agreed	R4	LTE_SL_V2	RP-76
36.101	4470	1	Rel-14	B	RP-171256	R4-1705970	approved	CR for V2V resource pool configuration	14.3.0	agreed	R4	LTE_SL_V2	RP-76
36.101	4471	2	Rel-12	F	RP-171297	R4-1706188	approved	Corrections for inCoverage configuration in ProSe direct communication (Rel-12)	12.15.0	agreed	R4	TEI12	RP-76
36.101	4472	-	Rel-13	A	RP-171297	R4-1705563	approved	Corrections for inCoverage configuration in ProSe direct communication (Rel-13)	13.7.0	agreed	R4	TEI12	RP-76
36.101	4473	-	Rel-14	A	RP-171297	R4-1705564	approved	Corrections for inCoverage configuration in ProSe direct communication (Rel-14)	14.3.0	agreed	R4	TEI12	RP-76
36.101	4474	1	Rel-13	F	RP-171299	R4-1703867	approved	CR for NB-IoT Absolute power tolerance	13.7.0	agreed	R4	NB_IOT-Co	RP-76
36.101	4475	-	Rel-14	A	RP-171299	R4-1705577	approved	CR for NB-IoT Absolute power tolerance	14.3.0	agreed	R4	NB_IOT-Co	RP-76
36.101	4476	2	Rel-13	F	RP-171307	R4-1706111	approved	Update of LAA REFSENS exclusion region	13.7.0	agreed	R4	LTE_LAA-C	RP-76
36.101	0322	1	Rel-14	F	RP-171282	R4-1704054	approved	Introduction of new bands for NB-IoT in 36.104	14.3.0	agreed	R4	NB_IOT_R1	RP-76
36.104	0944	1	Rel-14	B	RP-171279	R4-1704043	approved	Updates to performance requirements for NPUSCH format 2	14.3.0	agreed	R4	NB_IOT-Pe	RP-76
36.104	0972	-	Rel-13	F	RP-171301	R4-1703759	approved	Updates to performance requirements for NPUSCH format 2	13.7.0	agreed	R4	NB_IOT-Pe	RP-76
36.104	0973	-	Rel-14	A	RP-171301	R4-1703760	approved	Updates to performance requirements for NPUSCH format 2	14.3.0	agreed	R4	NB_IOT-Pe	RP-76
36.104	0974	1	Rel-13	F	RP-171310	R4-1704213	approved	clean up eMTC PUCCH requirements(Rel-13)	13.7.0	agreed	R4	LTE_MTCe	RP-76
36.104	0975	-	Rel-14	A	RP-171310	R4-1703790	approved	clean up eMTC PUCCH requirements(Rel-14)	14.3.0	agreed	R4	LTE_MTCe	RP-76
36.104	0976	3	Rel-14	B	RP-171257	R4-1703867	approved	CR for new PRACH performance requirements	14.3.0	agreed	R4	LTE_high_s	RP-76
36.104	4667	1	Rel-14	B	RP-171261	R4-1704059	approved	CR to 36.104: Introduction of FeMBMS numerologies	14.3.0	agreed	R4	MBMS_LTE	RP-76
36.104	4668	1	Rel-14	B	RP-171276	R4-1706083	approved	Introduction of 5DL CA combinations to 36.104	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.104	4671	1	Rel-14	B	RP-171272	R4-1706100	approved	Introduction of additional band combinations for Intra-band CA	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.104	4672	2	Rel-14	B	RP-171275	R4-1706288	approved	Introduction of Rel-14 4DL/1UL combinations in 36.104	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.104	4673	-	Rel-14	B	RP-171273	R4-1705196	approved	Introduction of completed R14 2DL band combinations to TS 36.104	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.104	4674	-	Rel-14	B	RP-171274	R4-1705215	approved	Introduction of completed R14 3DL band combinations to TS 36.104	14.3.0	agreed	R4	LTE_CA_R	RP-76
36.104	4676	1	Rel-14	B	RP-171280	R4-1706186	approved	Introduction of BS performance requirements for 256QAM in 36.104	14.3.0	agreed	R4	LTE_UL_Cs	RP-76
36.104	4678	-	Rel-14	F	RP-171299	R4-1705401	approved	Channel Raster For Multiple Standalone NB-IoT Carriers (TS 36.104)	14.3.0	agreed	R4	NB_IOT-Co	RP-76
36.104	4679	-	Rel-13	F	RP-171299	R4-1705404	approved	Narrowband blocking requirement for NB-IoT guard band operation (TS 36.104)	13.7.0	agreed	R4	NB_IOT-Co	RP-76
36.104	4680	-	Rel-14	A	RP-171299	R4-1705405	approved	Narrowband blocking requirement for NB-IoT guard band operation (TS 36.104)	14.3.0	agreed	R4	NB_IOT-Co	RP-76
36.104	4681	1	Rel-13	F	RP-171300	R4-1703871	approved	Intermodulation performance requirement for NB-IoT operation (TS 36.104)	13.7.0	agreed	R4	NB_IOT-Co	RP-76
36.104	4682	-	Rel-14	A	RP-171300	R4-1705413	approved	Intermodulation performance requirement for NB-IoT operation (TS 36.104)	14.3.0	agreed	R4	NB_IOT-Co	RP-76

36.104	4683	-	Rel-13	F	RP-171299	R4-1705556	approved	Note on BS in-channel selectivity for NB-IoT	13.7.0	agreed	R4	NB_IOT-Co	RP-76				
36.104	4684	-	Rel-14	A	RP-171299	R4-1705565	approved	Note on BS in-channel selectivity for NB-IoT	14.3.0	agreed	R4	NB_IOT-Co	RP-76				
36.104	4685	1	Rel-13	F	RP-171300	R4-1705869	approved	Clarification on 1.4 MHz for in-band operation	13.7.0	agreed	R4	NB_IOT-Co	RP-76				
36.104	4686	-	Rel-14	A	RP-171300	R4-1705569	approved	Clarification on 1.4 MHz for in-band operation	14.3.0	agreed	R4	NB_IOT-Co	RP-76				
36.133	4602	-	Rel-13	F	RP-171309	R4-1702755	approved	PDSCH allocation parameters for UE Cat M1 RSRP Test Cases	13.7.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4603	-	Rel-14	A	RP-171309	R4-1702756	approved	PDSCH allocation parameters for UE Cat M1 RSRP Test Cases	14.3.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4605	-	Rel-14	F	RP-171303	R4-1702761	approved	Cat NB1 RRM Test Case A.4.2.18/19 update for 5MHz Ch BW	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4606	-	Rel-14	F	RP-171278	R4-1702794	approved	CR on applicability of requirements for CA	14.3.0	agreed	R4	LTE_CA_R	RP-76				
36.133	4608	1	Rel-14	B	RP-171264	R4-1704115	approved	Introduction of non-uniform gap pattern	14.3.0	agreed	R4	LTE_meas_	RP-76				
36.133	4611	1	Rel-13	F	RP-171301	R4-1704136	approved	CR: NB-IoT Radio Link Monitoring Performance Test for Out-of-Sync in Normal Coverage	13.7.0	agreed	R4	NB-IOT_Pe	RP-76				
36.133	4612	-	Rel-14	A	RP-171301	R4-1702840	approved	CR: NB-IoT Radio Link Monitoring Performance Test for Out-of-Sync in Normal Coverage	14.3.0	agreed	R4	NB-IOT_Pe	RP-76				
36.133	4613	1	Rel-13	F	RP-171302	R4-1704137	approved	CR: NB-IoT Radio Link Monitoring Performance Test for Out-of-Sync in Enhanced Coverage	13.7.0	agreed	R4	NB-IOT_Pe	RP-76				
36.133	4618	-	Rel-13	F	RP-171307	R4-1702870	approved	LAA RRM: Correction to test case titles (Rel-13)	13.7.0	agreed	R4	LTE_LAA-P	RP-76				
36.133	4619	-	Rel-14	A	RP-171307	R4-1702871	approved	LAA RRM: Correction to test case titles (Rel-14)	14.3.0	agreed	R4	LTE_LAA-P	RP-76				
36.133	4620	-	Rel-13	F	RP-171309	R4-1702872	approved	eMTC RRM: Correction to prach test cases (Rel-13)	13.7.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4621	-	Rel-14	A	RP-171309	R4-1702873	approved	eMTC RRM: Correction to prach test cases (Rel-14)	14.3.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4622	-	Rel-13	F	RP-171309	R4-1702874	approved	eMTC RRM: Alignment of used OCNG patterns (Rel-13)	13.7.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4623	-	Rel-14	A	RP-171309	R4-1702875	approved	eMTC RRM: Alignment of used OCNG patterns (Rel-14)	14.3.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4624	-	Rel-13	F	RP-171301	R4-1702876	approved	NB-IoT RRM: Correction to used RMC and NOCNG (Rel-13)	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4625	-	Rel-14	A	RP-171301	R4-1702877	approved	NB-IoT RRM: Correction to NOCNG definition (Rel-14)	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4626	1	Rel-13	F	RP-171311	R4-1704246	approved	CA RRM: 5DL CA test case titles for inter-mode (FDD-TDD) scenarios (Rel-13)	13.7.0	agreed	R4	TEI13	RP-76				
36.133	4627	-	Rel-14	A	RP-171311	R4-1702879	approved	CA RRM: 5DL CA test case titles for inter-mode (FDD-TDD) scenarios (Rel-14)	14.3.0	agreed	R4	TEI13	RP-76				
36.133	4629	-	Rel-14	B	RP-171264	R4-1702897	approved	RSTD requirements for short MGL	14.3.0	agreed	R4	LTE_meas_	RP-76				
36.133	4633	1	Rel-14	F	RP-171283	R4-1704187	approved	Correction to RRC connected state requirements for CA	14.3.0	agreed	R4	LTE_high_s	RP-76				
36.133	4636	1	Rel-14	F	RP-171284	R4-1704196	approved	CR on CGI reading requirement with SRS switching	14.3.0	agreed	R4	LTE_SRS_s	RP-76				
36.133	4641	1	Rel-13	F	RP-171311	R4-1704241	approved	CR on requirement applicability for Cat-M1 and non-BL/CE UE R13	13.7.0	agreed	R4	TEI13	RP-76				
36.133	4645	1	Rel-13	F	RP-171308	R4-1704240	approved	CR on measurement condition in B.1.3 R13	13.7.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4650	1	Rel-14	A	RP-171308	R4-1704373	approved	CR on measurement condition in B.1.3 R14	14.3.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4655	1	Rel-14	B	RP-171279	R4-1704374	approved	Introduction of new bands for NB-IoT in 36.133	14.3.0	agreed	R4	NB_IOT_R1	RP-76				
36.133	4684	-	Rel-12	F	RP-171296	R4-1703112	approved	Band groups for category 0 operation	12.15.0	agreed	R4	LC_MTC_L	RP-76				
36.133	4685	1	Rel-13	A	RP-171296	R4-1704375	approved	Band groups for category 0 operation	13.7.0	agreed	R4	LC_MTC_L	RP-76				
36.133	4686	1	Rel-14	A	RP-171296	R4-1704376	approved	Band groups for category 0 operation	14.3.0	agreed	R4	LC_MTC_L	RP-76				
36.133	4687	-	Rel-13	B	RP-171308	R4-1703115	approved	Band groups for category M1 operation	13.7.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4688	-	Rel-14	A	RP-171308	R4-1703116	approved	Band groups for category 0 operation	14.3.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4691	1	Rel-13	F	RP-171298	R4-1704377	approved	Prose Operation during CA	13.7.0	agreed	R4	LTE_eD2D_	RP-76				
36.133	4692	1	Rel-14	A	RP-171298	R4-1704378	approved	Prose Operation during CA	14.3.0	agreed	R4	LTE_eD2D_	RP-76				
36.133	4695	3	Rel-14	F	RP-171267	R4-1706190	approved	PHR reporting for NB-IOT low-power class UEs	14.3.0	agreed	R4	NB_IOTenh	RP-76				
36.133	4697	-	Rel-13	F	RP-171309	R4-1703129	approved	Correction to Cat-M1 UE RRC re-establishment tests	13.7.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4698	-	Rel-14	A	RP-171309	R4-1703130	approved	Correction to Cat-M1 UE RRC re-establishment tests	14.3.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4699	1	Rel-13	F	RP-171308	R4-1704244	approved	Correction to CONNECTED mode Cat-M1 requirements	13.7.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4701	3	Rel-14	B	RP-171266	R4-1706291	approved	Timing requirements for Cat-M2	14.3.0	agreed	R4	LTE_feMTC	RP-76				
36.133	4703	1	Rel-14	B	RP-171264	R4-1704117	approved	CR on NCSG configuration	14.3.0	agreed	R4	LTE_meas_	RP-76				
36.133	4704	2	Rel-14	B	RP-171264	R4-1704276	approved	CR on per-CC based measurement gap configuration	14.3.0	agreed	R4	LTE_meas_	RP-76				
36.133	4706	3	Rel-14	F	RP-171269	R4-1706022	approved	CR for correction for RRM core requirement for Cat.1bis UE	14.3.0	agreed	R4	LTE_UE_ca	RP-76				
36.133	4707	1	Rel-14	B	RP-171269	R4-1704124	approved	CR for RRM measurement requirement for Cat.1bis UE	14.3.0	agreed	R4	LTE_UE_ca	RP-76				
36.133	4708	3	Rel-14	B	RP-171269	R4-1706023	approved	CR for RRM tests for Cat.1 UE with single receiver chain	14.3.0	agreed	R4	LTE_UE_ca	RP-76				
36.133	4713	1	Rel-13	F	RP-171309	R4-1704379	approved	Correction to event triggered reporting test cases in eMTC	13.7.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4714	-	Rel-14	A	RP-171309	R4-1703166	approved	Correction to event triggered reporting test cases in eMTC	14.3.0	agreed	R4	LTE_MTCe	RP-76				
36.133	4715	1	Rel-13	F	RP-171299	R4-1704142	approved	Correction to inter-frequency requirements in NB-IOT	13.7.0	agreed	R4	NB_IOT-Co	RP-76				
36.133	4716	-	Rel-14	A	RP-171299	R4-1703168	approved	Correction to inter-frequency requirements in NB-IOT	14.3.0	agreed	R4	NB_IOT-Co	RP-76				
36.133	4719	1	Rel-14	F	RP-171288	R4-1704275	approved	Clarification on requirements for RSTD based on CRS and PRS	14.3.0	agreed	R4	UTRA_LTE_	RP-76				
36.133	4721	1	Rel-14	F	RP-171284	R4-1704197	approved	SRS switching and SI reading	14.3.0	agreed	R4	LTE_SRS_s	RP-76				
36.133	4723	1	Rel-13	F	RP-171307	R4-1704265	approved	Requirements applicability for LAA	13.7.0	agreed	R4	LTE_LAA-C	RP-76				
36.133	4728	1	Rel-14	B	RP-171267	R4-1704127	approved	Requirements on NPRACH Transmission in Enhanced NB-IoT	14.3.0	agreed	R4	NB_IOTenh	RP-76	wrong CR cat. on CR cover			
36.133	4759	-	Rel-13	F	RP-171299	R4-1703614	approved	Maintenance of core requirements for UE Cat.NB1 R13	13.7.0	agreed	R4	NB_IOT-Co	RP-76				
36.133	4760	-	Rel-14	A	RP-171299	R4-1703615	approved	Maintenance of core requirements for UE Cat.NB1 R14	14.3.0	agreed	R4	NB_IOT-Co	RP-76				
36.133	4761	3	Rel-14	B	RP-171267	R4-1706264	approved	Applicability of requirements for UE Cat.NB2	14.3.0	agreed	R4	NB_IOTenh	RP-76				
36.133	4762	-	Rel-14	B	RP-171267	R4-1703617	approved	RRM tests for UE Cat.NB2	14.3.0	agreed	R4	NB_IOTenh	RP-76				
36.133	4763	-	Rel-13	F	RP-171301	R4-1703618	approved	CR on test parameters for UE transmit timing for UE Cat.NB1 R13	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4764	-	Rel-14	A	RP-171301	R4-1703619	approved	CR on test parameters for UE transmit timing for UE Cat.NB1 R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4765	3	Rel-13	F	RP-171267	R4-1706040	approved	CR for PHR requirement for NB-IoT R13	13.7.0	agreed	R4	NB_IOTenh	RP-76				
36.133	4766	-	Rel-14	A	RP-171301	R4-1703622	approved	CR for PHR requirement for NB-IoT R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4767	-	Rel-13	F	RP-171301	R4-1703623	approved	CR on T311 timer in RRC re-establishment test case R13	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4769	-	Rel-13	F	RP-171301	R4-1703625	approved	CR on conditions for NRSRP and NRSRQ accuracy R13	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4770	-	Rel-14	A	RP-171301	R4-1703626	approved	CR on conditions for NRSRP and NRSRQ accuracy R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4771	1	Rel-13	F	RP-171301	R4-1704263	approved	CR on to range for NB-IoT measurement accuracy R13	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4772	-	Rel-14	A	RP-171301	R4-1703628	approved	CR on to range for NB-IoT measurement accuracy R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4775	2	Rel-13	F	RP-171301	R4-1704262	approved	CR for cell reselection test parameter for NB-IoT R13	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4776	-	Rel-14	A	RP-171301	R4-1703632	approved	CR for cell reselection test parameter for NB-IoT R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4777	1	Rel-13	F	RP-171302	R4-1704138	approved	Correction on T2 time duration for RLM in-sync test R13	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4778	1	Rel-14	F	RP-171302	R4-1704143	approved	Correction on T2 time duration for RLM in-sync test R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4797	3	Rel-14	B	RP-171266	R4-1705976	approved	CR on UE Rx-Tx measurement requirement for FeMTC	14.3.0	agreed	R4	LTE_feMTC	RP-76				
36.133	4798	1	Rel-14	B	RP-171266	R4-1704174	approved	CR on UE Rx-Tx accuracy requirement for FeMTC	14.3.0	agreed	R4	LTE_feMTC	RP-76				
36.133	4808	-	Rel-14	B	RP-171262	R4-1703691	approved	Test case for CA interruption at SRS carrier based switching	14.3.0	agreed	R4	LTE_SRS_s	RP-76				

36.133	4809	1	Rel-14	B	RP-171262	R4-1704247	approved	Test case for DC interruption at SRS carrier based switching	14.3.0	agreed	R4	LTE_SRS_4	RP-76
36.133	4812	1	Rel-14	B	RP-171257	R4-1704189	approved	CR on measurement accuracy requirements under high speed scenarios	14.3.0	agreed	R4	LTE_high_s	RP-76
36.133	4813	5	Rel-14	B	RP-171257	R4-1706038	approved	Test case for cell reselection on idle mode under high speed scenario	14.3.0	agreed	R4	LTE_high_s	RP-76
36.133	4814	3	Rel-14	B	RP-171257	R4-1706039	approved	Test case for measurement reporting on connected mode under high speed scenario	14.3.0	agreed	R4	LTE_high_s	RP-76
36.133	4815	1	Rel-14	F	RP-171283	R4-1704188	approved	Remove bracket in measurement core requirements in high speed	14.3.0	agreed	R4	LTE_high_s	RP-76
36.133	4816	-	Rel-14	F	RP-171296	R4-1703701	approved	Correction on io for SCE test case A.8.22.8	14.3.0	agreed	R4	LTE_SC_er	RP-76
36.133	4818	-	Rel-13	F	RP-171309	R4-1703710	approved	CR on RA test for Cat-M1 normal coverage R13	13.7.0	agreed	R4	LTE_MTCe	RP-76
36.133	4819	-	Rel-14	A	RP-171309	R4-1703711	approved	CR on RA test for Cat-M1 normal coverage R14	14.3.0	agreed	R4	LTE_MTCe	RP-76
36.133	4821	3	Rel-14	F	RP-171266	R4-1705983	approved	Refinement of idle mode requirements for feMTC in R14	14.3.0	agreed	R4	LTE_feMTC	RP-76
36.133	4823	1	Rel-14	B	RP-171267	R4-1704289	approved	CR on NRSRP mapping table	14.3.0	agreed	R4	NB_IOTenh	RP-76
36.133	4824	-	Rel-14	B	RP-171267	R4-1703894	approved	CR on NRSRQ mapping table	14.3.0	agreed	R4	NB_IOTenh	RP-76
36.133	4829	-	Rel-14	F	RP-171256	R4-1703669	approved	CR on V2V RRM performance requirements corrections	14.3.0	agreed	R4	LTE_SL_V2	RP-76
36.133	4830	1	Rel-14	F	RP-171282	R4-1704157	approved	CR on V2X RRM core requirements corrections	14.3.0	agreed	R4	LTE_V2X-C	RP-76
36.133	4831	2	Rel-13	F	RP-171308	R4-1705996	approved	CR on idle mode requirements for eMTC in R13	13.7.0	agreed	R4	LTE_MTCe	RP-76
36.133	4833	-	Rel-13	F	RP-171307	R4-1704514	approved	LAA RRM: Correction to test case A.9.11.x and A.9.12.x (Rel-13)	13.7.0	agreed	R4	LTE_LAA-P	RP-76
36.133	4834	-	Rel-14	A	RP-171307	R4-1704515	approved	LAA RRM: Correction to test case A.9.11.x and A.9.12.x (Rel-14)	14.3.0	agreed	R4	LTE_LAA-P	RP-76
36.133	4835	-	Rel-13	F	RP-171309	R4-1704516	approved	eMTC RRM: Correction to MPDCCH and PDSCH Reference Measurement Channels (Rel-13)	13.7.0	agreed	R4	LTE_MTCe	RP-76
36.133	4836	-	Rel-14	A	RP-171309	R4-1704517	approved	eMTC RRM: Correction to MPDCCH and PDSCH Reference Measurement Channels (Rel-14)	14.3.0	agreed	R4	LTE_MTCe	RP-76
36.133	4837	-	Rel-14	F	RP-171281	R4-1704522	approved	CR on site condition for reliability of GNSS	14.3.0	agreed	R4	LTE_SL_V2	RP-76
36.133	4838	-	Rel-13	F	RP-171298	R4-1704581	approved	Correction to RRM 4DL FDD CA test cases	13.7.0	agreed	R4	LTE_CA_B	RP-76
36.133	4839	1	Rel-14	A	RP-171298	R4-1706283	approved	Correction to RRM 4DL FDD CA test cases	14.3.0	agreed	R4	LTE_CA_B	RP-76
36.133	4840	-	Rel-13	F	RP-171307	R4-1704589	approved	Corrections to LAA Event-triggered reporting Test Cases A.8.26	13.7.0	agreed	R4	LTE_LAA-P	RP-76
36.133	4841	-	Rel-14	A	RP-171307	R4-1704590	approved	Corrections to LAA Event-triggered reporting Test Cases A.8.26	14.3.0	agreed	R4	LTE_LAA-P	RP-76
36.133	4842	-	Rel-13	F	RP-171299	R4-1704673	approved	Rel-13 CR on the applicability of RRC procedures	13.7.0	agreed	R4	NB_IOT-Co	RP-76
36.133	4843	-	Rel-14	A	RP-171299	R4-1704674	approved	Rel-14 CR on the applicability of RRC procedures	14.3.0	agreed	R4	NB_IOT-Co	RP-76
36.133	4844	1	Rel-14	B	RP-171259	R4-1706001	approved	E-UTRAN FDD - FDD Intra frequency RACH-less handover	14.3.0	agreed	R4	LTE_eMob-	RP-76
36.133	4845	1	Rel-14	B	RP-171259	R4-1706002	approved	E-UTRAN FDD - FDD Inter frequency RACH-less handover	14.3.0	agreed	R4	LTE_eMob-	RP-76
36.133	4846	1	Rel-14	B	RP-171259	R4-1706003	approved	E-UTRAN TDD - TDD Intra frequency RACH-less handover	14.3.0	agreed	R4	LTE_eMob-	RP-76
36.133	4847	1	Rel-14	B	RP-171259	R4-1706004	approved	E-UTRAN TDD - TDD Inter frequency RACH-less handover	14.3.0	agreed	R4	LTE_eMob-	RP-76
36.133	4853	1	Rel-14	B	RP-171264	R4-1705953	approved	E-UTRAN FDD-FDD Inter-frequency event triggered reporting with MGL=3ms under fading propagation	14.3.0	agreed	R4	LTE_meas_	RP-76
36.133	4854	1	Rel-14	B	RP-171264	R4-1705954	approved	E-UTRAN TDD-TDD Inter-frequency event triggered reporting with MGL=3ms under fading propagation	14.3.0	agreed	R4	LTE_meas_	RP-76
36.133	4859	-	Rel-13	F	RP-171298	R4-1704721	approved	CA RRM: 4DL CA test parameter correction for A.8.16.51 and A.8.16.52 (Rel-13)	13.7.0	agreed	R4	LTE_CA_B	RP-76
36.133	4860	-	Rel-14	A	RP-171298	R4-1704722	approved	CA RRM: 4DL CA test parameter correction for A.8.16.51 and A.8.16.52 (Rel-14)	14.3.0	agreed	R4	LTE_CA_B	RP-76
36.133	4861	-	Rel-12	F	RP-171296	R4-1704740	approved	PCC and SCC assignment in 20MHz+10MHz test case A.8.16.22	12.15.0	agreed	R4	LTE_CA_B	RP-76
36.133	4862	-	Rel-13	A	RP-171296	R4-1704741	approved	PCC and SCC assignment in 20MHz+10MHz test case A.8.16.22	13.7.0	agreed	R4	LTE_CA_B	RP-76
36.133	4863	-	Rel-14	A	RP-171296	R4-1704743	approved	PCC and SCC assignment in 20MHz+10MHz test case A.8.16.22	14.3.0	agreed	R4	LTE_CA_B	RP-76
36.133	4864	1	Rel-14	B	RP-171264	R4-1706211	approved	Introduction of additional gap patterns and measurement capabilities for measurement gap enhancement	14.3.0	agreed	R4	LTE_meas_	RP-76
36.133	4867	1	Rel-14	B	RP-171265	R4-1705948	approved	CR on reference configurations for V2X RRM	14.3.0	agreed	R4	LTE_V2X-P	RP-76
36.133	4868	1	Rel-14	B	RP-171281	R4-1705944	approved	Correction on reliability of GNSS singal for V2V	14.3.0	agreed	R4	LTE_SL_V2	RP-76
36.133	4869	1	Rel-14	B	RP-171282	R4-1705945	approved	CR on reliability of GNSS singal for V2X	14.3.0	agreed	R4	LTE_V2X-C	RP-76
36.133	4873	-	Rel-14	A	RP-171301	R4-1704972	approved	CR on T311 timer in RRC re-establishment test case R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76
36.133	4874	-	Rel-13	F	RP-171300	R4-1704973	approved	Introduce NPDCCH RMC with DCI format N0 R13	13.7.0	agreed	R4	NB_IOT-Pe	RP-76
36.133	4875	-	Rel-14	A	RP-171300	R4-1704974	approved	Introduce NPDCCH RMC with DCI format N0 R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76
36.133	4876	2	Rel-13	F	RP-171302	R4-1706274	approved	Correction on UE transmit timing test for NB-IoT R13	13.7.0	agreed	R4	NB_IOT-Pe	RP-76
36.133	4877	-	Rel-14	A	RP-171302	R4-1704976	approved	Correction on UE transmit timing test for NB-IoT R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76
36.133	4878	1	Rel-13	F	RP-171303	R4-1705962	approved	Correction on timing advance test for NB-IoT R13	13.7.0	agreed	R4	NB_IOT-Pe	RP-76
36.133	4879	-	Rel-14	A	RP-171303	R4-1704978	approved	Correction on timing advance test for NB-IoT R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76
36.133	4880	-	Rel-13	F	RP-171299	R4-1704979	approved	Maintenance CR on NB-IoT core requirements R13	13.7.0	agreed	R4	NB_IOT-Co	RP-76
36.133	4881	-	Rel-14	A	RP-171299	R4-1704980	approved	Maintenance CR on NB-IoT core requirements R14	14.3.0	agreed	R4	NB_IOT-Co	RP-76
36.133	4882	-	Rel-13	F	RP-171302	R4-1704981	approved	Correction on side condition for RRC re-establishment test cases R13	13.7.0	agreed	R4	NB_IOT-Pe	RP-76
36.133	4883	-	Rel-14	A	RP-171302	R4-1704982	approved	Correction on side condition for RRC re-establishment test cases R14	14.3.0	agreed	R4	NB_IOT-Pe	RP-76
36.133	4885	-	Rel-14	B	RP-171259	R4-1704986	approved	E-UTRAN FDD - UE Transmit Timing Accuracy Test for RACH-less Handover	14.3.0	agreed	R4	LTE_eMob-	RP-76
36.133	4886	-	Rel-14	B	RP-171259	R4-1704987	approved	E-UTRAN TDD - UE Transmit Timing Accuracy Test for RACH-less Handover	14.3.0	agreed	R4	LTE_eMob-	RP-76
36.133	4887	1	Rel-13	F	RP-171310	R4-1705997	approved	Correction on transmit timing requirement R13	13.7.0	agreed	R4	LTE_MTCe	RP-76
36.133	4888	-	Rel-14	A	RP-171310	R4-1704993	approved	Correction on transmit timing requirement R14	14.3.0	agreed	R4	LTE_MTCe	RP-76
36.133	4889	1	Rel-14	B	RP-171267	R4-1705957	approved	CR on intra frequency RSTD measurement requirement for eNB-IOT	14.3.0	agreed	R4	NB_IOTenh	RP-76
36.133	4890	1	Rel-14	B	RP-171267	R4-1705958	approved	CR on inter frequency RSTD measurement requirement for eNB-IOT	14.3.0	agreed	R4	NB_IOTenh	RP-76
36.133	4891	1	Rel-14	B	RP-171267	R4-1706265	approved	CR on intra frequency RSTD accuracy requirement for eNB-IOT	14.3.0	agreed	R4	NB_IOTenh	RP-76
36.133	4892	1	Rel-14	B	RP-171267	R4-1706276	approved	CR on inter frequency RSTD accuracy requirement for eNB-IOT	14.3.0	agreed	R4	NB_IOTenh	RP-76
36.133	4893	1	Rel-14	B	RP-171266	R4-1705978	approved	CR on intra frequency RSTD measurement requirement for FeMTC	14.3.0	agreed	R4	LTE_feMTC	RP-76
36.133	4894	1	Rel-14	B	RP-171266	R4-1706277	approved	CR on inter frequency RSTD measurement requirement for FeMTC	14.3.0	agreed	R4	LTE_feMTC	RP-76
36.133	4906	1	Rel-14	B	RP-171266	R4-1706267	approved	CR on applicability rule for FeMTC in R14	14.3.0	agreed	R4	LTE_feMTC	RP-76
36.133	4909	1	Rel-14	A	RP-171266	R4-1705985	approved	CR on UE timer accuracy for FeMTC in R14	14.3.0	agreed	R4	LTE_feMTC	RP-76
36.133	4910	2	Rel-13	F	RP-171311	R4-1706299	approved	4DL FDD RSRQ for E-UTRAN in Carrier Aggregation in R13	13.7.0	agreed	R4	TEI13	RP-76
36.133	4911	1	Rel-14	A	RP-171311	R4-1706296	approved	4DL FDD RSRQ for E-UTRAN in Carrier Aggregation in R14	14.3.0	agreed	R4	TEI13	RP-76
36.133	4912	2	Rel-13	F	RP-171311	R4-1706300	approved	4DL TDD RSRQ for E-UTRAN in Carrier Aggregation in R13	13.7.0	agreed	R4	TEI13	RP-76
36.133	4913	4	Rel-14	A	RP-171311	R4-1706297	approved	4DL TDD RSRQ for E-UTRAN in Carrier Aggregation in R14	14.3.0	agreed	R4	TEI13	RP-76
36.133	4914	2	Rel-13	F	RP-171311	R4-1706301	approved	Correction on the test cases of RLM for Cat-M1 UE in R13	13.7.0	agreed	R4	TEI13	RP-76
36.133	4915	1	Rel-14	A	RP-171311	R4-1706298	approved	Correction on the test cases of RLM for Cat-M1 UE in R14	14.3.0	agreed	R4	TEI13	RP-76
36.133	4917	1	Rel-14	F	RP-171282	R4-1705946	approved	CR on Modification of Selection/Reselection of V2X Synchronization Reference	14.3.0	agreed	R4	LTE_V2X-C	RP-76
36.133	4918	-	Rel-14	B	RP-171265	R4-1705940	approved	CR on UE Transmission Timing Accuracy Tests for V2X	14.3.0	agreed	R4	LTE_V2X-P	RP-76
36.133	4925	-	Rel-13	F	RP-171307	R4-1706059	approved	Modification on LAA measurement considering Inter-frequency RSSI measurement R13	13.7.0	agreed	R4	LTE_LAA-C	RP-76
36.133	4926	-	Rel-14	F	RP-171285	R4-1705060	approved	Modification on LAA measurement considering Inter-frequency RSSI measurement R14	14.3.0	agreed	R4	LTE_4LAA-	RP-76
36.133	4927	1	Rel-13	F	RP-171307	R4-1705973	approved	Corrections on the LAA test cases R13	13.7.0	agreed	R4	LTE_LAA-P	RP-76

36.133	4928	-	Rel-14	A	RP-171307	R4-1705062	approved	Corrections on the LAA test cases R14	14.3.0	agreed	R4	LTE_LAA-P	RP-76				
36.133	4929	-	Rel-12	F	RP-171297	R4-1705063	approved	Update of some SCE test case	12.15.0	agreed	R4	TEI12	RP-76				
36.133	4930	-	Rel-13	A	RP-171297	R4-1705064	approved	Update of some SCE test case	13.7.0	agreed	R4	TEI12	RP-76				
36.133	4931	-	Rel-14	A	RP-171297	R4-1705065	approved	Update of some SCE test case	14.3.0	agreed	R4	TEI12	RP-76				
36.133	4932	-	Rel-13	F	RP-171311	R4-1705066	approved	Event triggered reporting on deactivated SCells and interruption probability (0.5%) without DRX (FDD-I	13.7.0	agreed	R4	TEI13	RP-76				
36.133	4933	-	Rel-14	A	RP-171311	R4-1705067	approved	Event triggered reporting on deactivated SCells and interruption probability (0.5%) without DRX (FDD-I	14.3.0	agreed	R4	TEI13	RP-76				
36.133	4934	-	Rel-13	F	RP-171311	R4-1705068	approved	Event triggered reporting on deactivated SCells and interruption probability (0.5%) without DRX (TDD-F	13.7.0	agreed	R4	TEI13	RP-76				
36.133	4935	-	Rel-14	A	RP-171311	R4-1705069	approved	Event triggered reporting on deactivated SCells and interruption probability (0.5%) without DRX (TDD-I	14.3.0	agreed	R4	TEI13	RP-76				
36.133	4936	2	Rel-13	B	RP-171303	R4-1706286	approved	Inter-frequency cell reselection under enhanced coverage for NB-IOT	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4937	-	Rel-14	A	RP-171303	R4-1705073	approved	Inter-frequency cell reselection under enhanced coverage for NB-IOT	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4938	3	Rel-14	B	RP-171266	R4-1706294	approved	CONNECTED mode requirements for feMTC UEs in CEModeA	14.3.0	agreed	R4	LTE_feMTC	RP-76				
36.133	4939	3	Rel-14	B	RP-171266	R4-1706295	approved	CONNECTED mode requirements for feMTC UEs in CEModeB	14.3.0	agreed	R4	LTE_feMTC	RP-76				
36.133	4940	1	Rel-13	F	RP-171308	R4-1706197	approved	Timing advance requirements for Cat.M1 UEs	13.7.0	agreed	R4	LTE_MTCa	RP-76				
36.133	4941	1	Rel-14	A	RP-171308	R4-1706284	approved	Timing advance requirements for Cat.M1 UEs	14.3.0	agreed	R4	LTE_MTCa	RP-76				
36.133	4942	1	Rel-14	B	RP-171266	R4-1706189	approved	Introduction of enhanced RLM requirements for feMTC	14.3.0	agreed	R4	LTE_feMTC	RP-76				
36.133	4952	1	Rel-13	F	RP-171303	R4-1705964	approved	Contention Based Random Access Test for UE category NB1 UEs in Normal Coverage	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4953	-	Rel-14	A	RP-171303	R4-1705117	approved	Contention Based Random Access Test for UE category NB1 UEs in Normal Coverage	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4954	1	Rel-13	F	RP-171303	R4-1705965	approved	Contention Based Random Access Test for UE category NB1 UEs in Enhanced Coverage	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4955	-	Rel-14	A	RP-171303	R4-1705119	approved	Contention Based Random Access Test for UE category NB1 UEs in Enhanced Coverage	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4956	-	Rel-14	A	RP-171302	R4-1705122	approved	CR: NB-IoT Radio Link Monitoring Performance Test for Out-of-Sync in Enhanced Coverage	14.3.0	agreed	R4	NB-IOT_Pe	RP-76				
36.133	4957	1	Rel-12	F	RP-171297	R4-1706207	approved	Correction to RSTD test cases for carrier aggregation (R12)	12.15.0	agreed	R4	TEI12	RP-76				
36.133	4958	1	Rel-13	A	RP-171297	R4-1706208	approved	Correction to RSTD test cases for carrier aggregation (R13)	13.7.0	agreed	R4	TEI12	RP-76				
36.133	4959	1	Rel-14	A	RP-171297	R4-1706209	approved	Correction to RSTD test cases for carrier aggregation (R14)	14.3.0	agreed	R4	TEI12	RP-76				
36.133	4960	1	Rel-14	B	RP-171269	R4-1706024	approved	CR for RSTD measurement requirement for Cat.1bis UE	14.3.0	agreed	R4	LTE_UE_ca	RP-76				
36.133	4962	1	Rel-13	F	RP-171302	R4-1705961	approved	Correction to inter-frequency RRC re-establishment test case in NB-IOT	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4963	-	Rel-14	A	RP-171302	R4-1705146	approved	Correction to inter-frequency RRC re-establishment test case in NB-IOT	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.133	4968	-	Rel-14	B	RP-171259	R4-1705168	approved	CR for E-UTRAN TDD intra-frequency MBB handover test cases	14.3.0	agreed	R4	LTE_eMob-	RP-76				
36.133	4969	-	Rel-14	B	RP-171259	R4-1705169	approved	CR for E-UTRAN FDD intra-frequency MBB handover test cases	14.3.0	agreed	R4	LTE_eMob-	RP-76				
36.133	4970	-	Rel-14	F	RP-171259	R4-1705170	approved	CR for correction of handover test cases	14.3.0	agreed	R4	LTE_eMob-	RP-76				
36.133	4971	-	Rel-14	F	RP-171286	R4-1705171	approved	CR for correction of handover requirements for mobility enhancement	14.3.0	agreed	R4	LTE_eMob-	RP-76				
36.133	4972	1	Rel-14	B	RP-171266	R4-1705982	approved	Enhanced Handover Requirement for FeMTC	14.3.0	agreed	R4	LTE_feMTC	RP-76				
36.133	4974	-	Rel-14	F	RP-171266	R4-1705457	approved	CR on 36.133: Intra and inter-frequency RSRP and RSRQ measurement accuracies for UE cat M1	14.3.0	agreed	R4	LTE_feMTC	RP-76				
36.133	4982	1	Rel-14	F	RP-171285	R4-1706214	approved	Requirements applicability for eLAA	14.3.0	agreed	R4	LTE_eLAA-	RP-76				
36.133	4983	-	Rel-13	F	RP-171307	R4-1705998	approved	Corrections in LAA requirements	13.7.0	agreed	R4	LTE_LAA-C	RP-76				
36.133	4984	-	Rel-14	A	RP-171307	R4-1705999	approved	Corrections in LAA requirements	14.3.0	agreed	R4	LTE_LAA-C	RP-76				
36.133	4985	4	Rel-14	B	RP-171261	R4-1706293	approved	RRM requirements with eMBMS enhancements	14.3.0	agreed	R4	MBMS_LTE	RP-76				
36.133	4986	1	Rel-14	F	RP-171266	R4-1705979	approved	Measurement requirements under discontonuous MPDCCH monitoring	14.3.0	agreed	R4	LTE_feMTC	RP-76				
36.133	4989	1	Rel-13	F	RP-171308	R4-1705994	approved	Introducing gapless measurement requirement for eMTC R13	13.7.0	agreed	R4	LTE_MTCa	RP-76				
36.133	4990	1	Rel-14	F	RP-171266	R4-1706273	approved	Introducing gapless measurement requirement for eMTC R14	14.3.0	agreed	R4	LTE_feMTC	RP-76				
36.133	4997	1	Rel-14	B	RP-171264	R4-1706171	approved	Introduction of test cases for burst gap	14.3.0	agreed	R4	LTE_meas_	RP-76				
36.133	4998	1	Rel-14	B	RP-171264	R4-1706170	approved	Introduction of test cases for NCSG	14.3.0	agreed	R4	LTE_meas_	RP-76				
36.133	4999	-	Rel-13	F	RP-171266	R4-1705986	approved	CR on UE timer accuracy for FeMTC in R13	13.7.0	agreed	R4	LTE_feMTC	RP-76				
36.141	0990	1	Rel-14	B	RP-171255	R4-1704064	approved	CR on eLAA BS for TS 36.141	14.3.0	agreed	R4	LTE_eLAA-	RP-76	wrong CR number on CR cover			
36.141	0991	1	Rel-14	F	RP-171282	R4-1704057	approved	CR on BS for protection of V2X UE in TS 36.141	14.3.0	agreed	R4	LTE_V2X-P	RP-76	wrong CR number on CR cover			
36.141	0975	1	Rel-14	B	RP-171279	R4-1704045	approved	Introduction of new bands for NB-IoT in 36.141	14.3.0	agreed	R4	NB_IOT_R1	RP-76				
36.141	1004	-	Rel-13	F	RP-171309	R4-1703712	approved	CR on 1-PRB FRC in eMTC PUSCH conformance R13	13.7.0	agreed	R4	LTE_MTCa	RP-76				
36.141	1005	-	Rel-14	A	RP-171309	R4-1703713	approved	CR on 1-PRB FRC in eMTC PUSCH conformance R14	14.3.0	agreed	R4	LTE_MTCa	RP-76				
36.141	1007	-	Rel-13	F	RP-171302	R4-1703761	approved	Updates to NPUSCH format 1 conformance test(R13)	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.141	1008	-	Rel-14	A	RP-171302	R4-1703762	approved	Updates to NPUSCH format 1 conformance test(R14)	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.141	1009	1	Rel-13	F	RP-171310	R4-1704229	approved	clean up eMTC PUCCH conformance test (Rel-13)	13.7.0	agreed	R4	LTE_MTCa	RP-76				
36.141	1010	-	Rel-14	A	RP-171310	R4-1703792	approved	clean up eMTC PUCCH conformance test (Rel-14)	14.3.0	agreed	R4	LTE_MTCa	RP-76				
36.141	1011	3	Rel-14	B	RP-171257	R4-1705968	approved	CR for new PRACH conformance test	14.3.0	agreed	R4	LTE_high_s	RP-76				
36.141	1019	-	Rel-10	F	RP-171294	R4-1703861	approved	Correction of maximum test system uncertainty for out of band blocking	10.12.0	agreed	R4	TEI10	RP-76				
36.141	1020	1	Rel-11	A	RP-171294	R4-1704386	approved	Correction of maximum test system uncertainty for out of band blocking	11.15.0	agreed	R4	TEI10	RP-76				
36.141	1021	1	Rel-12	A	RP-171294	R4-1704387	approved	Correction of maximum test system uncertainty for out of band blocking	12.12.0	agreed	R4	TEI10	RP-76				
36.141	1022	1	Rel-13	A	RP-171294	R4-1704389	approved	Correction of maximum test system uncertainty for out of band blocking	13.7.0	agreed	R4	TEI10	RP-76				
36.141	1023	1	Rel-14	A	RP-171294	R4-1704390	approved	Correction of maximum test system uncertainty for out of band blocking	14.3.0	agreed	R4	TEI10	RP-76				
36.141	1024	1	Rel-14	B	RP-171276	R4-1706084	approved	Introduction of 5DL CA combinations to 36.141	14.3.0	agreed	R4	LTE_CA_R	RP-76				
36.141	1025	1	Rel-13	F	RP-171310	R4-1706037	approved	Clarification of PRB allocation for PUSCH test for eMTC (Rel-13)	13.7.0	agreed	R4	LTE_MTCa	RP-76				
36.141	1026	-	Rel-14	A	RP-171310	R4-1704817	approved	Clarification of PRB allocation for PUSCH test for eMTC (Rel-14)	14.3.0	agreed	R4	LTE_MTCa	RP-76				
36.141	1029	1	Rel-13	F	RP-171302	R4-1705917	approved	NB-IoT Cell-ID value in Test Model N-TM and some editorials	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.141	1030	-	Rel-14	A	RP-171302	R4-1704835	approved	NB-IoT Cell-ID value in Test Model N-TM and some editorials	14.3.0	agreed	R4	NB_IOT-Pe	RP-76	wrong Tdoc number on CR cover			
36.141	1031	1	Rel-13	F	RP-171302	R4-1705966	approved	Wrong tolerance for NPUSCH format 1	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.141	1032	-	Rel-14	A	RP-171302	R4-1704837	approved	Wrong tolerance for NPUSCH format 1	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.141	1033	1	Rel-14	B	RP-171272	R4-1706101	approved	Introduction of additional band combinations for Intra-band CA	14.3.0	agreed	R4	LTE_CA_R	RP-76				
36.141	1034	3	Rel-14	B	RP-171275	R4-1706290	approved	Introduction of Rel-14 4DL/1UL combinations in 36.141	14.3.0	agreed	R4	LTE_CA_R	RP-76				
36.141	1035	1	Rel-14	B	RP-171273	R4-1706106	approved	Introduction of completed R14 2DL band combinations to TS 36.141	14.3.0	agreed	R4	LTE_CA_R	RP-76				
36.141	1036	-	Rel-14	B	RP-171274	R4-1705216	approved	Introduction of completed R14 3DL band combinations to TS 36.141	14.3.0	agreed	R4	LTE_CA_R	RP-76				
36.141	1038	1	Rel-14	B	RP-171260	R4-1706187	approved	Introduction of BS performance requirements for 256QAM in 36.141	14.3.0	agreed	R4	LTE_UL_C/	RP-76				
36.141	1040	-	Rel-14	F	RP-171303	R4-1705403	approved	Channel Raster For Multiple Standalone NB-IoT Carriers (TS 36.141)	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.141	1041	-	Rel-13	F	RP-171300	R4-1705408	approved	Narrowband blocking requirement for NB-IoT guard band operation (TS 36.141)	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.141	1042	-	Rel-14	A	RP-171300	R4-1705409	approved	Narrowband blocking requirement for NB-IoT guard band operation (TS 36.141)	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				
36.141	1043	1	Rel-13	F	RP-171303	R4-1706109	approved	Intermodulation performance requirement for NB-IoT operation (TS 36.141)	13.7.0	agreed	R4	NB_IOT-Pe	RP-76				
36.141	1044	-	Rel-14	A	RP-171303	R4-1705417	approved	Intermodulation performance requirement for NB-IoT operation (TS 36.141)	14.3.0	agreed	R4	NB_IOT-Pe	RP-76				

36.141	1045	1	Rel-13	F	RP-171303	R4-1705940	approved	Clarification on small BW support for in-band and guard band operation (36.141)	13.7.0	agreed	R4	NB_IOT-Pe	RP-76
36.141	1046	-	Rel-14	A	RP-171303	R4-1705421	approved	Clarification on small BW support for in-band and guard band operation (TS 36.141)	14.3.0	agreed	R4	NB_IOT-Pe	RP-76
36.141	1050	-	Rel-13	F	RP-171300	R4-1705566	approved	Note on BS in-channel selectivity for NB-IoT	13.7.0	agreed	R4	NB_IOT-Pe	RP-76
36.141	1051	-	Rel-14	A	RP-171300	R4-1705567	approved	Note on BS in-channel selectivity for NB-IoT	14.3.0	agreed	R4	NB_IOT-Pe	RP-76
36.211	0356	-	Rel-14	F	RP-171205	R1-1705149	approved	Correction on baseband generation for paging/random access non-anchor carriers	14.3.0	agreed	R1	NB_IOTenh	RP-76
36.211	0357	-	Rel-14	F	RP-171204	R1-1706003	approved	Correction of reference to PRS occasion group for OTDOA enhancements	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.211	0358	-	Rel-14	F	RP-171204	R1-1706292	approved	Center frequency for PUSCH allocation in larger bandwidth mode in FeMTC	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.211	0359	-	Rel-14	F	RP-171205	R1-1706304	approved	Clarification of NRS presence	14.2.0	agreed	R1	NB_IOTenh	RP-76
36.211	0360	-	Rel-14	F	RP-171194	R1-1706589	approved	CR 36.211 for clarification and correction on IFDMA UL-DMRS for eF-D-MIMO	14.2.0	agreed	R1	LTE_eFDM	RP-76
36.211	0361	-	Rel-13	F	RP-171196	R1-1706738	approved	CR on correction of PRACH transmission across SFN boundary	13.5.0	agreed	R1	LTE_MTCeI	RP-76
36.211	0362	-	Rel-13	F	RP-171198	R1-1706739	approved	Clarification on PDSCH collision with PSS/SSS in TDD	13.5.0	agreed	R1	TEI13	RP-76
36.211	0363	-	Rel-14	A	RP-171198	R1-1706740	approved	Clarification on PDSCH collision with PSS/SSS in TDD	14.2.0	agreed	R1	TEI13	RP-76
36.211	0364	-	Rel-14	F	RP-171194	R1-1706751	approved	CR 36.211 for Clarification on CDM-8 pattern for 24-ports CSI-RS in DwPTS	14.2.0	agreed	R1	LTE_eFDM	RP-76
36.211	0365	-	Rel-14	F	RP-171192	R1-1706772	approved	Correction on PUSCH symbol locations in UpPTS for UL capacity enhancement in TS 36.211	14.2.0	agreed	R1	LTE_UL_CA	RP-76
36.211	0366	-	Rel-14	A	RP-171196	R1-1706783	approved	CR on correction of PRACH transmission across SFN boundary	14.2.0	agreed	R1	LTE_MTCeI	RP-76
36.211	0367	-	Rel-14	F	RP-171204	R1-1708206	approved	Correction on resource mapping in case of retuning in 36.211	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.211	0368	1	Rel-13	F	RP-171197	R1-1709233	approved	Correction on NB-IoT DMRS definition in 36.211	13.5.0	agreed	R1	NB_IOT-Co	RP-76
36.211	0369	1	Rel-14	A	RP-171197	R1-1709234	approved	Correction on NB-IoT DMRS definition in 36.211	14.2.0	agreed	R1	NB_IOT-Co	RP-76
36.211	0370	1	Rel-13	F	RP-171197	R1-1708269	approved	Correction on NB-IoT SC-FDMA baseband signal generation	13.5.0	agreed	R1	NB_IOT-Co	RP-76
36.211	0371	1	Rel-14	A	RP-171197	R1-1709270	approved	Correction on NB-IoT SC-FDMA baseband signal generation	14.2.0	agreed	R1	NB_IOT-Co	RP-76
36.211	0372	-	Rel-13	F	RP-171197	R1-1709241	approved	Clarification on the definition of the nprach-NumCBRA-StartSubcarriers	13.5.0	agreed	R1	NB_IOT-Co	RP-76
36.211	0373	-	Rel-14	A	RP-171197	R1-1709242	approved	Clarification on the definition of the nprach-NumCBRA-StartSubcarriers	14.2.0	agreed	R1	NB_IOT-Co	RP-76
36.211	0374	-	Rel-14	F	RP-171204	R1-1709448	approved	Parallel reception of MPDCCH and PDSCH for BL/CE UE	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.211	0375	-	Rel-14	F	RP-171194	R1-1709648	approved	CR for precoding for spatial multiplexing using antenna ports with UE-specific reference signals in 36.211	14.2.0	agreed	R1	LTE_eFDM	RP-76
36.211	0376	-	Rel-14	F	RP-171194	R1-1709649	approved	Correction to CSI-RS configuration	14.2.0	agreed	R1	LTE_eFDM	RP-76
36.211	0377	-	Rel-13	F	RP-171196	R1-1709340	approved	Clarification of frequency hopping for "PDCCH order" initiated msg3 PUSCH	13.5.0	agreed	R1	LTE_MTCeI	RP-76
36.211	0378	-	Rel-14	A	RP-171196	R1-1709341	approved	Clarification of frequency hopping for "PDCCH order" initiated msg3 PUSCH	14.2.0	agreed	R1	LTE_MTCeI	RP-76
36.211	0379	-	Rel-13	F	RP-171196	R1-1709346	approved	Correction on determination of number of repetitions PUCCH format 1	13.5.0	agreed	R1	LTE_MTCeI	RP-76
36.211	0380	-	Rel-14	A	RP-171196	R1-1709347	approved	Correction on determination of number of repetitions PUCCH format 1	14.2.0	agreed	R1	LTE_MTCeI	RP-76
36.211	0381	-	Rel-14	F	RP-171204	R1-1709717	approved	Correction on PRS hopping	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.211	0382	-	Rel-13	F	RP-171197	R1-1709846	approved	NRS presence assumptions on unicast non-anchor carriers	13.5.0	agreed	R1	NB_IOT-Co	RP-76
36.211	0383	-	Rel-14	F	RP-171197	R1-1709847	approved	NRS presence assumptions on unicast non-anchor carriers	14.2.0	agreed	R1	NB_IOTenh	RP-76
36.212	0252	-	Rel-13	F	RP-171193	R1-1706261	approved	CR for applicability of spatial bundling for PUCCH format 3 with FDD Pcell	13.5.0	agreed	R1	LTE_CA_er	RP-76
36.212	0253	-	Rel-14	A	RP-171193	R1-1706262	approved	CR for applicability of spatial bundling for PUCCH format 3 with FDD Pcell	14.2.0	agreed	R1	LTE_CA_er	RP-76
36.212	0254	-	Rel-13	F	RP-171209	R1-1706263	approved	Corrections on bit width of PMI for wideband CQI reports in 36.212	13.5.0	agreed	R1	LTE_EBF_F	RP-76
36.212	0255	-	Rel-14	A	RP-171209	R1-1706264	approved	Corrections on bit width of PMI for wideband CQI reports in 36.212	14.2.0	agreed	R1	LTE_EBF_F	RP-76
36.212	0256	-	Rel-14	F	RP-171204	R1-1706293	approved	Clarification of resource allocation for PDSCH in CE mode B	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.212	0257	-	Rel-14	F	RP-171194	R1-1706586	approved	Corrections on bit width of UCI fields for advanced CSI reporting in 36.212	14.2.0	agreed	R1	LTE_eFDM	RP-76
36.212	0258	-	Rel-14	F	RP-171194	R1-1706752	approved	CR 36.212 for Correction on RI and CRI reporting for aperiodic and multi-shot CSI-RS	14.2.0	agreed	R1	LTE_eFDM	RP-76
36.212	0259	-	Rel-14	F	RP-171210	R1-1706765	approved	CR on Higher-Layer Parameters for 36.212	14.2.0	agreed	R1	TEI14	RP-76
36.212	0260	-	Rel-14	F	RP-171204	R1-1706767	approved	Clarification of resource allocation for PDSCH with maximum 5 MHz channel bandwidth in CE mode A	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.212	0262	-	Rel-13	F	RP-171196	R1-1709222	approved	Correction on total number of soft channel bits for Cat M1 UE in 36.212	13.5.0	agreed	R1	LTE_MTCeI	RP-76
36.212	0263	-	Rel-14	F	RP-171204	R1-1709385	approved	Corrections on total number of soft channel bits for UE Cat M1 and M2 in 36.212	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.213	0868	-	Rel-13	F	RP-171196	R1-1705136	approved	Correction on Msg3 PUSCH Repetition for CE mode B	13.5.0	agreed	R1	LTE_MTCeI	RP-76
36.213	0869	-	Rel-14	A	RP-171196	R1-1705137	approved	Correction on Msg3 PUSCH Repetition for CE mode B	14.2.0	agreed	R1	LTE_MTCeI	RP-76
36.213	0872	-	Rel-14	F	RP-171195	R1-1705145	approved	Correction on UE procedure for receiving PDSCH on FeMBMS/Unicast-mixed carrier in 36.213	14.2.0	agreed	R1	MBMS_LTE	RP-76
36.213	0873	-	Rel-14	F	RP-171205	R1-1705150	approved	Correction on TBS values	14.2.0	agreed	R1	NB_IoTenh	RP-76
36.213	0874	-	Rel-13	F	RP-171196	R1-1706265	approved	CR for candidate determination for MPDCCH starting in unsupported special subframe for eMTC	13.5.0	agreed	R1	LTE_MTCeI	RP-76
36.213	0875	-	Rel-14	A	RP-171196	R1-1706266	approved	CR for candidate determination for MPDCCH starting in unsupported special subframe for eMTC	14.2.0	agreed	R1	LTE_MTCeI	RP-76
36.213	0876	-	Rel-13	F	RP-171196	R1-1706267	approved	PUCCH resource determination in TDD for eMTC	13.5.0	agreed	R1	LTE_MTCeI	RP-76
36.213	0877	-	Rel-14	A	RP-171198	R1-1706268	approved	PUCCH resource determination in TDD for eMTC	14.2.0	agreed	R1	LTE_MTCeI	RP-76
36.213	0878	-	Rel-13	F	RP-171196	R1-1706269	approved	Corrections on UL resource allocation type 0 in TS 36.213	13.5.0	agreed	R1	LTE_MTCeI	RP-76
36.213	0879	-	Rel-14	A	RP-171196	R1-1706270	approved	Corrections on UL resource allocation type 0 in TS 36.213	14.2.0	agreed	R1	LTE_MTCeI	RP-76
36.213	0880	-	Rel-13	F	RP-171197	R1-1706271	approved	Timing relationship for RAR monitoring in NB-IoT	13.5.0	agreed	R1	NB_IOT-Co	RP-76
36.213	0881	-	Rel-14	A	RP-171197	R1-1706272	approved	Timing relationship for RAR monitoring in NB-IoT	14.2.0	agreed	R1	NB_IOT-Co	RP-76
36.213	0882	-	Rel-14	F	RP-171201	R1-1706282	approved	CR for 2-stage grant DCI field definition	14.2.0	agreed	R1	LTE_eLAA-	RP-76
36.213	0883	-	Rel-14	F	RP-171201	R1-1706283	approved	Correction to SRS Triggering for LAA Scells	14.2.0	agreed	R1	LTE_eLAA-	RP-76
36.213	0884	-	Rel-14	F	RP-171201	R1-1706284	approved	Correction for MCOT value on channel access priority class for UL	14.2.0	agreed	R1	LTE_eLAA-	RP-76
36.213	0885	-	Rel-14	F	RP-171203	R1-1706289	approved	Corrections on tables used for SCI format 1 in 36.213	14.2.0	agreed	R1	LTE_V2X-C	RP-76
36.213	0886	-	Rel-14	F	RP-171203	R1-1706290	approved	Alignment with 36.212	14.2.0	agreed	R1	LTE_V2X-C	RP-76
36.213	0887	-	Rel-14	F	RP-171204	R1-1706294	approved	CR for mapping of wideband combination index to allocated wideband in FeMTC	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.213	0888	-	Rel-14	F	RP-171204	R1-1706299	approved	Clarification of TBS table for PDSCH with maximum 5 MHz channel bandwidth	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.213	0889	-	Rel-14	F	RP-171204	R1-1706303	approved	CR for UL Type 4 resource allocation	14.2.0	agreed	R1	LTE_feMTC	RP-76
36.213	0890	-	Rel-14	F	RP-171194	R1-1706587	approved	Corrections on PUCCH reporting type payload size in 36.213	14.2.0	agreed	R1	LTE_eFDM	RP-76
36.213	0891	-	Rel-14	F	RP-171194	R1-1706590	approved	CR 36.213 for Correction on CSI relaxation for aperiodic CSI-RS	14.2.0	agreed	R1	LTE_eFDM	RP-76
36.213	0892	-	Rel-14	B	RP-171210	R1-1706600	approved	Introduction of new maximum TBS for DL 256QAM	14.2.0	agreed	R1	TEI14	RP-76
36.213	0893	1	Rel-14	F	RP-171192	R1-1706771	approved	CR for removal of table 8.6.1-4	14.2.0	agreed	R1	LTE_UL_CA	RP-76
36.213	0894	-	Rel-14	F	RP-171206	R1-1706649	approved	Modulation overriding in video-voice enhancements	14.2.0	agreed	R1	LTE_VoLTE	RP-76
36.213	0895	-	Rel-14	F	RP-171194	R1-1706694	approved	CR on CSI-RS resource activation	14.2.0	agreed	R1	LTE_eFDM	RP-76
36.213	0896	-	Rel-13	F	RP-171196	R1-1706736	approved	PUCCH format 2 collision with PDSCH with repetitions	13.5.0	agreed	R1	LTE_MTCeI	RP-76
36.213	0897	-	Rel-13	F	RP-171196	R1-1706737	approved	CR on MPDCCH PRB Sets	13.5.0	agreed	R1	LTE_MTCeI	RP-76
36.213	0898	1	Rel-14	F	RP-171203	R1-1706839	approved	Corrections on UE partial sensing behaviour in TS 36.213	14.2.0	agreed	R1	LTE_V2X-C	RP-76
36.213	0899	-	Rel-14	F	RP-171194	R1-1706742	approved	Corrections to 36.213 for Rel-14 eFD-MIMO	14.2.0	agreed	R1	LTE_eFDM	RP-76
36.213	0900	-	Rel-14	F	RP-171194	R1-1706743	approved	Corrections to 36.213 for Rel-14 eFD-MIMO CSI collision handling	14.2.0	agreed	R1	LTE_eFDM	RP-76

36.213	0901	-	Rel-14	F	RP-171194	R1-1706744	approved	Corrections on QCL indication in 36.213	14.2.0	agreed		R1	LTE_eFDM	RP-76	
36.213	0902	-	Rel-14	F	RP-171194	R1-1706750	approved	Corrections on CRI reporting for multi-shot CSI-RS in 36.213	14.2.0	agreed		R1	LTE_eFDM	RP-76	
36.213	0903	-	Rel-14	F	RP-171210	R1-1706766	approved	CR on Higher-Layer Parameters for 36.213	14.2.0	agreed		R1	TEI14	RP-76	
36.213	0904	-	Rel-14	F	RP-171204	R1-1706768	approved	Clarification of resource allocation for PDSCH in CE mode A	14.2.0	agreed		R1	LTE_feMTC	RP-76	
36.213	0905	-	Rel-14	F	RP-171204	R1-1706769	approved	Corrections on the UL resource allocation type 4 in TS 36.213	14.2.0	agreed		R1	LTE_feMTC	RP-76	
36.213	0906	-	Rel-14	A	RP-171196	R1-1706817	approved	PUCCH format 2 collision with PDSCH with repetitions	14.2.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0907	-	Rel-14	F	RP-171203	R1-1706858	approved	CR on subframe indexing in resource reselection	14.2.0	agreed		R1	LTE_V2X-C	RP-76	
36.213	0908	-	Rel-13	F	RP-171193	R1-1706343	approved	Determination of PUCCH format selection depending on number of HARQ-ACK, CSI and SR bits	13.5.0	agreed		R1	LTE_CA_er	RP-76	
36.213	0909	-	Rel-14	A	RP-171193	R1-1706344	approved	Determination of PUCCH format selection depending on number of HARQ-ACK, CSI and SR bits	14.2.0	agreed		R1	LTE_CA_er	RP-76	
36.213	0910	2	Rel-14	F	RP-171199	R1-1709333	approved	Miscellaneous corrections to 36.213	14.2.0	agreed		R1	LTE_SL_V2	RP-76	
36.213	0912	-	Rel-13	F	RP-171197	R1-1709008	approved	Correction on 3.75 kHz NPUSCH format 2 transmission	13.5.0	agreed		R1	NB_IOT-Co	RP-76	
36.213	0913	-	Rel-14	A	RP-171197	R1-1709009	approved	Correction on 3.75 kHz NPUSCH format 2 transmission	14.2.0	agreed		R1	NB_IOT-Co	RP-76	
36.213	0916	-	Rel-14	F	RP-171203	R1-1709191	approved	CR for skipped subframe handling for shorter periodicity in PC5-based V2V	14.2.0	agreed		R1	LTE_V2X-C	RP-76	
36.213	0917	-	Rel-13	F	RP-171196	R1-1709227	approved	Clarification of the #repetitions used for msg3 retiansmissions	13.5.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0918	-	Rel-14	A	RP-171196	R1-1709228	approved	Clarification of the #repetitions used for msg3 retiansmissions	14.2.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0919	-	Rel-14	A	RP-171196	R1-1709235	approved	CR on MPDCCH PRB Sets	14.2.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0920	1	Rel-13	F	RP-171196	R1-1709352	approved	Correction of RAR window definition in CE mode B	13.5.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0921	1	Rel-14	A	RP-171196	R1-1709353	approved	Correction of RAR window definition in CE mode B	14.2.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0925	-	Rel-14	F	RP-171203	R1-1709645	approved	Correction of UE behavior to meet Crimit	14.2.0	agreed		R1	LTE_V2X-c	RP-76	
36.213	0926	-	Rel-14	F	RP-171204	R1-1709651	approved	Correction on HARQ-ACK bundling and dynamic HARQ-ACK timing in 36.213	14.2.0	agreed		R1	LTE_feMTC	RP-76	
36.213	0927	-	Rel-14	F	RP-171200	R1-1709655	approved	Corrections on Power Control for SRS Switching	14.2.0	agreed		R1	LTE_SRS_s	RP-76	
36.213	0928	-	Rel-13	F	RP-171198	R1-1709656	approved	Correction on the numbering of the tables in 8.0	13.5.0	agreed		R1	TEI13	RP-76	
36.213	0929	-	Rel-14	F	RP-171210	R1-1709657	approved	Correction on the numbering of the tables in 8.0	14.2.0	agreed		R1	TEI14	RP-76	
36.213	0930	1	Rel-14	F	RP-171192	R1-1709719	approved	Corrections on PRB scaling for PUSCH in UpPTS	14.2.0	agreed		R1	LTE_UL_C/	RP-76	
36.213	0931	-	Rel-14	F	RP-171194	R1-1709335	approved	CR on CSR for CSI feedback for semi-OL transmission	14.2.0	agreed		R1	LTE_eFDM	RP-76	
36.213	0932	-	Rel-13	F	RP-171196	R1-1709338	approved	Clarification of RV Cycling in the presence of invalid SFs	13.5.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0933	-	Rel-14	A	RP-171196	R1-1709339	approved	Clarification of RV Cycling in the presence of invalid SFs	14.2.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0934	-	Rel-13	F	RP-171196	R1-1709342	approved	Correction of the calculation of the #RV-blocks for a given PDSCH	13.5.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0935	-	Rel-14	A	RP-171196	R1-1709343	approved	Correction of the calculation of the #RV-blocks for a given PDSCH	14.2.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0936	-	Rel-13	F	RP-171196	R1-1709344	approved	Clarification for the overlap of UL TA update and retuning gaps for BL/CE UEs	13.5.0	agreed		R1	LTE_MTCa	RP-76	wrong Tdoc number on CR cover
36.213	0937	-	Rel-14	A	RP-171196	R1-1709345	approved	Clarification for the overlap of UL TA update and retuning gaps for BL/CE UEs	14.2.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0938	-	Rel-13	F	RP-171196	R1-1709713	approved	Correction on starting OFDM symbol for MPDCCH and PDSCH in special subframe	13.5.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0939	-	Rel-14	A	RP-171196	R1-1709714	approved	Correction on starting OFDM symbol for MPDCCH and PDSCH in special subframe	14.2.0	agreed		R1	LTE_MTCa	RP-76	
36.213	0940	-	Rel-14	F	RP-171203	R1-1709332	approved	CR on skipped subframe handling for partial sensing	14.2.0	agreed		R1	LTE_V2X-C	RP-76	
36.213	0941	-	Rel-14	F	RP-171203	R1-1709331	approved	Correction on abbreviation of Sidelink SPS RNTI in DCI Format 5A in 36.212	14.2.0	agreed		R1	LTE_V2X-C	RP-76	
36.213	0942	-	Rel-14	F	RP-171205	R1-1709718	approved	Timing relationships for 2 HARQ processes	14.2.0	agreed		R1	NB_IOTenh	RP-76	
36.300	0994	2	Rel-13	F	RP-171243	R2-1704598	approved	Correction on radio protocol architecture for DC	13.7.0	agreed		R2	LTE_dualC	RP-76	
36.300	0995	2	Rel-14	A	RP-171243	R2-1704599	approved	Correction on radio protocol architecture for DC	14.2.0	agreed		R2	LTE_dualC	RP-76	
36.300	0996	1	Rel-14	F	RP-171244	R2-1704601	approved	Correction on HARQ principles for eMTC	14.2.0	agreed		R2	LTE_MTCa	RP-76	
36.300	0997	2	Rel-14	F	RP-171236	R2-1704625	approved	Correction on eLWA	14.2.0	agreed		R2	LTE_WLAN	RP-76	
36.300	0999	3	Rel-14	F	RP-171223	R2-1706113	approved	Corrections to stage 2 description of FeMTC and eNB-IoT	14.2.0	agreed		R2	LTE_feMTC	RP-76	
36.300	1000	1	Rel-14	F	RP-171235	R2-1705717	approved	Corrections to stage 2 description for voice and video enhancements for LTE	14.2.0	agreed		R2	LTE_VoLTE	RP-76	
36.300	1006	1	Rel-14	F	RP-171224	R2-1705290	approved	Corrections to NB-IoT Enhancements	14.2.0	agreed		R2	NB_IOTenh	RP-76	
36.300	1009	2	Rel-14	F	RP-171226	R2-1705842	approved	Indication of in proximity of CEN DSRC	14.2.0	agreed		R2	LTE_SL_V2	RP-76	
36.300	1010	1	Rel-14	C	RP-171223	R2-1704705	approved	CE mode configuration/deconfiguration without handover	14.2.0	agreed		R2	LTE_feMTC	RP-76	
36.300	1014	2	Rel-14	F	RP-171236	R2-1704206	approved	Clarification of the end marker solution for eLWA	14.2.0	agreed		R2	LTE_WLAN	RP-76	
36.300	1017	2	Rel-14	F	RP-171226	R2-1705858	approved	CR to cell reselection for V2X in TS 36.300	14.2.0	agreed		R2	LTE_SL_V2	RP-76	
36.300	1022	4	Rel-13	B	RP-171243	R2-1706199	approved	LAA/WiFi sharing indication	13.7.0	agreed		R2	LTE_LAA-C	RP-76	
36.300	1023	4	Rel-14	A	RP-171243	R2-1706200	approved	LAA/WiFi sharing indication	14.2.0	agreed		R2	LTE_LAA-C	RP-76	
36.300	1024	1	Rel-14	A	RP-171245	R2-1705893	approved	Clarification of UE-AMBR support for NB-IoT	14.2.0	agreed		R2	NB_IOT-Co	RP-76	
36.300	1026	-	Rel-13	F	RP-171245	R2-1705284	approved	Miscellaneous corrections for NB-IoT	13.7.0	agreed		R2	NB_IOT-Co	RP-76	
36.300	1027	-	Rel-14	A	RP-171245	R2-1705285	approved	Miscellaneous corrections for NB-IoT	14.2.0	agreed		R2	NB_IOT-Co	RP-76	
36.300	1028	2	Rel-14	F	RP-171224	R2-1706114	approved	Resources selection for PRACH triggered by a PDCCH order in eNB-IoT(Option2)	14.2.0	agreed		R2	NB_IOTenh	RP-76	
36.300	1029	1	Rel-14	F	RP-171227	R2-1705976	approved	Editorial Corrections to Support of Multiple SPS Configurations	14.2.0	agreed		R2	LTE_V2X-C	RP-76	
36.300	1033	1	Rel-13	F	RP-171245	R2-1705892	approved	Clarification of UE-AMBR support for NB-IoT	13.7.0	agreed		R2	NB_IOT-Co	RP-76	
36.300	1034	1	Rel-14	B	RP-171246	R2-1706168	approved	EUTRAN Sharing enhancement	14.2.0	endorsed		R2	TEI14	RP-76	
36.300	1038	-	Rel-14	B	RP-171224	R2-1706163	approved	Introduction of RRC connection re-establishment for NB-IoT control plane	14.2.0	agreed		R2	NB_IoTenh	RP-76	
36.300	1040	1	Rel-14	F	RP-171225	R2-1706188	approved	Correction on UE-AMBR for NB-IoT UE using CP solution	14.2.0	agreed		R2	TEI14, NB_	RP-76	
36.300	1041	-	Rel-14	B	RP-171224	R2-1706171	approved	Support of RLF for CP CIoT Optimisation	14.2.0	agreed		R2	NB_IOTenh	RP-76	
36.302	0105	2	Rel-14	F	RP-171223	R2-1705934	approved	Correction to SC-MCCH and SC-MTCH reception type	14.2.0	agreed		R2	LTE_feMTC	RP-76	
36.302	0107	1	Rel-14	F	RP-171234	R2-1704960	approved	Correction on the data modulation of Uplink Shared Channel	14.2.0	agreed		R2	LTE_UL_C/	RP-76	
36.302	0108	2	Rel-13	F	RP-171244	R2-1705276	approved	Correction to downlink reception types for BL UEs and UEs in CE	13.5.0	agreed		R2	LTE_MTCa	RP-76	
36.302	0109	1	Rel-14	A	RP-171244	R2-1705385	approved	Correction to downlink reception types for BL UEs and UEs in CE	14.2.0	agreed		R2	LTE_MTCa	RP-76	
36.302	0112	1	Rel-14	F	RP-171221	R2-1706020	approved	Correction to Downlink Reception Type Combinations for FeMBMS	14.2.0	agreed		R2	MBMS_LTE	RP-76	wrong CR number on CR cover
36.304	0363	2	Rel-14	F	RP-171224	R2-1704181	approved	Correction to paging carrier selection formula in Rel-14 NB-IoT	14.2.0	agreed		R2	NB_IOTenh	RP-76	
36.304	0369	2	Rel-13	F	RP-171243	R2-1704764	approved	Correction for eDRX Hashed ID	13.5.0	agreed		R2	LTE_eDR	RP-76	
36.304	0370	2	Rel-14	A	RP-171243	R2-1704819	approved	Correction for eDRX Hashed ID	14.2.0	agreed		R2	LTE_eDR	RP-76	
36.304	0376	2	Rel-14	F	RP-171223	R2-1706180	approved	Correction to usage of SC-PTM offset in NB-IoT and FeMTC	14.2.0	agreed		R2	NB_IOTenh	RP-76	
36.304	0380	1	Rel-14	F	RP-171221	R2-1706021	approved	Correction to Reselection priorities handling for FeMBMS	14.2.0	agreed		R2	MBMS_LTE	RP-76	
36.305	0069	1	Rel-14	F	RP-171224	R2-1705913	approved	Clarification to positioning measurement in idle state	14.1.0	agreed		R2	NB_IOTenh	RP-76	
36.306	1437	1	Rel-14	F	RP-171231	R2-1704623	approved	Correction on UE capabilities for eLAA	14.2.0	agreed		R2	LTE_eLAA-	RP-76	
36.306	1438	2	Rel-14	B	RP-171225	R2-1705702	approved	Introduction of new Transport Block Size for DL 256QAM	14.2.0	agreed		R2	TEI14	RP-76	
36.306	1439	4	Rel-14	F	RP-171236	R2-1706193	approved	UE capabilities for eLWA	14.2.0	agreed		R2	LTE_WLAN	RP-76	
36.306	1440	2	Rel-12	B	RP-171248	R2-1706044	approved	Entry-Level UE Support UL 64QAM	12.11.0	endorsed		R2	TEI12	RP-76	

36.306	1441	2	Rel-13	A	RP-171248	R2-1706045	approved	Entry-Level UE Support UL 64QAM	13.5.0	endorsed	R2	TEI12	RP-76									
36.306	1442	2	Rel-14	A	RP-171248	R2-1706046	approved	Entry-Level UE Support UL 64QAM	14.2.0	endorsed	R2	TEI12	RP-76									
36.306	1443	2	Rel-14	F	RP-171224	R2-1706112	approved	Miscellaneous corrections to TS 36.306	14.2.0	agreed	R2	NB_IOTenh	RP-76									
36.306	1445	1	Rel-14	F	RP-171222	R2-1704971	approved	CR for introduction of non-uniform gap in measurement gap enhancement	14.2.0	agreed	R2	LTE_measu	RP-76									
36.306	1446	1	Rel-14	B	RP-171247	R2-1704970	approved	Introduction of a new UL UE category for 300Mbps with 64QAM	14.2.0	endorsed	R2	TEI14	RP-76									
36.306	1448	2	Rel-14	F	RP-171223	R2-1705926	approved	Corrections to capabilities for feMTC	14.2.0	agreed	R2	LTE_feMTC	RP-76									
36.306	1452	1	Rel-14	C	RP-171223	R2-1704706	approved	CE mode configuration/deconfiguration without handover	14.2.0	agreed	R2	LTE_feMTC	RP-76									
36.306	1456	-	Rel-12	F	RP-171241	R2-1704033	approved	Optional feature without UE capability bit for VoLTE	12.11.0	agreed	R2	TEI12, LTE	RP-76	wrong rev number on CR cover								
36.306	1457	-	Rel-13	A	RP-171241	R2-1704034	approved	Optional feature without UE capability bit for VoLTE	13.5.0	agreed	R2	TEI12, LTE	RP-76	wrong rev number on CR cover								
36.306	1458	-	Rel-14	A	RP-171241	R2-1704035	approved	Optional feature without UE capability bit for VoLTE	14.2.0	agreed	R2	TEI12, LTE	RP-76	wrong rev number on CR cover								
36.306	1460	2	Rel-13	B	RP-171243	R2-1706093	approved	LAA/WiFi sharing indication	13.5.0	agreed	R2	LTE_LAA-C	RP-76									
36.306	1461	2	Rel-14	A	RP-171243	R2-1706094	approved	LAA/WiFi sharing indication	14.2.0	agreed	R2	LTE_LAA-C	RP-76									
36.306	1462	1	Rel-14	F	RP-171225	R2-1706066	approved	Update of ROHC profile reference	14.2.0	agreed	R2	TEI14	RP-76									
36.306	1463	-	Rel-14	B	RP-171225	R2-1704938	approved	UE Capabilities to enable Uplink-Only RoHC operations	14.2.0	approved	R2	TEI14	RP-76									
36.306	1464	-	Rel-14	F	RP-171224	R2-1705018	approved	Corrections to capabilities for NB-IoT	14.2.0	agreed	R2	NB_IOTenh	RP-76									
36.306	1465	-	Rel-14	F	RP-171234	R2-1705321	approved	UL 256QAM capability clarification	14.2.0	agreed	R2	LTE_UL_C/	RP-76									
36.306	1470	-	Rel-14	B	RP-171221	R2-1705423	approved	Introduction of FeMBMS to 36.306	14.2.0	agreed	R2	MBMS_LTE	RP-76									
36.306	1475	-	Rel-14	F	RP-171223	R2-1705476	approved	Correction on the description of or-esIEnhancement for FeMTC	14.2.0	agreed	R2	LTE_feMTC	RP-76									
36.306	1476	-	Rel-14	F	RP-171223	R2-1705478	approved	Minor correction on TS 36.306 for FeMTC	14.2.0	agreed	R2	LTE_feMTC	RP-76									
36.306	1478	2	Rel-14	B	RP-171407	R2-1706127	approved	Introduction of UE capability for V2X in 36.306	14.2.0	agreed	R2	LTE_V2X-C	RP-76									
36.306	1479	2	Rel-14	B	RP-171223	R2-1706184	approved	Introduction of enhanced RLM measurement capabilities	14.2.0	agreed	R2	LTE_feMTC	RP-76									
36.306	1480	-	Rel-14	B	RP-171229	R2-1706005	approved	Introduction of UE capabilities for high speed	14.2.0	agreed	R2	LTE_high_s	RP-76									
36.306	1483	-	Rel-14	F	RP-171223	R2-1706125	approved	Correction to eMeasurements-r14 measurement capability	14.2.0	agreed	R2	LTE_feMTC	RP-76									
36.306	1484	-	Rel-14	B	RP-171224	R2-1706164	approved	Introduction of RRC connection re-establishment for NB-IoT control plane	14.2.0	agreed	R2	NB_IoTenh	RP-76									
36.307	0743	1	Rel-8	F	RP-171292	R4-1706064	approved	Cleanup of TS 36.307	8.16.0	agreed	R4	TEI8	RP-76									
36.307	0744	1	Rel-9	F	RP-171293	R4-1706065	approved	Cleanup of TS 36.307	9.18.0	agreed	R4	TEI9	RP-76									
36.307	0745	1	Rel-10	F	RP-171294	R4-1706046	approved	Cleanup of TS 36.307	10.21.0	agreed	R4	TEI10, LTE	RP-76									
36.307	0746	1	Rel-11	F	RP-171295	R4-1706045	approved	Cleanup of TS 36.307	11.18.0	agreed	R4	TEI11, LTE	RP-76									
36.307	0747	1	Rel-12	F	RP-171291	R4-1706044	approved	Cleanup of TS 36.307	12.14.0	agreed	R4	LC_MTC_L	RP-76									
36.307	0748	1	Rel-13	F	RP-171291	R4-1706043	approved	Cleanup of TS 36.307	13.6.0	agreed	R4	LC_MTC_L	RP-76									
36.307	0749	1	Rel-14	F	RP-171291	R4-1706042	approved	Cleanup of TS 36.307	14.2.0	agreed	R4	LC_MTC_L	RP-76									
36.321	1038	3	Rel-14	F	RP-171226	R2-1705564	approved	Introducing a new resource reselection trigger for V2X sidelink communication	14.2.1	agreed	R2	LTE_SL_V2	RP-76									
36.321	1046	2	Rel-13	F	RP-171244	R2-1705465	approved	Correction on terminology of SI for eMTC	13.5.0	agreed	R2	LTE_MTCe	RP-76									
36.321	1053	2	Rel-14	F	RP-171233	R2-1705975	approved	Clarification for the UE Contention Resolution Identity MAC Control Element	14.2.1	agreed	R2	LTE_eMob	RP-76									
36.321	1062	3	Rel-14	F	RP-171224	R2-1705925	approved	Small corrections to random access procedure and DRX for REI-14 NB-IoT Enhancements	14.2.0	agreed	R2	NB_IOTenh	RP-76									
36.321	1063	1	Rel-14	F	RP-171223	R2-1705287	approved	Alignment of the parameter names for SC-PTM DRX for SC-MCCH and SC-MTCH	14.2.0	agreed	R2	NB_IOTenh	RP-76									
36.321	1068	2	Rel-14	D	RP-171224	R2-1705931	approved	Editorial corrections for MAC	14.2.0	agreed	R2	NB_IOTenh	RP-76									
36.321	1071	3	Rel-13	F	RP-171244	R2-1706107	approved	Configuration of preamble groups for CE levels and preamble groups A/B – Alt2	13.5.0	agreed	R2	LTE_MTCe	RP-76									
36.321	1072	3	Rel-14	A	RP-171244	R2-1706108	approved	Configuration of preamble groups for CE levels and preamble groups A/B – Alt2	14.2.0	agreed	R2	LTE_MTCe	RP-76									
36.321	1076	2	Rel-14	F	RP-171231	R2-1704993	approved	Clarification on the UE behaviour when the validity of PUSCH trigger A expires	14.2.1	agreed	R2	LTE_eLAA-	RP-76									
36.321	1079	3	Rel-13	F	RP-171243	R2-1706197	approved	Corrections to Sidelink Discovery Gap for Transmission	13.5.0	agreed	R2	LTE_eD2D_	RP-76									
36.321	1088	1	Rel-14	F	RP-171227	R2-1705857	approved	Miscellaneous corrections to V2X in TS 36.321	14.2.1	agreed	R2	LTE_V2X-C	RP-76									
36.321	1094	1	Rel-14	F	RP-171232	R2-1705853	approved	Remaining issues in Activation/Deactivation of CSI-RS resources MAC CE for eFD-MIMO	14.2.1	agreed	R2	LTE_eFDM	RP-76									
36.321	1095	1	Rel-13	F	RP-171245	R2-1705883	approved	Stop condition for the drx-RetransmissionTimer for NB-IoT	13.5.0	agreed	R2	NB_IOT-Co	RP-76									
36.321	1096	-	Rel-14	F	RP-171224	R2-1704490	approved	Stop condition for the drx-RetransmissionTimer for NB-IoT	14.2.1	agreed	R2	NB_IOTenh	RP-76									
36.321	1097	-	Rel-14	F	RP-171224	R2-1704492	approved	Correction to maximum number of HARQ processes for NB-IoT	14.2.1	agreed	R2	NB_IOTenh	RP-76									
36.321	1105	1	Rel-14	F	RP-171223	R2-1705933	approved	Action upon reception of SC-PTM stop indication	14.2.0	agreed	R2	NB_IOTenh	RP-76									
36.321	1108	-	Rel-14	F	RP-171228	R2-1705404	approved	Correction of L2 latency reduction	14.2.1	agreed	R2	LTE_LATRE	RP-76									
36.321	1109	-	Rel-14	F	RP-171221	R2-1705422	approved	SI-RNTI number correction for feMBMS	14.2.0	agreed	R2	MBMS_LTE	RP-76									
36.321	1113	2	Rel-14	F	RP-171224	R2-1706172	approved	Resources selection for PRACH triggered by a PDCCH order in eNB-IoT(Option2)	14.2.1	agreed	R2	NB_IOTenh	RP-76									
36.321	1114	-	Rel-14	A	RP-171244	R2-1705467	approved	Correction on terminology of SI for eMTC	14.2.0	agreed	R2	LTE_MTCe	RP-76									
36.321	1115	2	Rel-13	F	RP-171244	R2-1706105	approved	RAR reception for eMTC	13.5.0	agreed	R2	LTE_MTCe	RP-76									
36.321	1116	1	Rel-14	A	RP-171244	R2-1706106	approved	RAR reception for eMTC	14.2.0	agreed	R2	LTE_MTCe	RP-76									
36.321	1123	-	Rel-14	A	RP-171243	R2-1705547	approved	Corrections to Sidelink Discovery Gap for Transmission	14.2.1	agreed	R2	LTE_eD2D	RP-76									
36.323	0195	2	Rel-13	F	RP-171244	R2-1705437	approved	Clarification on polling	13.5.0	agreed	R2	LTE_WLAN	RP-76									
36.323	0197	1	Rel-14	F	RP-171225	R2-1706067	approved	Update of ROHC profile reference	14.2.0	agreed	R2	TEI14	RP-76									
36.323	0198	-	Rel-14	B	RP-171225	R2-1704939	approved	Enable Uplink-Only RoHC operations	14.2.0	agreed	R2	TEI14	RP-76									
36.331	0199	-	Rel-14	A	RP-171244	R2-1705461	approved	Clarification on polling	14.2.0	agreed	R2	LTE_WLAN	RP-76									
36.331	2705	2	Rel-14	F	RP-171226	R2-1705565	approved	Correction to exceptional pool usage in TS 36.331	14.2.2	agreed	R2	LTE_SL_V2	RP-76									
36.331	2706	1	Rel-14	F	RP-171237	R2-1706048	approved	Support eDECOR for NB-IoT	14.2.2	agreed	R2	eDECOR-U	RP-76									
36.331	2709	1	Rel-14	F	RP-171231	R2-1704624	approved	Correction on UE capabilities for eLAA	14.2.2	agreed	R2	LTE_eLAA-	RP-76									
36.331	2710	3	Rel-13	F	RP-171243	R2-1704948	approved	Correction on WLAN connection status report monitoring for LWIP	13.5.0	agreed	R2	LTE_WLAN	RP-76									
36.331	2711	3	Rel-14	A	RP-171243	R2-1704949	approved	Correction on WLAN connection status report monitoring for LWIP	14.2.2	agreed	R2	LTE_WLAN	RP-76									
36.331	2712	3	Rel-14	F	RP-171236	R2-1704633	approved	Correction on eLWA	14.2.2	agreed	R2	LTE_WLAN	RP-76									
36.331	2713	2	Rel-14	B	RP-171225	R2-1705703	approved	Introduction of new Transport Block Size for DL 256QAM	14.2.2	agreed	R2	TEI14	RP-76									
36.331	2714	2	Rel-14	F	RP-171236	R2-1704205	approved	UE capabilities for eLWA	14.2.2	agreed	R2	LTE_WLAN	RP-76									
36.331	2715	2	Rel-14	B	RP-171227	R2-1705563	approved	Introducing a new SL master information block for V2X sidelink communication	14.2.2	agreed	R2	LTE_V2X-C	RP-76									
36.331	2717	1	Rel-13	F	RP-171243	R2-1704991	approved	Miscellaneous corrections to CA enhancements	13.5.0	agreed	R2	LTE_CA_er	RP-76									
36.331	2718	3	Rel-13	F	RP-171245	R2-1705884	approved	Correction on the UE AS context handling	13.5.0	agreed	R2	TEI13 , NB_	RP-76									
36.331	2719	2	Rel-13	F	RP-171245	R2-1705886	approved	Correction on attach without PDN connectivity	13.5.0	agreed	R2	NB_IoT-Cor	RP-76									
36.331	2720	2	Rel-14	F	RP-171236	R2-1705102	approved	Clarifications to eLWA	14.2.2	agreed	R2	LTE_WLAN	RP-76									
36.331	2728	2	Rel-14	B	RP-171247	R2-1705974	approved	Introduction of a new UL UE category for 300Mbps with 64QAM	14.2.2	endorsed	R2	TEI14	RP-76									
36.331	2734	2	Rel-14	F	RP-171223	R2-1706919	approved	Introduction of SFN indication in handover message	14.2.1	agreed	R2	LTE_feMTC	RP-76									
36.331	2737	1	Rel-14	F	RP-171224	R2-1705020	approved	Correction to SIB-Type-NB	14.2.1	agreed	R2	NB_IOTenh	RP-76									

36.331	2741	5	Rel-14	F	RP-171233	R2-1706014	approved	Clarification of intra-frequency applicability of makeBeforeBreak HO	14.2.2	agreed	R2	LTE_eMob-	RP-76						
36.331	2745	3	Rel-14	F	RP-171224	R2-1705899	approved	Correction to the value range of cs-AuthorisationOffset	14.2.1	agreed	R2	NB_IOTenh	RP-76						
36.331	2746	2	Rel-14	C	RP-171224	R2-1706897	approved	Introduction of Overload Control for Control plane data only	14.2.0	agreed	R2	TEI14, NB_	RP-76						
36.331	2748	2	Rel-14	F	RP-171223	R2-1706181	approved	SC-MCCH information change notification for FeMTC and NB-IoT enhancements	14.2.1	agreed	R2	LTE_feMTC	RP-76						
36.331	2749	1	Rel-14	F	RP-171223	R2-1705286	approved	Alignment of the parameter names for SC-PTM DRX for SC-MCCH and SC-MTCH	14.2.1	agreed	R2	NB_IOTenh	RP-76						
36.331	2752	3	Rel-14	F	RP-171233	R2-1706015	approved	Corrections to RACH-less handover and SCG change	14.2.2	agreed	R2	LTE_eMob-	RP-76						
36.331	2753	1	Rel-13	F	RP-171244	R2-1705464	approved	Clarification on additionalSpectrumEmission for eMTC	13.5.0	agreed	R2	LTE_MTCa	RP-76						
36.331	2754	1	Rel-13	F	RP-171245	R2-1705690	approved	Clarification on additionalSpectrumEmission for NB-IoT	13.5.0	agreed	R2	NB_IOT-Co	RP-76						
36.331	2759	7	Rel-14	F	RP-171222	R2-1706198	approved	Corrections to per-CC measurement gap configuration and add the support for UE reporting of numFre	14.2.2	agreed	R2	LTE_meas_	RP-76						
36.331	2760	1	Rel-14	F	RP-171233	R2-1705485	approved	Corrections to make before break mobility	14.2.2	agreed	R2	LTE_eMob-	RP-76						
36.331	2766	3	Rel-13	F	RP-171241	R2-1705965	approved	Clarification on UE capability and early feature support	13.5.0	agreed	R2	LTE-L23, TE	RP-76						
36.331	2767	3	Rel-13	F	RP-171243	R2-1705967	approved	Clarification regarding EBF-FDMIMO configuration (REL-13)	13.5.0	agreed	R2	LTE_EBF_F	RP-76						
36.331	2768	2	Rel-14	F	RP-171243	R2-1705491	approved	Clarification regarding requesting fallback combinations with different capabilities	14.2.1	agreed	R2	LTE_CA_en	RP-76						
36.331	2771	1	Rel-14	F	RP-171226	R2-1704446	approved	Leap second change for DFN timing	14.2.2	agreed	R2	LTE_SL_V2	RP-76						
36.331	2772	1	Rel-13	F	RP-171244	R2-1704700	approved	Correction to RACH CE level info list	13.5.0	agreed	R2	LTE_MTCa	RP-76						
36.331	2773	1	Rel-14	A	RP-171244	R2-1704701	approved	Correction to RACH CE level info list	14.2.2	agreed	R2	LTE_MTCa	RP-76						
36.331	2775	2	Rel-14	C	RP-171223	R2-1705916	approved	CE mode configuration/deconfiguration without handover	14.2.2	agreed	R2	LTE_feMTC	RP-76						
36.331	2791	3	Rel-14	F	RP-171227	R2-1705983	approved	Correction on V2X Rx pool for inter-frequency configuration in 36.331	14.2.1	agreed	R2	LTE_V2X-C	RP-76						
36.331	2793	1	Rel-12	B	RP-171248	R2-1706038	approved	Entry-Level UE Support UL 64QAM	12.13.0	endorsed	R2	TEI12	RP-76						
36.331	2794	1	Rel-13	A	RP-171248	R2-1706039	approved	Entry-Level UE Support UL 64QAM	13.5.0	endorsed	R2	TEI12	RP-76						
36.331	2795	1	Rel-14	A	RP-171248	R2-1706040	approved	Entry-Level UE Support UL 64QAM	14.2.2	endorsed	R2	TEI12	RP-76						
36.331	2797	1	Rel-14	F	RP-171235	R2-1705405	approved	FDD TDD difference for VoLTE capability	14.2.2	agreed	R2	LTE_VoLTE	RP-76						
36.331	2800	1	Rel-13	F	RP-171244	R2-1705466	approved	Correction on terminology of SI for eMTC	13.5.0	agreed	R2	LTE_MTCa	RP-76						
36.331	2803	1	Rel-13	A	RP-171242	R2-1706097	approved	Setting of FGI 107 and 108 in case of TDD-FDD CA	13.5.0	agreed	R2	TEI12	RP-76						
36.331	2804	1	Rel-14	A	RP-171242	R2-1706099	approved	Setting of FGI 107 and 108 in case of TDD-FDD CA	14.2.2	agreed	R2	TEI12	RP-76						
36.331	2813	1	Rel-14	F	RP-171226	R2-1705843	approved	Correction of RRCConnectionReconfiguration reception for V2X	14.2.2	agreed	R2	LTE_SL_V2	RP-76						
36.331	2820	-	Rel-14	F	RP-171227	R2-1704626	approved	CR on V2X miscellaneous RRC corrections	14.2.2	agreed	R2	LTE_V2X-C	RP-76						
36.331	2823	2	Rel-14	B	RP-171224	R2-1706165	approved	Introduction of RRC connection re-establishment for NB-IoT control plane	14.2.2	agreed	R2	NB_IoTenh	RP-76						
36.331	2826	-	Rel-14	A	RP-171243	R2-1704752	approved	Miscellaneous corrections to CA enhancements	14.2.2	agreed	R2	LTE_CA_en	RP-76						
36.331	2827	1	Rel-13	A	RP-171244	R2-1705903	approved	Clarification to MIB repetitions	13.5.0	agreed	R2	LTE_MTCa	RP-76						
36.331	2828	2	Rel-14	A	RP-171244	R2-1705910	approved	Clarification to MIB repetitions	14.2.2	agreed	R2	LTE_MTCa	RP-76	wrong Tdoc number (0 missing) on CR cover					
36.331	2829	3	Rel-13	B	RP-171243	R2-1706146	approved	LAA/WiFi sharing indication	13.5.0	agreed	R2	LTE_LAA-C	RP-76						
36.331	2830	3	Rel-14	A	RP-171243	R2-1706147	approved	LAA/WiFi sharing indication	14.2.2	agreed	R2	LTE_LAA-C	RP-76						
36.331	2831	-	Rel-14	B	RP-171225	R2-1704940	approved	Enable Uplink-Only RoHC operations	14.2.2	agreed	R2	TEI14	RP-76						
36.331	2832	1	Rel-13	F	RP-171245	R2-1705890	approved	Clarification on contention based random access for NB-IoT	13.5.0	agreed	R2	NB_IOT-Co	RP-76						
36.331	2833	1	Rel-14	A	RP-171245	R2-1705891	approved	Clarification on contention based random access for NB-IoT	14.2.2	agreed	R2	NB_IOT-Co	RP-76						
36.331	2835	-	Rel-13	F	RP-171245	R2-1704952	approved	Editorial correction on ab-Barring parameter	13.5.0	agreed	R2	NB_IOT-Co	RP-76						
36.331	2836	-	Rel-14	A	RP-171245	R2-1704953	approved	Editorial correction on ab-Barring parameter	14.2.2	agreed	R2	NB_IOT-Co	RP-76						
36.331	2842	-	Rel-14	F	RP-171223	R2-1705024	approved	Correction to FGI 25	14.2.1	agreed	R2	LTE_feMTC	RP-76						
36.331	2844	1	Rel-14	F	RP-171223	R2-1705907	approved	Correction to InterFreqRSTDMeasurementIndication message	14.2.1	agreed	R2	LTE_feMTC	RP-76						
36.331	2845	2	Rel-14	B	RP-171223	R2-1706183	approved	Introduction of enhanced RLM reporting	14.2.1	agreed	R2	LTE_feMTC	RP-76						
36.331	2848	1	Rel-14	A	RP-171245	R2-1705885	approved	Correction on the UE AS context handling	14.2.2	agreed	R2	TEI13_NB_	RP-76						
36.331	2849	1	Rel-14	A	RP-171245	R2-1705887	approved	Correction on attach without PDN connectivity	14.2.2	agreed	R2	NB_IoT-Cor	RP-76						
36.331	2851	1	Rel-14	F	RP-171233	R2-1706016	approved	Miscellaneous RRC corrections on mobility enhancement	14.2.2	agreed	R2	LTE_eMob-	RP-76						
36.331	2852	1	Rel-13	F	RP-171245	R2-1705908	approved	Clarification on logicalChannelSR-ProhibitTimer for NB-IOT	13.5.0	agreed	R2	NB_IoT-Cor	RP-76						
36.331	2853	1	Rel-14	A	RP-171245	R2-1705895	approved	Clarification on logicalChannelSR-ProhibitTimer for NB-IOT	14.2.2	agreed	R2	NB_IoT-Cor	RP-76						
36.331	2854	2	Rel-14	F	RP-171223	R2-1706115	approved	Correction to SC-MCCH and SC-MTCH configuration without delta configuration	14.2.1	agreed	R2	NB_IOTenh	RP-76						
36.331	2869	1	Rel-14	F	RP-171230	R2-1705814	approved	Correction of SRS switching	14.2.2	agreed	R2	LTE_SRS_s	RP-76						
36.331	2870	2	Rel-14	F	RP-171223	R2-1706186	approved	Miscellaneous feMTC corrections and clarifications resulting from ASN.1review	14.2.1	agreed	R2	LTE_feMTC	RP-76						
36.331	2871	-	Rel-14	F	RP-171237	R2-1705408	approved	Miscellaneous eDECOR corrections and clarifications resulting from ASN.1 review	14.2.1	agreed	R2	eDECOR-U	RP-76						
36.331	2872	3	Rel-14	F	RP-171425	-	approved	Miscellaneous general corrections and clarifications resulting from ASN.1 review	14.2.2	-	R2	-	RP-76						
36.331	2873	1	Rel-14	F	RP-171221	R2-1706042	approved	Miscellaneous feMBMS corrections and clarifications resulting from ASN.1 review	14.2.1	agreed	R2	MBMS_LTE	RP-76						
36.331	2874	1	Rel-14	B	RP-171221	R2-1706018	approved	UE capabilities for feMBMS	14.2.1	agreed	R2	MBMS_LTE	RP-76						
36.331	2876	1	Rel-14	F	RP-171224	R2-1705896	approved	Long DRX values with regular wake-up cycle – Option 1	14.2.2	agreed	R2	NB_IoT-Cor	RP-76						
36.331	2879	-	Rel-14	A	RP-171244	R2-1705468	approved	Correction on terminology of SI for eMTC	14.2.0	agreed	R2	LTE_MTCa	RP-76						
36.331	2882	1	Rel-14	F	RP-171223	R2-1706037	approved	Correction on the description of ce-srsEnhancement for FeMTC	14.2.0	agreed	R2	LTE_feMTC	RP-76						
36.331	2883	3	Rel-14	B	RP-171223	R2-1706182	approved	Measurement gap sharing for FeMTC intra- and inter-frequency measurement	14.2.0	agreed	R2	LTE_feMTC	RP-76						
36.331	2884	1	Rel-14	F	RP-171223	R2-1705922	approved	Minor correction in TS 36.331 for feMTC	14.2.0	agreed	R2	LTE_feMTC	RP-76						
36.331	2885	2	Rel-14	F	RP-171223	R2-1706117	approved	Corrections on reconfiguration between CE mode and normal mode in eMTC	14.2.0	agreed	R2	LTE_feMTC	RP-76						
36.331	2887	1	Rel-14	F	RP-171511	R2-1705852	approved	Clarification regarding eFD-MIMO configuration (REL-14)	14.2.1	agreed	R2	LTE_eFDM	RP-76	was approved by email after RAN #76					
36.331	2889	1	Rel-14	F	RP-171235	R2-1706022	approved	Correction of issues related to ASN.1 review for eVoLTE	14.2.1	agreed	R2	LTE_VoLTE	RP-76						
36.331	2890	1	Rel-14	F	RP-171230	R2-1705847	approved	Merging of returningTimeBandPairList with regular supported BC capabilities (ASN.1 review issue S.059)	14.2.1	agreed	R2	LTE_SRS_s	RP-76						
36.331	2891	-	Rel-14	F	RP-171222	R2-1705500	approved	Consistent gap pattern configuration for serving cells	14.2.2	agreed	R2	LTE_meas_	RP-76	wrong Tdoc number (0 missing) on CR cover					
36.331	2903	2	Rel-14	B	RP-171407	R2-1706126	approved	Introduction of UE capability for V2X in 36.331	14.2.2	agreed	R2	LTE_V2X-C	RP-76						
36.331	2905	1	Rel-14	F	RP-171227	R2-1705844	approved	Correction on V2X behavior in 36.331	14.2.2	agreed	R2	LTE_V2X-C	RP-76						
36.331	2912	2	Rel-14	B	RP-171246	R2-1706167	approved	EUTRAN Sharing enhancement	14.2.2	endorsed	R2	TEI14	RP-76						
36.331	2913	-	Rel-13	F	RP-171245	R2-1706610	approved	Generic clarification of "first bit" as leftmost bit	13.5.0	agreed	R2	TEI13, LTE	RP-76						
36.331	2919	-	Rel-14	A	RP-171244	R2-1705689	approved	Clarification on additionalSpectrumEmission for eMTC	14.2.2	agreed	R2	LTE_MTCa	RP-76						
36.331	2920	-	Rel-14	A	RP-171245	R2-1705691	approved	Clarification on additionalSpectrumEmission for NB-IoT	14.2.2	agreed	R2	NB_IOT-Co	RP-76						
36.331	2927	-	Rel-14	F	RP-171224	R2-1705756	approved	Correction to CarrierConfigDedicated-NB	14.2.2	agreed	R2	NB_IOTenh	RP-76						
36.331	2929	2	Rel-14	F	RP-171224	R2-1706179	approved	Miscellaneous NB-IoT corrections and clarifications resulting from ASN.1 review	14.2.2	agreed	R2	NB_IOTenh	RP-76						
36.331	2930	2	Rel-13	F	RP-171245	R2-1705940	approved	Extension of SIIntraSearchP value range	13.5.0	agreed	R2	NB_IoT-Cor	RP-76						
36.331	2931	2	Rel-14	A	RP-171245	R2-1706104	approved	Extension of SIIntraSearchP value range	14.2.2	agreed	R2	NB_IoT-Cor	RP-76						
36.331	2932	-	Rel-14	F	RP-171223	R2-1705772	approved	Maximum PDSCH/PUSCH BW preference indication handling for handover	14.2.2	agreed	R2	LTE_feMTC	RP-76						

Samsung Exhibit 1025, Page 1789 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

36.331	2938	3	Rel-14	F	RP-171225	R2-1706152	approved	Revert PDCP state variable HFN and SN back to the values used in the source cell	14.2.2	agreed	R2	TEI14	RP-76						
36.331	2942	1	Rel-14	F	RP-171236	R2-1706101	approved	ASN.1 corrections for eLWA	14.2.2	agreed	R2	LTE_WLAN	RP-76						
36.331	2943	-	Rel-14	A	RP-171241	R2-1705986	approved	Clarification on UE capability and early feature support	14.2.2	agreed	R2	LTE-L23, TI	RP-76						
36.331	2944	-	Rel-14	A	RP-171243	R2-1705988	approved	Clarification regarding EBF-FDMIMO configuration (REL-13)	14.2.2	agreed	R2	LTE_EBF_F	RP-76						
36.331	2945	1	Rel-14	A	RP-171245	R2-1706202	approved	Generic clarification of "first bit" as leftmost bit	14.2.2	agreed	R2	TEI13,LTE	RP-76						
36.331	2948	-	Rel-14	B	RP-171229	R2-1705998	approved	Introduction UE capabilities on high speed	14.2.2	agreed	R2	LTE_high_s	RP-76						
36.331	2949	-	Rel-14	F	RP-171229	R2-1706008	approved	Correction of high speed	14.2.2	agreed	R2	LTE_high_s	RP-76						
36.331	2950	-	Rel-14	F	RP-171227	R2-1705854	approved	CR on reduction of SIB21 size	14.2.2	agreed	R2	LTE_V2X-Co	RP-76						
36.331	2951	1	Rel-13	F	RP-171244	R2-1706109	approved	Configuration of preamble groups for CE levels and preamble groups A/B	13.5.0	agreed	R2	LTE_MTCe	RP-76						
36.331	2952	1	Rel-14	A	RP-171244	R2-1706196	approved	Configuration of preamble groups for CE levels and preamble groups A/B	14.2.2	agreed	R2	LTE_MTCe	RP-76						
36.331	2953	1	Rel-13	F	RP-171244	R2-1706176	approved	Extension of RSRP range for eMTC	13.5.0	agreed	R2	LTE_eMTC	RP-76						
36.331	2954	1	Rel-14	A	RP-171244	R2-1706177	approved	Extension of RSRP range for eMTC	14.2.2	agreed	R2	LTE_eMTC	RP-76						
36.331	2957	-	Rel-12	F	RP-171242	R2-1706098	approved	Setting of FGI 107 and 108 in case of TDD-FDD CA	12.13.0	agreed	R2	TEI12	RP-76						
36.331	2958	-	Rel-14	C	RP-171169	-	approved	FeMBMS/unicast-mixed carrier flag in measurement object	14.2.2	-	R2	MBMS_LTE	RP-76						
36.355	0169	3	Rel-14	F	RP-171224	R2-1706166	approved	Compact Signal Measurement Information for OTDOA	14.1.0	agreed	R2	NB_IOTenh	RP-76						
36.355	0171	1	Rel-14	F	RP-171223	R2-1704441	approved	Correction to PRS Subframe Offset	14.1.0	agreed	R2	LTE_feMTC	RP-76						
36.355	0173	1	Rel-14	F	RP-171223	R2-1704443	approved	Correction to SFN time stamp in OTDOA Signal Measurement Information	14.1.0	agreed	R2	LTE_feMTC	RP-76						
36.355	0174	1	Rel-14	F	RP-171223	R2-1704444	approved	Correction to OTDOA capabilities	14.1.0	agreed	R2	LTE_feMTC	RP-76						
36.355	0175	1	Rel-14	F	RP-171224	R2-1704437	approved	Correction to NPRS	14.1.0	agreed	R2	NB_IOTenh	RP-76						
36.355	0176	2	Rel-14	F	RP-171225	R2-1704436	approved	LPP clean-up	14.1.0	agreed	R2	TEI14	RP-76						
36.355	0177	-	Rel-14	F	RP-171224	R2-1704438	approved	Corrections to number of NPRS carriers and ECID measurements for NB-IoT	14.1.0	agreed	R2	NB_IOTenh	RP-76						
36.355	0178	1	Rel-14	F	RP-171224	R2-1705914	approved	Removal of FFS for retransmission timer in LPP	14.1.0	agreed	R2	NB_IOTenh	RP-76						
36.355	0181	1	Rel-14	F	RP-171224	R2-1705912	approved	Signalling optimisation for NB-IoT Enhancements	14.1.0	agreed	R2	NB_IOTenh	RP-76						
36.361	0006	-	Rel-14	F	RP-171225	R2-1705695	approved	Clarification on LWIP aggregation	14.0.0	agreed	R2	TEI14	RP-76						
36.413	1503	2	Rel-13	F	RP-171329	R3-171275	approved	Correction on the presence of Extended UE Identity Index Value	13.5.0	agreed	R3	TEI13, LTE	RP-76						
36.413	1504	3	Rel-14	A	RP-171329	R3-171380	approved	Correction on the presence of Extended UE Identity Index Value	14.2.0	agreed	R3	TEI13, LTE	RP-76						
36.413	1508	2	Rel-13	F	RP-171329	R3-171525	approved	Correction on Overload action for exception reporting	13.5.0	agreed	R3	TEI13	RP-76						
36.413	1509	2	Rel-14	A	RP-171329	R3-171526	approved	Correction on Overload action for exception reporting	14.2.0	agreed	R3	TEI13	RP-76						
36.413	1510	-	Rel-14	F	RP-171323	R3-171194	approved	Impact on paging from NB-IoT enhancements	14.2.0	agreed	R3	NB_IOTenh	RP-76						
36.413	1514	-	Rel-13	F	RP-171329	R3-171282	approved	Correction of missing security information in Suspend and Resume messages	13.5.0	agreed	R3	NB_IOT-Co	RP-76						
36.413	1515	-	Rel-14	A	RP-171329	R3-171283	approved	Correction of missing security information in Suspend and Resume messages	14.2.0	agreed	R3	NB_IOT-Co	RP-76						
36.413	1517	2	Rel-14	F	RP-171323	R3-172024	approved	Correction on UE-AMBR for NB-IoT UE using CP solution	14.2.0	agreed	R3	TEI14, NB_	RP-76						
36.413	1519	-	Rel-13	F	RP-171329	R3-171677	approved	Correction to Path Switch Request for RRC Resume Cause	13.5.0	agreed	R3	NB_IOT-Co	RP-76						
36.413	1520	-	Rel-14	A	RP-171329	R3-171678	approved	Correction to Path Switch Request for RRC Resume Cause	14.2.0	agreed	R3	NB_IOT-Co	RP-76						
36.413	1521	3	Rel-14	B	RP-171323	R3-172035	approved	Support of RLF for CP CIoT Optimisation	14.2.0	agreed	R3	NB_IOTenh	RP-76						
36.414	0017	2	Rel-14	F	RP-171324	R3-171388	approved	TS 36.414 derivation of Diffserv code point marking includes ARP	14.0.0	agreed	R3	TEI14	RP-76						
36.414	0018	-	Rel-14	D	RP-171324	R3-171563	approved	Rapporteur editorial review	14.0.0	agreed	R3	TEI14	RP-76						
36.423	1032	1	Rel-13	F	RP-171329	R3-171946	approved	Introduction of UL TNL address in CIoT UP Solution	13.6.0	agreed	R3	TEI13	RP-76						
36.423	1033	1	Rel-14	A	RP-171329	R3-171947	approved	Introduction of UL TNL address in CIoT UP Solution	14.2.0	agreed	R3	TEI13	RP-76						
36.424	0024	2	Rel-14	F	RP-171324	R3-171389	approved	TS 36.424 derivation of Diffserv code point marking includes ARP	14.0.0	agreed	R3	TEI14	RP-76						
36.424	0025	-	Rel-14	F	RP-171324	R3-171373	approved	Clarification of the use of the RAN Container	14.0.0	agreed	R3	TEI14	RP-76						
36.424	0026	-	Rel-14	D	RP-171324	R3-171675	approved	Rapporteur editorial review	14.0.0	agreed	R3	TEI14	RP-76	wrong TDoc number on CR cover					
36.444	0077	1	Rel-14	F	RP-171325	R3-171294	approved	Correction of eNB ID part in E-UTRAN CGI	14.0.0	agreed	R3	LTE_FNBID	RP-76						
36.455	0074	1	Rel-14	F	RP-171323	R3-171270	approved	Correction on NB-IoT OTDOA	14.1.0	agreed	R3	TEI14, NB_	RP-76						
36.455	0075	1	Rel-14	D	RP-171324	R3-171489	approved	Rapporteur's Review of LPPa Editorials	14.1.0	agreed	R3	TEI14	RP-76						
36.463	0038	1	Rel-14	F	RP-171326	R3-171282	approved	Corrections on inter-WLAN interworking mode error handling	14.1.0	agreed	R3	LTE_WLAN	RP-76						
36.463	0039	1	Rel-14	F	RP-171324	R3-171913	approved	Rapporteur update for TS 36.463	14.1.0	agreed	R3	TEI14	RP-76						
36.464	0011	-	Rel-14	F	RP-171324	R3-171374	approved	Clarification of the use of the RAN Container	14.0.0	agreed	R3	TEI14	RP-76						
36.508	0906	1	Rel-14	F	RP-171350	R5-172850	approved	Update SRB reconfiguration for NB-IoT	14.1.0	agreed	R5	NB_IOT-UE	RP-76						
36.508	0908	-	Rel-14	F	RP-171335	R5-172049	approved	Updates to D2D ProSe default message contents	14.1.0	agreed	R5	LTE_D2D_f	RP-76						
36.508	0909	1	Rel-14	F	RP-171350	R5-172851	approved	NB-IoT: Add new generic procedure for generic RB establishment for UP	14.1.0	agreed	R5	NB_IOT-UE	RP-76						
36.508	0910	-	Rel-14	F	RP-171363	R5-172061	approved	Editorial update to references to PhysicalConfigDedicated-DEFAULT for SIG	14.1.0	agreed	R5	TEI8_Test	RP-76						
36.508	0911	1	Rel-14	F	RP-171345	R5-172875	approved	Update SystemInfomationBlockType2	14.1.0	agreed	R5	LTE_MTCe	RP-76						
36.508	0912	1	Rel-14	F	RP-171345	R5-173000	approved	Update ATTACH ACCEPT	14.1.0	agreed	R5	LTE_MTCe	RP-76						
36.508	0913	1	Rel-14	F	RP-171345	R5-172999	approved	Update RRCConnectionSetupComplete	14.1.0	agreed	R5	LTE_MTCe	RP-76						
36.508	0915	-	Rel-14	F	RP-171382	R5-172115	approved	NB-IoT test frequencies for Band 70	14.1.0	agreed	R5	NB_IOT_R1	RP-76						
36.508	0916	1	Rel-14	F	RP-171345	R5-172876	approved	Update generic procedure control plane CIoT connection request	14.1.0	agreed	R5	LTE_MTCe	RP-76						
36.508	0917	1	Rel-14	F	RP-171345	R5-172877	approved	Add generic procedure control plane CIoT with test mode	14.1.0	agreed	R5	LTE_MTCe	RP-76						
36.508	0918	1	Rel-14	F	RP-171345	R5-173001	approved	Update RRCConnectionRelease	14.1.0	agreed	R5	LTE_MTCe	RP-76						
36.508	0919	1	Rel-14	F	RP-171345	R5-172879	approved	Update generic procedure user plane CIoT connection request	14.1.0	agreed	R5	LTE_MTCe	RP-76	wrong rev number on CR cover					
36.508	0920	1	Rel-14	F	RP-171345	R5-173002	approved	Add generic procedure user plane CIoT with test mode	14.1.0	agreed	R5	LTE_MTCe	RP-76						
36.508	0921	1	Rel-14	F	RP-171345	R5-173003	approved	Update UE test state	14.1.0	agreed	R5	LTE_MTCe	RP-76						
36.508	0922	1	Rel-14	F	RP-171345	R5-172880	approved	Add messages for resuming an RRC connection	14.1.0	agreed	R5	LTE_MTCe	RP-76						
36.508	0923	1	Rel-14	F	RP-171350	R5-173406	approved	Update to NB-IOT RRM cell configuration	14.1.0	agreed	R5	NB_IOT-UE	RP-76						
36.508	0924	1	Rel-14	F	RP-171343	R5-173416	approved	New connection diagrams for RX tests with 2Rx and 4Rx and clarification for TX tests	14.1.0	agreed	R5	LTE_4Rx_A	RP-76						
36.508	0925	-	Rel-14	F	RP-171355	R5-172227	approved	CA_46C-66A test frequencies for signalling test and correction to CA_46A-66A	14.1.0	agreed	R5	LTE_CA_R	RP-76						
36.508	0926	1	Rel-14	F	RP-171365	R5-172895	approved	Addition of Band 66 Frequencies	14.1.0	agreed	R5	TEI9_Test	RP-76						
36.508	0927	1	Rel-14	F	RP-171375	R5-172896	approved	Update System Information Block type 19 for Band > 64	14.1.0	agreed	R5	TEI11_Test	RP-76						
36.508	0929	1	Rel-14	F	RP-171510	R5-173035	approved	Correction to SIB21	14.1.0	agreed	R5	LTE_SL_V2	RP-76	was approved by email after RAN #76					
36.508	0930	1	Rel-14	F	RP-171357	R5-173036	approved	Correction to RRCConnectionReconfiguration (SideLink)	14.1.0	agreed	R5	LTE_SL_V2	RP-76						
36.508	0931	1	Rel-14	F	RP-171510	R5-173352	approved	Introduction of the generic procedures for V2X Communication	14.1.0	agreed	R5	LTE_V2X-U	RP-76	was approved by email after RAN #76					
36.508	0932	1	Rel-14	F	RP-171345	R5-173315	approved	RadioResourceConfigCommon-DEFAULT correction for eMTC (Editorial)	14.1.0	agreed	R5	LTE_MTCe	RP-76						
36.508	0933	-	Rel-14	F	RP-171365	R5-172324	approved	MobilityControlInfo-HO correction for bands > 64 (Editorial)	14.1.0	agreed	R5	TEI9_Test	RP-76						
36.508	0934	1	Rel-14	F	RP-171355	R5-172941	approved	Addition of CA_2A-66A, CA_5A-66A and CA_13A-66A test frequencies for signalling test	14.1.0	agreed	R5	LTE_CA_R	RP-76						

Samsung Exhibit 1025, Page 1790 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

36.508	0936	1	Rel-14	F	RP-171345	R5-173408	approved	Separation of Narrowband Index for SI message and Data (PDSCH/MPDCCH/PUSCH) for eMTC test	14.1.0	agreed	R5	LTE_MTCd	RP-76						
36.508	0938	-	Rel-14	F	RP-171345	R5-172427	approved	Update to e-MTC SIB-2 Signaling	14.1.0	agreed	R5	LTE_MTCd	RP-76						
36.508	0940	1	Rel-14	F	RP-171340	R5-172944	approved	Correction of test frequency selection of band 20 in Table 6.2.3.2-2	14.1.0	agreed	R5	LTE_CA_R	RP-76						
36.508	0942	1	Rel-14	F	RP-171355	R5-173227	approved	Addition of Figure Connection for more than 3DL CA with static propagation channels and additional im	14.1.0	agreed	R5	LTE_CA_R	RP-76						
36.508	0943	1	Rel-14	F	RP-171344	R5-173028	approved	LAA band 46 clarification on DL only operation	14.1.0	agreed	R5	LTE_LAA-U	RP-76						
36.508	0944	-	Rel-14	F	RP-171344	R5-172507	approved	Correction to PhysicalConfigdedicated Parameters for LAA	14.1.0	agreed	R5	LTE_LAA-U	RP-76						
36.508	0947	-	Rel-14	F	RP-171355	R5-172561	approved	Update of test frequencies for 2DL/1UL of CA_3A-3A and CA_7A-7A due to new REFSENS test points	14.1.0	agreed	R5	LTE_CA_R	RP-76						
36.508	0948	-	Rel-14	F	RP-171379	R5-172567	approved	Addition of SRS switching common test environment	14.1.0	agreed	R5	LTE_SRS_s	RP-76						
36.508	0949	1	Rel-14	F	RP-171510	R5-172981	approved	Update of V2X related message contents in 36.508	14.1.0	agreed	R5	LTE_V2X-U	RP-76	was approved by email after RAN #76					
36.508	0950	-	Rel-14	F	RP-171355	R5-172582	approved	Addition of test frequencies with Low Wgap for CA_66A-66A	14.1.0	agreed	R5	LTE_CA_R	RP-76						
36.508	0952	-	Rel-14	F	RP-171345	R5-172636	approved	Correction to scheduling request parameters for CatM1 using HD-FDD	14.1.0	agreed	R5	LTE_MTCd	RP-76						
36.508	0953	-	Rel-14	F	RP-171359	R5-172672	approved	Introduction of test frequencies for Band 48 for protocol testing	14.1.0	agreed	R5	LTE_TDD_c	RP-76						
36.508	0955	-	Rel-14	F	RP-171382	R5-172796	approved	Addition of Rel-14 NB-IoT operating bands	14.1.0	agreed	R5	NB_IOT_R1	RP-76						
36.508	0956	1	Rel-14	F	RP-171510	R5-173353	approved	Addition of reference test frequencies for V2X 47B	14.1.0	agreed	R5	LTE_V2X_U	RP-76	was approved by email after RAN #76					
36.508	0957	-	Rel-14	F	RP-171350	R5-172776	approved	NB-IoT test frequencies update for inband operation mode	14.1.0	agreed	R5	NB_IOT-UE	RP-76						
36.508	0959	-	Rel-14	F	RP-171363	R5-172786	approved	Editorial correction to Clause and Table numbers in generic procedure 4.5A.3B	14.1.0	agreed	R5	TEI8_Test	RP-76						
36.508	0960	1	Rel-14	F	RP-171363	R5-173006	approved	Correction to DRB logical channel configurations	14.1.0	agreed	R5	TEI8_Test	RP-76	wrong Tdoc number on CR cover					
36.508	0961	1	Rel-14	F	RP-171343	R5-172961	approved	Update for Antenna configuration for 4 Rx UE antenna	14.1.0	agreed	R5	LTE_4Rx_A	RP-76						
36.508	0963	-	Rel-14	F	RP-171350	R5-172853	approved	Correction to EPS network feature support for ATTACH ACCEPT and TRACKING AREA UPDATE ACC	14.1.0	agreed	R5	NB_IOT-UE	RP-76						
36.508	0964	-	Rel-14	F	RP-171350	R5-172878	approved	Update SystemInformationBlockType3-NB	14.1.0	agreed	R5	NB_IOT-UE	RP-76						
36.508	0965	-	Rel-14	F	RP-171337	R5-172946	approved	Introduction of test frequencies for 2UL/2DL of DC_41A-42A to section 6	14.1.0	agreed	R5	LTE_SC_er	RP-76						
36.508	0966	-	Rel-14	F	RP-171345	R5-172962	approved	Correction to RACH-ConfigCommon-DEFAULT	14.1.0	agreed	R5	LTE_MTCd	RP-76						
36.509	0168	1	Rel-14	F	RP-171510	R5-173038	approved	The UE test loop mode for V2X Communication	13.3.0	agreed	R5	LTE_SL_V2	RP-76	was approved by email after RAN #76					
36.509	0170	-	Rel-13	F	RP-171350	R5-172854	approved	Introduction of UE test loop mode1 for control plane loopback of IP PDUs via UL TFT handler	13.3.0	agreed	R5	NB_IOT-UE	RP-76						
36.521-1	3443	1	Rel-14	F	RP-171355	R5-173209	approved	Update of test points and test requirements in TC 7.3A.5 for CA_4A-12A-30A	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3444	1	Rel-14	F	RP-171384	R5-173341	approved	Correction to Band 70 test frequencies to clarify the use of two duplex spacings	14.2.0	agreed	R5	TEI14_Test	RP-76						
36.521-1	3446	1	Rel-14	F	RP-171355	R5-173351	approved	CA_46A-46A-66A, CA_46C-66A Receiver requirements	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3447	-	Rel-14	F	RP-171382	R5-172116	approved	NB-IoT bands 11, 25, 31, and 70 introduction to receiver requirements	14.2.0	agreed	R5	NB_IOT_R1	RP-76						
36.521-1	3448	1	Rel-14	F	RP-171344	R5-173276	approved	Addition of new LAA Test Case - CQI reporting / PUSCH 3-1 / FDD Pcell	14.2.0	agreed	R5	LTE_LAA-U	RP-76						
36.521-1	3449	1	Rel-14	F	RP-171344	R5-173277	approved	Addition of new LAA Test Case - CQI reporting / PUSCH 3-1 / TDD Pcell	14.2.0	agreed	R5	LTE_LAA-U	RP-76						
36.521-1	3450	-	Rel-14	F	RP-171344	R5-172142	approved	Uncertainties and Test Tolerances for new LAA Test Cases - CQI reporting / PUSCH 3-1	14.2.0	agreed	R5	LTE_LAA-U	RP-76						
36.521-1	3451	1	Rel-14	F	RP-171355	R5-173210	approved	New CA band combinations CA_1A-41A-42C and 1A-41C-42A - Updates of 7.3A.9 REFSENS	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3452	1	Rel-14	F	RP-171355	R5-173212	approved	New CA band combinations CA_3C-9A - Updates of 7.3A.5 REFSENS	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3453	1	Rel-14	F	RP-171341	R5-173298	approved	Introduction to New Rx test case 7.6.3A.8 Narrow band blocking for 5DL CA	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3454	1	Rel-14	F	RP-171341	R5-173289	approved	Introduction to New Rx test case 7.7A.8 Spurious response for 5DL CA	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3455	1	Rel-14	F	RP-171341	R5-173290	approved	Introduction to New Rx test case 7.8.1A.8 Wideband intermodulation for 5DL CA	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3456	1	Rel-14	F	RP-171374	R5-173201	approved	Correction to typos in Rx test cases for CA	14.2.0	agreed	R5	TEI10_TES	RP-76						
36.521-1	3457	-	Rel-14	F	RP-171374	R5-172196	approved	Correction to typos in UL-MIMO test cases 6.3.2B	14.2.0	agreed	R5	TEI10_Test	RP-76						
36.521-1	3458	-	Rel-14	F	RP-171375	R5-172198	approved	Clarification to measurement of SEM in test procedure of TC 6.6.2.1A.2	14.2.0	agreed	R5	TEI11_Test	RP-76						
36.521-1	3459	-	Rel-14	F	RP-171375	R5-172199	approved	Introduction of switched case for inter-band CA transmit modulation test cases	14.2.0	agreed	R5	TEI11_Test	RP-76						
36.521-1	3460	-	Rel-14	F	RP-171377	R5-172200	approved	Introduction of switched case for TC 6.5.2A.1.2_1	14.2.0	agreed	R5	TEI13_Test	RP-76						
36.521-1	3461	-	Rel-14	F	RP-171374	R5-172201	approved	Update of test requirements in TC 7.3A.3 for missing CA configurations	14.2.0	agreed	R5	TEI10_Test	RP-76						
36.521-1	3462	1	Rel-14	F	RP-171343	R5-173417	approved	Update of legacy Reference Sensitivity CA tests for 4Rx	14.2.0	agreed	R5	LTE_4Rx_A	RP-76						
36.521-1	3463	-	Rel-14	F	RP-171343	R5-172203	approved	Update of TC 7.3_1 to align with minimum conformance requirements	14.2.0	agreed	R5	LTE_4Rx_A	RP-76						
36.521-1	3464	-	Rel-14	F	RP-171341	R5-172206	approved	Update of TC 6.6.2.2A.2 for CA_2A-5A and CA_2A-12A	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3465	-	Rel-14	F	RP-171341	R5-172207	approved	Update of TC 6.6.3.3A.2 for CA_2A-5A and CA_2A-12A	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3466	1	Rel-14	F	RP-171341	R5-173291	approved	Update of test requirements in TC 7.3A.6 for new Rel-13 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3467	-	Rel-14	F	RP-171383	R5-172214	approved	Remove content of SDR test cases for 4Rx	14.2.0	agreed	R5	LTE_4Rx_A	RP-76						
36.521-1	3468	-	Rel-14	F	RP-171355	R5-172216	approved	Update of requirements in TC 6.2.2A.2 for new Rel-14 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3469	1	Rel-14	F	RP-171355	R5-173385	approved	Update of TC 6.2.4A.2 for new Rel-14 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3470	1	Rel-14	F	RP-171355	R5-173386	approved	Update of TC 6.2.4A.2_1 for new Rel-14 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3471	-	Rel-14	F	RP-171355	R5-172219	approved	Update of test requirements in TC 6.6.3.1A.2 for new Rel-14 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3472	1	Rel-14	F	RP-171355	R5-173215	approved	Update of TC 6.6.3.2A.2 for Rel-14 CA configuration CA_2A-7A	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3473	-	Rel-14	F	RP-171355	R5-172221	approved	Update of initial conditions in TC 6.6.3.3A.2 for new Rel-14 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3474	1	Rel-14	F	RP-171355	R5-173387	approved	Update of TC 6.6.2.2A.2 for new Rel-14 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3475	1	Rel-14	F	RP-171365	R5-173388	approved	Update of TC 6.6.2.2A.2_1 for new Rel-14 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3476	-	Rel-14	F	RP-171355	R5-172224	approved	Update of test requirements in TC 7.3A.6 for new Rel-14 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3477	-	Rel-14	F	RP-171341	R5-172255	approved	Update of the TC about TDD FDD CA Sustained data rate performance	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3478	-	Rel-14	F	RP-171341	R5-172260	approved	Update of the TC 7.3A.5 REFSENS for 3DL CA (CA_1A-19A-42A, 1A-21A-42A, 19A-21A-42A)	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3479	1	Rel-14	F	RP-171341	R5-173401	approved	Update of the TC 7.3A.9 REFSENS for 4DL CA (CA_1A-3A-19A-42A, 1A-19A-21A-42A, 1A-19A-42C,	14.2.0	agreed	R5	LTE_CA_R	RP-76						
36.521-1	3481	1	Rel-14	F	RP-171382	R5-173348	approved	Update of the TC 6.6.3F.2 Spurious emission band UE co-existence for category NB1 for Release 14	14.2.0	agreed	R5	NB_IOT_R1	RP-76						
36.521-1	3482	1	Rel-14	F	RP-171510	R5-173354	approved	Update to operating bands for V2X Communication	14.2.0	agreed	R5	LTE_V2X-U	RP-76	was approved by email after RAN #76					
36.521-1	3483	1	Rel-14	F	RP-171510	R5-173355	approved	Introduction of 6.2.2G UE Maximum Output Power for V2X Communication	14.2.0	agreed	R5	LTE_V2X-U	RP-76	was approved by email after RAN #76					
36.521-1	3484	1	Rel-14	F	RP-171357	R5-173356	approved	Update to 6.2.3G.1 Maximum Power Reduction (MPR) for V2X Communication / Power class 3 / Conti	14.2.0	agreed	R5	LTE_SL_V2	RP-76						
36.521-1	3485	1	Rel-14	F	RP-171357	R5-173357	approved	Update to 6.2.4G.1 Additional Maximum Power Reduction (A-MPR) for V2X Communication / Non-cont	14.2.0	agreed	R5	LTE_SL_V2	RP-76						
36.521-1	3486	1	Rel-14	F	RP-171357	R5-173358	approved	Update to TC 6.2.5G.1 Configured UE transmitted Output Power for V2X Communication / Non-concurr	14.2.0	agreed	R5	LTE_SL_V2	RP-76						
36.521-1	3487	1	Rel-14	F	RP-171377	R5-173384	approved	Correction to the A-SE requirement for Band 41	14.2.0	agreed	R5	TEI13_Test	RP-76						
36.521-1	3488	-	Rel-14	F	RP-171337	R5-172307	approved	Update to the Dual Connectivity performance test cases	14.2.0	agreed	R5	LTE_SC_er	RP-76						
36.521-1	3489	1	Rel-14	F	RP-171510	R5-173359	approved	Introduction of 6.2.2G.2 UE Maximum Output Power for V2X Communication / Simultaneous E-UTRA	14.2.0	agreed	R5	LTE_V2X-U	RP-76	was approved by email after RAN #76					
36.521-1	3490	1	Rel-14	F	RP-171510	R5-173360	approved	Introduction of 6.2.5G.2 Configured UE transmitted Output Power for V2X Communication / Simultaneo	14.2.0	agreed	R5	LTE_V2X-U	RP-76	was approved by email after RAN #76					
36.521-1	3492	1	Rel-14	F	RP-171510	R5-173361	approved	Introduction of 6.2.3G.1.3 Maximum Power Reduction (MPR) for V2X Communication / Power class 3 /	14.2.0	agreed	R5	LTE_V2X-U	RP-76	was approved by email after RAN #76					
36.521-1	3493	1	Rel-14	F	RP-171378	R5-173205	approved	Update of NAICS demodulation TCs	14.2.0	agreed	R5	TEI12_Test	RP-76						
36.521-1	3494	-	Rel-14	F	RP-171346	R5-172345	approved	Alignment of Fixed Reference Channel two antenna ports for UE category M1 to TS 36.101	14.2.0	agreed	R5	LTE_MTCe	RP-76						
36.521-1	3495	-	Rel-14	F	RP-171343	R5-172347	approved	Invalid csi-ReportMode-r10 in message exceptions of CSI reporting for 4Rx UE TC	14.2.0	agreed	R5	LTE_4Rx_A	RP-76						

Samsung Exhibit 1025, Page 1791 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

36.521-1	3496	1	Rel-14	F	RP-171343	R5-173329	approved	Sending of MaxLayersMimo-r10 IE for 4Rx TCs with more than 2 Layers	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3497	1	Rel-14	F	RP-171381	R5-173346	approved	eHST RF: Practical and consistent model definition for HST-SFN scenario	14.2.0	agreed	R5	LTE_high_s	RP-76					
36.521-1	3498	-	Rel-14	F	RP-171374	R5-172350	approved	Correction of UL RMC for 5+10+10 MHz test step in TC 8.7.1.1_A.2	14.2.0	agreed	R5	TEI10_Test	RP-76					
36.521-1	3499	-	Rel-14	F	RP-171346	R5-172351	approved	Editorial correction of references to tables in clause UE category M1 TCs	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3500	-	Rel-14	F	RP-171376	R5-172352	approved	Editorial correction of test case heading	14.2.0	agreed	R5	TEI12_Test	RP-76					
36.521-1	3501	-	Rel-14	F	RP-171376	R5-172353	approved	Removal of duplicate Test step in TC 8.2.3.1.2.3	14.2.0	agreed	R5	TEI12_Test	RP-76					
36.521-1	3502	1	Rel-14	F	RP-171376	R5-173431	approved	Updates to A-MPR, A-SEM and A-Spur TCs	14.2.0	agreed	R5	TEI12_Test	RP-76					
36.521-1	3504	-	Rel-14	F	RP-171374	R5-172359	approved	Update to chapter 8 & 9 PCC&SCC frequency mapping	14.2.0	agreed	R5	TEI10_Test	RP-76					
36.521-1	3505	-	Rel-14	F	RP-171376	R5-172360	approved	Editorial update to Annex G for DL 256QAM	14.2.0	agreed	R5	TEI12_Test	RP-76					
36.521-1	3506	-	Rel-14	F	RP-171346	R5-172362	approved	New eMTC test case 6.5.1EA_1, Frequency Error for UE category M1 (CE Mode B)	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3507	1	Rel-14	F	RP-171346	R5-173421	approved	Updates to Annex A and Annex G for eMTC test cases	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3508	1	Rel-14	F	RP-171346	R5-173342	approved	Updates to eMTC test case 8.11.1.1.1, FDD and half-duplex FDD Closed-loop spatial multiplexing perf	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3509	1	Rel-14	F	RP-171346	R5-173343	approved	Updates to eMTC test case 8.11.1.1.2, FDD and half-duplex FDD PDSCH Single-layer Spatial Multiplex	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3510	1	Rel-14	F	RP-171346	R5-173316	approved	Updates to eMTC test case 8.11.1.1.3, FDD and half-duplex FDD PDSCH Transmit Diversity 2x1 for UE	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3511	1	Rel-14	F	RP-171346	R5-173422	approved	Updates to eMTC test case 8.11.1.1.3_1, FDD PDS and half-duplex FDD CH Transmit Diversity 2x1 fo	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3512	1	Rel-14	F	RP-171346	R5-173344	approved	Updates to eMTC test case 8.11.1.2.1, TDD Closed-loop spatial multiplexing performance for UE categ	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3513	1	Rel-14	F	RP-171346	R5-173345	approved	Updates to eMTC test case 8.11.1.2.2, TDD PDSCH Single-layer Spatial Multiplexing on antenna ports	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3514	1	Rel-14	F	RP-171346	R5-173317	approved	Updates to eMTC test case 8.11.1.2.3, TDD PDSCH Transmit Diversity for UE category M1	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3515	1	Rel-14	F	RP-171346	R5-173318	approved	Updates to eMTC test case 9.8.1.1, FDD and Half duplex FDD CQI reporting definition under AWGN ac	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3516	-	Rel-14	F	RP-171355	R5-172374	approved	Align CA capability definitions for demodulation test cases in sub-clause 8.1.2.2 with TS 36.101 v14.3.	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3517	-	Rel-14	F	RP-171355	R5-172375	approved	Align CA delta RIB in sub-clause 7.3.3 with TS 36.101 v14.3.0	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3518	-	Rel-14	F	RP-171355	R5-172376	approved	Align CA delta TIB in sub-clause 6.2.5.3 with TS 36.101 v14.3.0	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3519	-	Rel-14	F	RP-171355	R5-172377	approved	Align CA minimum requirements for reference sensitivity in sub-clause 7.3A.0 with TS 36.101 v14.3.0	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3520	1	Rel-14	F	RP-171355	R5-172216	approved	Align operating bands and Channel bandwidths in sub-clause 5.2, 5.2A, 5.4.2.1 and 5.4.2A with TS36.	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3521	-	Rel-14	F	RP-171351	R5-172392	approved	Updated to NB-IoT RF tests cases	14.2.0	agreed	R5	NB_IOT-UE	RP-76					
36.521-1	3522	1	Rel-14	F	RP-171374	R5-173202	approved	Updated table references related to reference sensitivity in test description and test requirements	14.2.0	agreed	R5	TEI10_Test	RP-76					
36.521-1	3523	1	Rel-14	F	RP-171351	R5-173200	approved	Updated Test Applicability for TC 6.2.3E	14.2.0	agreed	R5	NB_IOT-UE	RP-76					
36.521-1	3524	-	Rel-14	F	RP-171360	R5-172397	approved	Updated to Table of E-UTRA channel numbers for SDL Band 69	14.2.0	agreed	R5	LTE_FDD_j	RP-76					
36.521-1	3525	1	Rel-14	F	RP-171344	R5-173278	approved	Introduction of LAA Dual-Layer Spatial Multiplexing with DM-RS with TDD as Pcell Test Case	14.2.0	agreed	R5	LTE_LAA-J	RP-76					
36.521-1	3526	-	Rel-14	F	RP-171344	R5-172422	approved	Retu dmission to update Annex F for test case 7.3A.3 to add LAA band combinations	14.2.0	agreed	R5	LTE_LAA-J	RP-76					
36.521-1	3527	1	Rel-14	F	RP-171355	R5-173217	approved	Addition of CA_13A-66A in TS 36.521-1	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3528	-	Rel-14	F	RP-171343	R5-172431	approved	Correction of codebookSubsetRestriction in test case 9.9.1.3.2	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3529	-	Rel-14	F	RP-171346	R5-172433	approved	Updates to FDD and half-duplex FDD demodulation of MPDCCH in CE Mode A and TDD demodulatior	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3530	1	Rel-14	F	RP-171343	R5-173330	approved	Updates to legacy FDD PDSCH demod test cases to include 4Rx UE	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3531	1	Rel-14	F	RP-171343	R5-173331	approved	Updates to legacy TDD PDSCH demod test cases to include 4Rx UE	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3532	1	Rel-14	F	RP-171343	R5-173332	approved	Updates to legacy TDD FDD CA PDSCH demod test cases to include 4Rx UE	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3533	1	Rel-14	F	RP-171343	R5-173333	approved	Updates to legacy sustained data rate test cases to include 4Rx UE	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3534	1	Rel-14	F	RP-171341	R5-173402	approved	Correction to Test configuration Tables in subclause 7.3A for 3DL CA and 4DL CA	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3535	1	Rel-14	F	RP-171341	R5-173295	approved	Introduction of 8.2.3.2.2.3 TDD FDD CA PDSCH Open Loop Spatial Multiplexing 2x2 for TDD PCell (4[	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3536	1	Rel-14	F	RP-171341	R5-173296	approved	Introduction of 8.2.3.2.2.4 TDD FDD CA PDSCH Open Loop Spatial Multiplexing 2x2 for TDD PCell (5[	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3539	1	Rel-14	F	RP-171341	R5-173302	approved	Addition of 3A for TDD FDD CA PDSCH Single Antenna and Open Loop Spatial Multiplexing 2x2 Pe	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3540	-	Rel-14	F	RP-171341	R5-172463	approved	Addition of Annex F for TDD FDD CA PDSCH Open Loop Multiplexing 2x2 Performance Test cases (4	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3542	1	Rel-14	F	RP-171344	R5-173279	approved	Update test case 7.6.2A.3 to add LAA band combinations	14.2.0	agreed	R5	LTE_LAA-J	RP-76					
36.521-1	3543	1	Rel-14	F	RP-171344	R5-173280	approved	Update test case 7.7A.3 to add LAA band combinations	14.2.0	agreed	R5	LTE_LAA-J	RP-76					
36.521-1	3544	-	Rel-14	F	RP-171351	R5-172487	approved	Change of UE target power configuration for Carrier leakage and In-band emissions tests	14.2.0	agreed	R5	NB_IOT-UE	RP-76					
36.521-1	3545	1	Rel-14	F	RP-171351	R5-173400	approved	Change of UE target power configuration for EVM test	14.2.0	agreed	R5	NB_IOT-UE	RP-76					
36.521-1	3546	1	Rel-14	F	RP-171351	R5-173423	approved	Clean up NPDCCH single-antenna performance test	14.2.0	agreed	R5	NB_IOT-UE	RP-76					
36.521-1	3547	1	Rel-14	F	RP-171351	R5-173424	approved	Clean up NPDSCH demodulation test in standalone and Guard-band mode	14.2.0	agreed	R5	NB_IOT-UE	RP-76					
36.521-1	3549	1	Rel-14	F	RP-171381	R5-173347	approved	Introduction of reference channels for enhanced high speed train test	14.2.0	agreed	R5	LTE_high_s	RP-76					
36.521-1	3550	2	Rel-14	F	RP-171355	R5-173070	approved	Introduction of CA_1A-11A-28A to section 7	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3551	-	Rel-14	F	RP-171355	R5-172527	approved	Introduction of CA_8A-11A-28A to section 7	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3552	1	Rel-14	F	RP-171355	R5-173220	approved	Corrections on 3A-28A-41A in Test Configuration Table of section 7.3A.5.4.1	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3553	1	Rel-14	F	RP-171355	R5-173390	approved	Introduction of 2UL/2DL CA_41A-42A to section 6	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3554	1	Rel-14	F	RP-171355	R5-173221	approved	Introduction of 2UL/2DL CA_41A-42A to section 7	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3555	1	Rel-14	F	RP-171341	R5-173303	approved	Update of 2DL/1UL of CA_3A-42A, CA_28A-42A, CA_41A-42A and CA_42A-46A to section 7.3A.3	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3556	1	Rel-14	F	RP-171341	R5-173306	approved	Introduction of 3DL/1UL of CA_2A-4A-7A and CA_3A-41A-42A to section 7.3A.5	14.2.0	agreed	R5	LTE_CA_R	RP-76	wrong rev number on CR cover				
36.521-1	3557	2	Rel-14	F	RP-171355	R5-173071	approved	Update of 2DL/1UL of CA_3A-3A and CA_7A-7A to section 7.3A.3	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3558	2	Rel-14	F	RP-171355	R5-173072	approved	Introduction of 3DL/1UL of CA_3A-3A-7A and CA_3A-7A-7A to section 7.3A.5	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3559	2	Rel-14	F	RP-171355	R5-173073	approved	Introduction of 4DL/1UL of CA_3A-3A-7A-7A to section 7.3A.9	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3560	1	Rel-14	F	RP-171341	R5-173298	approved	Correction of 3DL CA & 4DL CA RX TC	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3561	1	Rel-14	F	RP-171341	R5-173299	approved	Introduction of New TC7.3A.10 Reference sensitivity level for 5DL CA	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3562	1	Rel-14	F	RP-171341	R5-173301	approved	Addition of CA_8A-41C in test configuration in TC 7.3A.5	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3563	1	Rel-14	F	RP-171355	R5-173399	approved	Addition of CA_12A-66A in test configuration in 7.3A.3	14.2.0	agreed	R5	LTE_CA_R	RP-76	wrong rev number on CR cover				
36.521-1	3564	1	Rel-14	F	RP-171355	R5-173395	approved	Addition of CA bands in test configuration in TC 7.3A.5	14.2.0	agreed	R5	LTE_CA_R	RP-76	wrong rev number on CR cover				
36.521-1	3565	1	Rel-14	F	RP-171355	R5-173396	approved	Addition of CA bands in test configuration in TC 7.3A.9	14.2.0	agreed	R5	LTE_CA_R	RP-76	wrong rev number on CR cover				
36.521-1	3566	1	Rel-14	F	RP-171357	R5-173370	approved	Update of 7.3G.1 Reference sensitivity level for V2X Communication / Non-concurrent with E-UTRA up	14.2.0	agreed	R5	LTE_SL_V2	RP-76					
36.521-1	3567	2	Rel-14	F	RP-171510	R5-173436	approved	Introduction of 7.3G.2 Reference sensitivity level for V2X Communication / Simultaneous E-UTRA V2X	14.2.0	agreed	R5	LTE_V2XrU	RP-76	was approved by email after RAN #76				
36.521-1	3568	1	Rel-14	F	RP-171510	R5-173372	approved	Introduction of 7.3G.3 Reference sensitivity level for V2X Communication / Intra-band contiguous MCC	14.2.0	agreed	R5	LTE_V2XrU	RP-76	was approved by email after RAN #76				
36.521-1	3569	1	Rel-14	F	RP-171357	R5-173373	approved	Update of 7.4G.1 Maximum input level for V2X Communication / Non-concurrent with E-UTRA uplink ta	14.2.0	agreed	R5	LTE_SL_V2	RP-76					
36.521-1	3570	1	Rel-14	F	RP-171510	R5-173374	approved	Introduction of 7.4G.2 Maximum input level for V2X Communication / Simultaneous E-UTRA V2X adell	14.2.0	agreed	R5	LTE_V2XrU	RP-76	was approved by email after RAN #76				
36.521-1	3571	1	Rel-14	F	RP-171510	R5-173375	approved	Introduction of 7.4G.3 Maximum input level for V2X Communication / Intra-band contiguous MCC oper	14.2.0	agreed	R5	LTE_V2XrU	RP-76	was approved by email after RAN #76				
36.521-1	3572	1	Rel-14	F	RP-171357	R5-173376	approved	Update of 7.5G.1 Adjacent channel selectivity (ACS) for V2X Communication / Non-concurrent	14.2.0	agreed	R5	LTE_SL_V2	RP-76					
36.521-1	3573	1	Rel-14	F	RP-171510	R5-173377	approved	Introduction of 7.5G.2 Adjacent channel selectivity (ACS) for V2X Communication / Simultaneous E-UT	14.2.0	agreed	R5	LTE_V2XrU	RP-76	was approved by email after RAN #76				
36.521-1	3574	1	Rel-14	F	RP-171510	R5-173378	approved	Introduction of 7.5G.3 Adjacent channel selectivity (ACS) for V2X Communication / Intra-band contiguo	14.2.0	agreed	R5	LTE_V2XrU	RP-76	was approved by email after RAN #76				

Samsung Exhibit 1025, Page 1792 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

36.521-1	3575	1	Rel-14	F	RP-171357	R5-173379	approved	Update of 7.6.1G.1 In-band blocking for V2X Communication / Non-concurrent with E-UTRA uplink tran	14.2.0	agreed	R5	LTE_SL_V2	RP-76					
36.521-1	3576	1	Rel-14	F	RP-171510	R5-173380	approved	Introduction of 7.6.1G.2 In-band blocking for V2X Communication / Non-concurrent with E-UTRA uplink	14.2.0	agreed	R5	LTE_V2X-U	RP-76	was approved by email after RAN #76				
36.521-1	3577	1	Rel-14	F	RP-171510	R5-173381	approved	Introduction of 7.6.1G.3 In-band blocking for V2X Communication / Intra-band contiguous MCC operation	14.2.0	agreed	R5	LTE_V2X-U	RP-76	was approved by email after RAN #76				
36.521-1	3578	-	Rel-14	F	RP-171341	R5-172602	approved	Addition of Annex G.3A.5 and G.3A.6 for 4DL CA test cases.	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3579	-	Rel-14	F	RP-171341	R5-172603	approved	Removing of redundant editor's note for 4DL CA test cases	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3580	1	Rel-14	F	RP-171355	R5-173397	approved	Introduction of 3DL/1UL of CA_3A-20A-32A to section 7	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3581	1	Rel-14	F	RP-171382	R5-173349	approved	NB-IoT band 70 introduction to transmitter requirements	14.2.0	agreed	R5	NB_IOT_R1	RP-76					
36.521-1	3582	1	Rel-14	F	RP-171357	R5-173382	approved	Introduction of TC 7.8.1G Wide band Intermodulation for V2X	14.2.0	agreed	R5	LTE_SL_V2	RP-76					
36.521-1	3583	1	Rel-14	F	RP-171357	R5-173383	approved	Introduction of TC7.9G Spurious emissions for V2X	14.2.0	agreed	R5	LTE_SL_V2	RP-76					
36.521-1	3584	1	Rel-14	F	RP-171341	R5-173403	approved	Correction to 4DL CA out of band blocking interferer	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3585	-	Rel-14	F	RP-171341	R5-172626	approved	Correction to message contents for 4DL CA Rx tests	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3587	-	Rel-14	F	RP-171341	R5-172628	approved	Correction to message contents of 4DL CA 8.2.1.4.2_A.3	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3589	-	Rel-14	F	RP-171344	R5-172634	approved	Introducing uncertainty of receiver spurious emission for band 46	14.2.0	agreed	R5	LTE_LAA-U	RP-76					
36.521-1	3590	1	Rel-14	F	RP-171346	R5-173428	approved	Correction to transmit signal quality tests for category M1	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3591	1	Rel-14	F	RP-171346	R5-173409	approved	Clean up on Cat-M1 Rx test cases	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3592	1	Rel-14	F	RP-171346	R5-173410	approved	Clean up on Cat-M1 Tx test cases	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3593	1	Rel-14	F	RP-171346	R5-173411	approved	Correction to spurious emission band UE co-existence for UE category M1	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3594	-	Rel-14	F	RP-171346	R5-172641	approved	Correction to Annex A.2 and A.3 for Cat-M1	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3595	1	Rel-14	F	RP-171346	R5-173063	approved	Correction to CSI tests for Cat-M1	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3596	1	Rel-14	F	RP-171346	R5-173064	approved	Correction to MPDCCH aggregation level for Cat-M1	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3597	-	Rel-14	F	RP-171346	R5-172644	approved	Correction to Annex A.4 for Cat-M1	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3598	2	Rel-14	F	RP-171346	R5-173065	approved	Correction to Cat-M1 demodulation test cases	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-1	3600	1	Rel-14	F	RP-171355	R5-173223	approved	Addition of CA configuration CA_66A-66C, CA_xA-66A-66A and CA_66A-66A-xA for Refsens test	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3601	-	Rel-14	F	RP-171363	R5-172650	approved	Correction to spurious emission band UE co-existence test	14.2.0	agreed	R5	TEI8_Test	RP-76					
36.521-1	3602	-	Rel-14	F	RP-171363	R5-172651	approved	Editorial correction to 6.2.5	14.2.0	agreed	R5	TEI8_Test	RP-76					
36.521-1	3603	-	Rel-14	F	RP-171374	R5-172652	approved	Correction to message contents of 3DL CA Rx tests	14.2.0	agreed	R5	TEI10_Test	RP-76					
36.521-1	3604	1	Rel-14	F	RP-171343	R5-173203	approved	Correction to UL configuration for REFSENS test for CA_41C and CA_7C	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3605	1	Rel-14	F	RP-171374	R5-173204	approved	Clean up on test configuration tables for intra-contiguous 2CA Rx tests	14.2.0	agreed	R5	TEI10_Test	RP-76					
36.521-1	3606	1	Rel-14	F	RP-171374	R5-173427	approved	Correction to 3DL CA out of band blocking interferer	14.2.0	agreed	R5	TEI10_Test	RP-76					
36.521-1	3607	-	Rel-14	F	RP-171375	R5-172656	approved	Correction to message contents for 2DL CA Rx tests	14.2.0	agreed	R5	TEI11_Test	RP-76					
36.521-1	3608	1	Rel-14	F	RP-171363	R5-173206	approved	Correction to Annex B.2.2	14.2.0	agreed	R5	TEI8_test	RP-76					
36.521-1	3609	-	Rel-14	F	RP-171374	R5-172658	approved	Correction to PMI test for TM8 with 8 TX and with 4TX enhanced codebook	14.2.0	agreed	R5	TEI10_Test	RP-76					
36.521-1	3610	-	Rel-14	F	RP-171343	R5-172710	approved	Test tolerance and statistical test time addition to 4Rx demodulation test cases	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3611	-	Rel-14	F	RP-171359	R5-172715	approved	Addition of NS_27 for Band 48 in A-MPR test cases	14.2.0	agreed	R5	LTE_TDD_3	RP-76					
36.521-1	3612	1	Rel-14	F	RP-171359	R5-173339	approved	Addition of NS_27 for Band 48 in A-SEM test cases	14.2.0	agreed	R5	LTE_TDD_3	RP-76					
36.521-1	3613	1	Rel-14	F	RP-171359	R5-173340	approved	Addition of NS_27 for Band 48 in A-Spurious test cases	14.2.0	agreed	R5	LTE_TDD_3	RP-76					
36.521-1	3614	-	Rel-14	F	RP-171344	R5-172718	approved	Introduction of test case LAA PDFICH/PDCCH Transmit Diversity 2x2 with TDD as Pcell	14.2.0	agreed	R5	LTE_LAA-U	RP-76					
36.521-1	3616	-	Rel-14	F	RP-171374	R5-172720	approved	Applicability correction for eDL-MIMO test cases in part 1	14.2.0	agreed	R5	TEI10_Test	RP-76					
36.521-1	3617	-	Rel-14	F	RP-171341	R5-172724	approved	Correction to test case references in tables for applicability and test rules in clause 8.1.2.3	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3618	1	Rel-14	F	RP-171341	R5-173306	approved	Addition of test case TDD FDD CQI Reporting under AWGN conditions – PUCCH 1-0 for FDD PCell (5	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3619	1	Rel-14	F	RP-171341	R5-173307	approved	Addition of test case TDD FDD CQI Reporting under AWGN conditions – PUCCH 1-0 for TDD PCell (5	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3620	1	Rel-14	F	RP-171341	R5-173404	approved	Correction of CA configuration CA_28A-40C Refsens test	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3621	1	Rel-14	F	RP-171343	R5-173052	approved	Updates to legacy CA CQI reporting test cases to include 4Rx UE	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3622	1	Rel-14	F	RP-171343	R5-173053	approved	Updates to legacy single carrier CQI reporting test cases to include 4Rx UE	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3623	1	Rel-14	F	RP-171343	R5-173054	approved	Updates to legacy PMI and RI test cases to include 4Rx UE	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-1	3624	1	Rel-14	F	RP-171351	R5-173228	approved	Test Tolerances and general updates to NB-IoT performance test cases	14.2.0	agreed	R5	NB_IOT-UE	RP-76					
36.521-1	3625	-	Rel-14	F	RP-171355	R5-172814	approved	Update of minimum conformance requirement in 7.4A.0	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3626	1	Rel-14	F	RP-171344	R5-173281	approved	LAA: Addition of CQI Reporting with FDD as PCELL	14.2.0	agreed	R5	LTE_LAA-U	RP-76					
36.521-1	3628	-	Rel-14	F	RP-171341	R5-172824	approved	Introduction of 8.2.3.2.1.3 TDD FDD CA PDSCH Open Loop Multi Layer Spatial Multiplexing 2x2 for FE	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	3629	-	Rel-14	F	RP-171341	R5-172825	approved	Introduction of 8.2.3.2.1.4 TDD FDD CA PDSCH Open Loop Multi Layer Spatial Multiplexing 2x2 for FE	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-1	0550	-	Rel-14	F	RP-171355	R5-172112	approved	Addition of 14 CA configurations containing Band 66 to 36.521-2	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-2	0551	1	Rel-14	F	RP-171382	R5-173350	approved	NB-IoT bands 11, 25, 31, and 70 introduction to 36.521-2	14.2.0	agreed	R5	NB_IOT_R1	RP-76					
36.521-2	0552	-	Rel-14	F	RP-171355	R5-172158	approved	New CA band combination CA_1A-41C-42C - Updates of Table A.4.6.3-4	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-2	0553	1	Rel-14	F	RP-171355	R5-173224	approved	New CA band combination CA_3C-8A - Updates of Table A.4.6.3-3	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-2	0554	1	Rel-14	F	RP-171983	R5-173419	approved	Remove applicability of SDR test cases for 4Rx	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-2	0555	-	Rel-14	F	RP-171376	R5-172396	approved	Update to Additional UE radio access capabilities for NS_04	14.2.0	agreed	R5	TEI12_Test	RP-76					
36.521-2	0556	1	Rel-14	F	RP-171375	R5-173207	approved	Remove MPR/A-MPR test cases from Applicability spec	14.2.0	agreed	R5	TEI11_Test	RP-76					
36.521-2	0557	1	Rel-14	F	RP-171344	R5-173282	approved	LAA: Applicability update of LAA test cases	14.2.0	agreed	R5	LTE_LAA-U	RP-76					
36.521-2	0558	-	Rel-14	F	RP-171355	R5-172425	approved	Addition of CA_2A-66A, CA_5A-66A and CA_13A-66A to TS 36.521-2	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-2	0560	-	Rel-14	F	RP-171355	R5-172524	approved	Introduction of CA_1A-11A-28A to Annex A4 6.3	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-2	0561	-	Rel-14	F	RP-171355	R5-172528	approved	Introduction of CA_8A-11A-28A to Annex A4 6.3	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-2	0562	1	Rel-14	F	RP-171348	R5-173413	approved	Correction to F-D-FDD only test case comment and condition	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-2	0563	-	Rel-14	F	RP-171384	R5-172687	approved	Maintenance of the tables 4.1, 4.1-1a, 4.2 in TS36.521-2 for XML conversion	14.2.0	agreed	R5	TEI14_Test	RP-76					
36.521-2	0564	-	Rel-14	F	RP-171374	R5-172695	approved	Correction to RRM applicability condition C132	14.2.0	agreed	R5	TEI10_Test	RP-76					
36.521-2	0565	-	Rel-14	F	RP-171360	R5-172697	approved	Addition of new CA configuration CA_3A-69A to 36.521-2	14.2.0	agreed	R5	LTE_FDD_2	RP-76					
36.521-2	0566	-	Rel-14	F	RP-171340	R5-172699	approved	Addition of new CA configuration CA_2A-2A-12A to 36.521-2	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-2	0568	1	Rel-14	F	RP-171343	R5-173420	approved	4Rx updates to RF/RRM applicability specification	14.2.0	agreed	R5	LTE_4Rx_A	RP-76					
36.521-2	0569	-	Rel-14	F	RP-171374	R5-172721	approved	Applicability correction for eDL-MIMO test cases in part 2	14.2.0	agreed	R5	TEI10_Test	RP-76					
36.521-2	0570	1	Rel-14	F	RP-171340	R5-173308	approved	Applicability of Rel-13 CA RF and RRM test cases	14.2.0	agreed	R5	LTE_CA_R	RP-76					
36.521-2	0571	-	Rel-14	F	RP-171348	R5-172726	approved	Applicability of eMTC RF and RRM test cases	14.2.0	agreed	R5	LTE_MTCd	RP-76					
36.521-2	0572	-	Rel-14	F	RP-171336	R5-172734	approved	Add Applicability for TS 36.521-2 Test case 8.22.11 and 8.22.12	14.2.0	agreed	R5	LTE_SC_en	RP-76					
36.521-2	0574	1	Rel-14	F	RP-171365	R5-173367	approved	Corrections to Applicability Conformance and Conditions for intra/inter-frequency SI acquisition for HO	14.2.0	agreed	R5	TEI9_Test	RP-76					
36.521-2	0576	1	Rel-14	F	RP-171375	R5-173324	approved	Update of CA Physical Layer Baseline Implementation Capabilities for new CA configuration in Annex A	14.2.0	agreed	R5	TEI11_Test	RP-76					
36.521-2	0577	-	Rel-14	F	RP-171351	R5-173327	approved	Update test applicabilities for NB-IoT test cases 6.1.15 and 6.1.16	14.2.0	agreed	R5	NB_IOT-UE	RP-76					

Samsung Exhibit 1025, Page 1793 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

36.521-3	1789	1	Rel-14	F	RP-171344	R5-173237	approved	LAA: Test Tolerance analysis and test update of LAA Scell activation and deactivation	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1790	1	Rel-14	F	RP-171344	R5-173245	approved	LAA: Test Tolerance analysis and test update of LAA Scell event reporting for deactivated cell	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1791	1	Rel-14	F	RP-171344	R5-173056	approved	LAA: Test tolerance analysis for RSRP accuracy and addition of TDD-FS3 RSRP accuracy test case	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1792	1	Rel-14	F	RP-171355	R5-173225	approved	Correction on Annex J	14.1.0	agreed	R5	LTE_CA_R1	RP-76	
36.521-3	1793	-	Rel-14	F	RP-171342	R5-172197	approved	Update to RRM test cases 8.16.57 and 8.16.61	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1794	1	Rel-14	F	RP-171347	R5-173260	approved	Test Tolerance addition and update of test case E-UTRAN TDD Radio Link Monitoring Test for Out-of-	14.1.0	agreed	R5	LTE_MTCe2	RP-76	wrong rev number on CR cover
36.521-3	1795	1	Rel-14	F	RP-171347	R5-173261	approved	Test Tolerance addition and update of test case E-UTRAN TDD Radio Link Monitoring Test for In-sync	14.1.0	agreed	R5	LTE_MTCe2	RP-76	wrong rev number on CR cover
36.521-3	1796	1	Rel-14	F	RP-171347	R5-173262	approved	Test Tolerance addition and update of test case E-UTRAN TDD Radio Link Monitoring Test for Out-of-	14.1.0	agreed	R5	LTE_MTCe2	RP-76	wrong rev number on CR cover
36.521-3	1797	1	Rel-14	F	RP-171347	R5-173263	approved	Test Tolerance addition and update of test case E-UTRAN TDD Radio Link Monitoring Test for In-Sync	14.1.0	agreed	R5	LTE_MTCe2	RP-76	wrong rev number on CR cover
36.521-3	1798	1	Rel-14	F	RP-171347	R5-173264	approved	Update Annex E and Annex F Test Tolerance for TC7.3.56,7.3.57,7.3.58,7.3.59	14.1.0	agreed	R5	LTE_MTCe2	RP-76	wrong rev number on CR cover
36.521-3	1799	-	Rel-14	F	RP-171347	R5-172237	approved	Update Test Case 5.1.16: E-UTRAN FDD-FDD Intra Frequency Handover for Cat-M1 UEs in CEModeB	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1800	-	Rel-14	F	RP-171347	R5-172238	approved	Update Test Case 5.1.17: E-UTRAN HD-FDD Intra Frequency Handover for Cat-M1 UEs in CEModeB	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1801	-	Rel-14	F	RP-171347	R5-172239	approved	Update Test Case 5.1.18: E-UTRAN TDD Intra Frequency Handover for Cat-M1 UEs in CEModeB	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1802	-	Rel-14	F	RP-171347	R5-172240	approved	Update Test System Uncertainties and Test Tolerances in Annex F for RRM Requirements of Test Cas	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1803	1	Rel-14	F	RP-171347	R5-173265	approved	Update Test Case 6.2.10: E-UTRAN FDD Contention Based Random Access Test for Cat-M1 UEs in N	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1804	1	Rel-14	F	RP-171347	R5-173266	approved	Update Test Case 6.2.11: E-UTRAN HD-FDD Contention Based Random Access Test for Cat-M1 UEs	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1805	1	Rel-14	F	RP-171347	R5-173267	approved	Update Test Tolerance FFS in Test Cases 6.2.13, 6.2.14, 6.2.15 and Annex F 3.2	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1806	-	Rel-14	F	RP-171342	R5-172256	approved	Update of the Message contents about TDD FDD 4/5DL CA RSRP TCs	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1807	-	Rel-14	F	RP-171342	R5-172257	approved	Update of the Message contents about TDD FDD 4/5DL CA RSRQ TCs	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1808	1	Rel-14	F	RP-171347	R5-173258	approved	Addition of SIB and default RRC message content exception for eMTC. Part 1: annex H	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1809	1	Rel-14	F	RP-171347	R5-173319	approved	Corrections RRM eMTC 6.2.x TCs	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1810	1	Rel-14	F	RP-171347	R5-173320	approved	Correction of message contents for RRM eMTC HO TCs (5.1.13 and 5.1.15)	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1812	-	Rel-14	F	RP-171347	R5-172273	approved	Correction of message contents for RRM eMTC TC 4.2.12 and 4.2.15	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1813	1	Rel-14	F	RP-171347	R5-173321	approved	Correction of SRS BW and message contents for eMTC 7.1.X and 7.2.6 TCs	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1814	1	Rel-14	F	RP-171347	R5-173322	approved	Correction to OCNG pattern for all eMTC RRM TCs	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1816	1	Rel-14	F	RP-171351	R5-173407	approved	NCell configuration mapping correction for RRM NB-IOT TC 4.2.18	14.1.0	agreed	R5	NB_IOT-UE	RP-76	
36.521-3	1817	1	Rel-14	F	RP-171355	R5-173226	approved	Correct TC title RRM 5DL CA testcases	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1818	1	Rel-14	F	RP-171344	R5-173283	approved	Correct TC title RRM LAA testcases	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1819	1	Rel-14	F	RP-171344	R5-173239	approved	Introduction of Test case 8.26.7 E-UTRAN FDD-FS3 Intra-frequency event triggered reporting in DRX f	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1820	1	Rel-14	F	RP-171344	R5-173240	approved	Introduction of Test case 8.26.8 E-UTRAN TDD-FS3 Intra-frequency event triggered reporting in DRX f	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1821	-	Rel-14	F	RP-171342	R5-172285	approved	Completion of Test cases 8.16.59 and 8.16.63, 4 DL PCell in FDD CA Activation and Deactivation of Kr	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1824	1	Rel-14	F	RP-171347	R5-173323	approved	Correct reference of connection diagram in eMTC MISO RRM tests	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1825	-	Rel-14	F	RP-171376	R5-172329	approved	Update Test Tolerances and Test requirements for TS 36.521-3 Test cases 9.1.7.1_1+9.1.13.1_1	14.1.0	agreed	R5	TEI12_Test	RP-76	
36.521-3	1826	-	Rel-14	F	RP-171376	R5-172331	approved	Update Test Tolerances and Test requirements for TS 36.521-3 Test cases 9.1.7.2_1+9.1.13.2_1	14.1.0	agreed	R5	TEI12_Test	RP-76	
36.521-3	1827	1	Rel-14	F	RP-171376	R5-173272	approved	Update Test Tolerances and Test requirements for TS 36.521-3 Test cases 9.1.8.1_1+9.1.9.1_1	14.1.0	agreed	R5	TEI12_Test	RP-76	
36.521-3	1828	1	Rel-14	F	RP-171376	R5-173273	approved	Update Test Tolerances and Test requirements for TS 36.521-3 Test cases 9.1.10.1_1+9.1.11.1_1	14.1.0	agreed	R5	TEI12_Test	RP-76	
36.521-3	1829	1	Rel-14	F	RP-171344	R5-173057	approved	New RRM LAA TCs 9.11.1 and 9.11.2 including Test Tolerances	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1830	1	Rel-14	F	RP-171344	R5-173284	approved	New RRM LAA TCs 9.12.1 and 9.12.2	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1831	1	Rel-14	F	RP-171344	R5-173285	approved	LAA Annex E cell mapping for RRM TC 9.11.1, 9.11.2, 9.12.1 and 9.12.2	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1833	1	Rel-14	F	RP-171342	R5-173233	approved	Updated to RRM 4DL CA Event Triggered Reporting under Deactivated SCells in Non-DRX test cases	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1834	1	Rel-14	F	RP-171342	R5-173234	approved	Introduction of 4DL CA RRM TC 8.16.52 with uncertainties and test tolerance	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1835	1	Rel-14	F	RP-171342	R5-173309	approved	Add new Rel-13 CA 4DL RRM test cases into Annex E	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1836	-	Rel-14	F	RP-171347	R5-172384	approved	Updated minimum conformance requirement to TC4.2.15	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1837	2	Rel-14	F	RP-171347	R5-173066	approved	Introduction of test cases 7.2.10 in CEModeB with Test tolerance	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1838	2	Rel-14	F	RP-171347	R5-173067	approved	Introduction of test cases 7.2.11 in CEModeB with Test tolerance	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1839	2	Rel-14	F	RP-171347	R5-173068	approved	Introduction of test cases 7.2.12 in CEModeB with Test tolerance	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1840	-	Rel-14	F	RP-171347	R5-172389	approved	Correction to complete eMTC RRM 8.1.x tests	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1841	-	Rel-14	F	RP-171347	R5-172390	approved	Updated to eMTC RRM TC 8.1.31 and 8.1.32	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1842	-	Rel-14	F	RP-171357	R5-172391	approved	Add RMC for V2V Sidelink Communication	14.1.0	agreed	R5	LTE_SL_V2	RP-76	
36.521-3	1843	1	Rel-14	F	RP-171351	R5-173275	approved	Updated to NB-IoT RRM TC 4.2.18	14.1.0	agreed	R5	NB_IOT-UE	RP-76	
36.521-3	1844	1	Rel-14	F	RP-171342	R5-173310	approved	Introduction of new Test Case 8.16.67 "5 DL PCell in FDD CA activation and deactivation of Unknown S	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1845	1	Rel-14	F	RP-171342	R5-173311	approved	Introduction of new Test Case 8.16.69 "E-UTRAN FDD 5DL CA activation and deactivation of unknown	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1846	-	Rel-14	F	RP-171337	R5-172420	approved	DC: Addition of Interruption test cases for Dual Connectivity	14.1.0	agreed	R5	LTE_SC_en	RP-76	
36.521-3	1848	1	Rel-14	F	RP-171355	R5-173398	approved	Introduction of 5DL TDD RSRP for E-UTRAN in Carrier Aggregation	14.1.0	agreed	R5	LTE_CA_R1	RP-76	
36.521-3	1849	-	Rel-14	F	RP-171347	R5-172538	approved	Reducing test time for eMTC RRM test cases	14.1.0	agreed	R5	LTE_MTCe2	RP-76	
36.521-3	1850	1	Rel-14	F	RP-171342	R5-173312	approved	Introduction to RRM test case 8.16.58 E-UTRAN TDD 4DL CA activation and deactivation of know SCe	14.1.0	agreed	R5	LTE_CA_Re	RP-76	wrong rev number on CR cover
36.521-3	1851	1	Rel-14	F	RP-171342	R5-173313	approved	Introduction to RRM test case 8.16.60 E-UTRAN PCell in TDD FDD-TDD 4 DL CA activation and deact	14.1.0	agreed	R5	LTE_CA_Re	RP-76	wrong rev number on CR cover
36.521-3	1852	1	Rel-14	F	RP-171344	R5-173238	approved	Test Tolerance CR, addition of LAA test cases 8.26.2	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1853	1	Rel-14	F	RP-171344	R5-173244	approved	Test Tolerance CR, addition of LAA test cases 8.26.4	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1854	1	Rel-14	F	RP-171344	R5-173242	approved	Test Tolerance CR of LAA test cases 9.1..60 and 9.1.61	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1855	-	Rel-14	F	RP-171344	R5-172545	approved	Test Tolerance CR to update Annex F for LAA test cases 8.26.2, 8.26.4, 9.1.60 and 9.1.61	14.1.0	agreed	R5	LTE_LAA-U	RP-76	
36.521-3	1856	1	Rel-14	F	RP-171351	R5-173248	approved	Test tolerance updates for the test cases 6.1.15 and 6.1.16	14.1.0	agreed	R5	NB_IOT-UE	RP-76	
36.521-3	1857	2	Rel-14	F	RP-171351	R5-173061	approved	Test tolerance updates for the test cases 7.1.17 and 7.1.18	14.1.0	agreed	R5	NB_IOT-UE	RP-76	
36.521-3	1858	1	Rel-14	F	RP-171351	R5-173252	approved	Test tolerance updates for the test cases 7.2.9	14.1.0	agreed	R5	NB_IOT-UE	RP-76	
36.521-3	1859	1	Rel-14	F	RP-171351	R5-173254	approved	Test tolerance updates for the test cases 7.3.62 and 7.3.63	14.1.0	agreed	R5	NB_IOT-UE	RP-76	
36.521-3	1860	1	Rel-14	F	RP-171351	R5-173255	approved	Test tolerance updates in Annex F for the test cases 6.1.15, 6.1.16, 7.1.17, 7.1.18, 7.2.9, 7.3.62 and 7.3	14.1.0	agreed	R5	NB_IOT-UE	RP-76	
36.521-3	1861	1	Rel-14	F	RP-171351	R5-173229	approved	Addition of SIB exceptions for RLM for UE category NB1 in Annex H	14.1.0	agreed	R5	NB_IOT-UE	RP-76	
36.521-3	1863	1	Rel-14	F	RP-171342	R5-173235	approved	Introduction of 4DL CA RRM TC 8.16.54 with Test tolerance	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1865	1	Rel-14	F	RP-171342	R5-173314	approved	Correction to RRM 4DL FDD CA Event Triggered Reporting test cases	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1866	-	Rel-14	F	RP-171342	R5-172631	approved	Correction to RRM 4DL FDD CA Activation and Deactivation test cases	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.521-3	1867	1	Rel-14	F	RP-171363	R5-173325	approved	Clarification of Inter-band configuration for TDD Band 34	14.1.0	agreed	R5	TEI8_Test	RP-76	
36.521-3	1868	-	Rel-14	F	RP-171376	R5-172660	approved	Editorial correction of TDD-FDD 2CA measurement accuracy test cases	14.1.0	agreed	R5	TEI12_Test	RP-76	
36.521-3	1869	-	Rel-14	F	RP-171374	R5-172661	approved	Correction to test parameters and test tolerance for RRM 2CA asymmetric bandwidth test case 8.16.22	14.1.0	agreed	R5	TEI10_Test	RP-76	
36.521-3	1871	-	Rel-14	F	RP-171347	R5-172671	approved	eMTC RRM: Correction to MPDCCH and PDSCH Reference Measurement Channels	14.1.0	agreed	R5	LTE_MTCe2	RP-76	

Samsung Exhibit 1025, Page 1794 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

36.521-3	1872	-	Rel-14	F	RP-171344	R5-172688	approved	Test Tolerance: Updates of test cases 8.26.9 and 8.26.10	14.1.0	agreed	R5	LTE_LAA-U	RP-76
36.521-3	1873	1	Rel-14	F	RP-171340	R5-173334	approved	E-UTRAN FDD-WLAN Event Triggered Reporting in non-DRX under AWGN	14.1.0	agreed	R5	LTE_WLAN	RP-76
36.521-3	1874	-	Rel-14	F	RP-171344	R5-172704	approved	Test Tolerance: Updates of test cases 9.2.51 and 9.2.52	14.1.0	agreed	R5	LTE_LAA-U	RP-76
36.521-3	1875	1	Rel-14	F	RP-171336	R5-173231	approved	Test requirements addition and other updates for TS 36.521-3 Test case 8.22.7 and 8.22.8	14.1.0	agreed	R5	LTE_SC_enl	RP-76
36.521-3	1876	-	Rel-14	F	RP-171336	R5-172733	approved	Test requirements addition and other updates for TS 36.521-3 Test case 8.22.11 and 8.22.12	14.1.0	agreed	R5	LTE_SC_enl	RP-76
36.521-3	1877	-	Rel-14	F	RP-171336	R5-172735	approved	Update of TS 36.521-3 Test case 8.22.5 and 8.22.6	14.1.0	agreed	R5	LTE_SC_enl	RP-76
36.521-3	1878	1	Rel-14	F	RP-171344	R5-173286	approved	Updates of LAA test cases 8.26.9 and 8.26.10	14.1.0	agreed	R5	LTE_LAA-U	RP-76
36.521-3	1879	1	Rel-14	F	RP-171344	R5-173287	approved	Updates of LAA test cases 9.2.51 and 9.2.52	14.1.0	agreed	R5	LTE_LAA-U	RP-76
36.521-3	1880	-	Rel-14	F	RP-171347	R5-172748	approved	Updates of test cases 7.1.10, 7.1.11 and 7.1.12	14.1.0	agreed	R5	LTE_MTCeI	RP-76
36.521-3	1881	1	Rel-14	F	RP-171351	R5-173425	approved	Updates of test cases 7.3.60 and 7.3.61	14.1.0	agreed	R5	NB_IoT-UE	RP-76
36.521-3	1882	-	Rel-14	F	RP-171376	R5-172750	approved	Test Tolerance updating of test cases 9.1.8.2, 9.1.9.2 To include band group FDD_B	14.1.0	agreed	R5	TEI12_Test	RP-76
36.521-3	1883	-	Rel-14	F	RP-171343	R5-172753	approved	Adding RLM test cases for 4Rx UEs	14.1.0	agreed	R5	LTE_4Rx_A	RP-76
36.521-3	1884	-	Rel-14	F	RP-171343	R5-172754	approved	Updates of test cases in Clause 4 to cater for 4Rx testing	14.1.0	agreed	R5	LTE_4Rx_A	RP-76
36.521-3	1885	-	Rel-14	F	RP-171382	R5-172755	approved	Addition of band group table for NB-IoT operating bands	14.1.0	agreed	R5	NB_IOT_R1	RP-76
36.521-3	1886	-	Rel-14	F	RP-171339	R5-172757	approved	Addition of two IncMon test cases 8.3.8 and 8.3.9	14.1.0	agreed	R5	LTE_UTRA	RP-76
36.521-3	1887	1	Rel-14	F	RP-171337	R5-173328	approved	New test cases: Addition of TC7.4.3 E-UTRAN FDD-FDD Interruption at transitions between active and	14.1.0	agreed	R5	LTE_SC_enl	RP-76
36.521-3	1888	1	Rel-14	F	RP-171351	R5-173257	approved	Test Tolerances for NB-IoT In-Sync RLM test cases 7.3.64 and 7.3.65	14.1.0	agreed	R5	NB_IOT-UE	RP-76
36.521-3	1890	1	Rel-14	F	RP-171349	R5-173335	approved	E-UTRAN TDD-WLAN Event Triggered Reporting in non-DRX under AWGN	14.1.0	agreed	R5	LTE_WLAN	RP-76
36.523-1	3956	1	Rel-14	F	RP-171365	R5-172914	approved	Correction to Pre-registration at 1xRTT test case 13.4.4.2	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	3957	1	Rel-14	F	RP-171348	R5-173004	approved	Correction to (Cat-M1) eMTC MAC test case 7.17.2.2	14.0.1	agreed	R5	LTE_MTCeI	RP-76
36.523-1	3958	1	Rel-14	F	RP-171374	R5-172911	approved	Correction to EMM test case 9.2.3.1.5a for Multi-PDN UE	14.0.1	agreed	R5	TEI10_Test	RP-76
36.523-1	3959	1	Rel-14	F	RP-171375	R5-173012	approved	Correction to MDT test case 8.6.9.2	14.0.1	agreed	R5	TEI11_Test	RP-76
36.523-1	3960	-	Rel-14	F	RP-171365	R5-172036	approved	Correction to IMS Emergency test case 11.2.7	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	3961	-	Rel-14	F	RP-171375	R5-172037	approved	Correction to eMDT test cases 8.6.x.x	14.0.1	agreed	R5	TEI11_Test	RP-76
36.523-1	3962	1	Rel-14	F	RP-171352	R5-172856	approved	Add test case NB-IoT / RRC Connection Establishment / Multi-Carrier	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3963	2	Rel-14	F	RP-171352	R5-172926	approved	Add test case NB-IoT / RRC connection reconfiguration / Radio bearer establishment / Success / Dedic	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3964	1	Rel-14	F	RP-171352	R5-172858	approved	Add test case NB-IoT / RRC connection reconfiguration / SRB reconfiguration / Success	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3965	1	Rel-14	F	RP-171352	R5-172859	approved	Update test case 22.4.19	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3966	-	Rel-14	F	RP-171335	R5-173050	approved	Editorial update to the title of test case 19.1.8	14.0.1	agreed	R5	LTE_D2D_I	RP-76
36.523-1	3967	-	Rel-14	F	RP-171352	R5-173053	approved	Corrections to GCF WI-257 MAC test case 22.3.1.1	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3968	1	Rel-14	F	RP-171352	R5-172860	approved	Corrections to GCF WI-257 MAC test case 22.3.1.2	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3969	-	Rel-14	F	RP-171352	R5-173056	approved	Corrections to GCF WI-257 PDCP test case 22.3.3.6	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3970	-	Rel-14	F	RP-171352	R5-172057	approved	Corrections to GCF WI-257 EMM test case 22.5.5	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3972	1	Rel-14	F	RP-171363	R5-173023	approved	Corrections to GCF WI-081 RRC test case 8.1.2.7	14.0.1	agreed	R5	TEI8_Test	RP-76
36.523-1	3974	-	Rel-14	F	RP-171374	R5-172064	approved	Correction to RRC Inter-RAT Logged RLF test cases to support Band > 64	14.0.1	agreed	R5	TEI10_Test	RP-76
36.523-1	3975	-	Rel-14	F	RP-171365	R5-172065	approved	Correction to MBMS test cases to support Band > 64	14.0.1	agreed	R5	TEI11_Test	RP-76
36.523-1	3976	-	Rel-14	F	RP-171377	R5-173076	approved	Correction to SC-PTM test case 21.3.6	14.0.1	agreed	R5	TEI13_Test	RP-76
36.523-1	3977	1	Rel-14	F	RP-171348	R5-172882	approved	Correction to eMTC Idle Mode test case 6.1.2.6a	14.0.1	agreed	R5	LTE_MTCeI	RP-76
36.523-1	3978	-	Rel-14	F	RP-171363	R5-172090	approved	Editorial correction to RRC test cases 8.1.11a and 8.1.2.13	14.0.1	agreed	R5	TEI8_Test	RP-76
36.523-1	3980	-	Rel-14	F	RP-171363	R5-172099	approved	Editorial correction to EMM test case 9.2.1.2.1c	14.0.1	agreed	R5	TEI8_Test	RP-76
36.523-1	3981	-	Rel-14	F	RP-171365	R5-172130	approved	Correction to Multi-layer Call setup and RRC connection reconfiguration test case 13.1.18 to support B	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	3982	1	Rel-14	F	RP-171365	R5-172916	approved	Correction to Multi-layer Inter-system mobility packet test case 13.4.2.2 to support Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	3983	2	Rel-14	F	RP-171363	R5-172917	approved	Correction to Multi-layer Inter-system mobility voice test cases to support Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	3984	2	Rel-14	F	RP-171365	R5-172905	approved	Correction to RRC Inter-RAT handover UTRA to E-UTRA test cases to support Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	3985	1	Rel-14	F	RP-171365	R5-172906	approved	Correction to RRC Inter-RAT mobility E-UTRA to GERAN test cases to support Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	3986	2	Rel-14	F	RP-171365	R5-172907	approved	Correction to RRC Inter-RAT handover E-UTRA to and 1xRTT test cases to support Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	3987	1	Rel-14	F	RP-171374	R5-172830	approved	Correction to RRC Inter-RAT Logged RLF test cases to support Band > 64	14.0.1	agreed	R5	TEI10_Test	RP-76
36.523-1	3988	1	Rel-14	F	RP-171374	R5-172831	approved	Correction to RRC Inter-RAT Logged Handover Failure test cases to support Band > 64	14.0.1	agreed	R5	TEI10_Test	RP-76
36.523-1	3989	-	Rel-14	F	RP-171363	R5-172141	approved	Updates to manual CSG selection test cases	14.0.1	agreed	R5	TEI8_Test	RP-76
36.523-1	3990	-	Rel-14	F	RP-171335	R5-172156	approved	Removing TDD parts of D2D ProSe Direct Communication Test Cases	14.0.1	agreed	R5	LTE_D2D_I	RP-76
36.523-1	3991	-	Rel-14	F	RP-171352	R5-172163	approved	Corrections to NBIOT RRC ACB TC 22.4.5	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3992	-	Rel-14	F	RP-171352	R5-172164	approved	Corrections to NBIOT RRC ACB TC 22.4.9	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3993	1	Rel-14	F	RP-171352	R5-172855	approved	Correction to NBIOT NAS TC 22.5.16	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	3996	1	Rel-14	F	RP-171374	R5-172902	approved	Update 8.3.1.21 for Band > 64	14.0.1	agreed	R5	TEI10_Test	RP-76
36.523-1	3997	1	Rel-14	F	RP-171374	R5-172908	approved	Correction to RRC Logged Handover Failure test cases to support Band > 64	14.0.1	agreed	R5	TEI10_Test	RP-76
36.523-1	4000	1	Rel-14	F	RP-171375	R5-172925	approved	Correction to LTE SINTC Test Case 10.8.8	14.0.1	agreed	R5	TEI11_Test	RP-76
36.523-1	4001	1	Rel-14	F	RP-171352	R5-172861	approved	Corrections to GCF WI-257 EMM test case 22.5.8	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	4002	1	Rel-14	F	RP-171375	R5-173920	approved	Correction of test case 20.2	14.0.1	agreed	R5	TEI11_Test	RP-76
36.523-1	4003	1	Rel-14	F	RP-171365	R5-172903	approved	Update chapter 8.3.2 for Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	4004	1	Rel-14	F	RP-171375	R5-173008	approved	Update Inter-RAT PLMN selection chapter 6.2.1 for Band > 64	14.0.1	agreed	R5	TEI11_Test	RP-76
36.523-1	4005	1	Rel-14	F	RP-171375	R5-173007	approved	Update Inter-RAT cell reselection chapter 6.2.3 for Band > 64	14.0.1	agreed	R5	TEI11_Test	RP-76
36.523-1	4006	1	Rel-14	F	RP-171365	R5-172915	approved	Update test case 11.2.11 for Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	4007	1	Rel-14	F	RP-171363	R5-173009	approved	Correction to RRC connection management procedures test case 8.1.3.7 to support Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	4008	1	Rel-14	F	RP-171365	R5-173010	approved	Correction to RRC Radio link failure test case 8.5.2.1 to support Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	4009	2	Rel-14	F	RP-171384	R5-173017	approved	Addition of new TC for reselection using Pcompensation	14.0.1	agreed	R5	TEI14_Test	RP-76
36.523-1	4010	-	Rel-14	F	RP-171352	R5-172315	approved	Update of NB-IoT TC 22.5.1	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	4011	1	Rel-14	F	RP-171365	R5-172918	approved	Update inter-system mobility packet chapter 13.4.2 for Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	4012	1	Rel-14	F	RP-171365	R5-172919	approved	Update inter-system mobility voice chapter 13.4.3 for Band > 64	14.0.1	agreed	R5	TEI9_Test	RP-76
36.523-1	4014	-	Rel-14	F	RP-171377	R5-172361	approved	Correction to SC-PTM test case 21.3.11.1 to support Band > 64	14.0.1	agreed	R5	TEI13_Test	RP-76
36.523-1	4015	1	Rel-14	F	RP-171348	R5-172881	approved	Correction to GCF WI-254-A Rel-13 eMTC Idle Mode test case 6.1.2.2d	14.0.1	agreed	R5	LTE_MTCeI	RP-76
36.523-1	4016	1	Rel-14	F	RP-171363	R5-172912	approved	Correction to EMM test case 9.2.3.1.23 for multi-PDN capable UE	14.0.1	agreed	R5	TEI8_Test	RP-76
36.523-1	4017	1	Rel-14	F	RP-171348	R5-172883	approved	Update of CP-CIoT TC for LTE	14.0.1	agreed	R5	LTE_MTCeI	RP-76
36.523-1	4018	-	Rel-14	F	RP-171352	R5-172419	approved	Addition of underlying sub-clause 22.4 RRC	14.0.1	agreed	R5	NB_IOT-UE	RP-76
36.523-1	4019	1	Rel-14	F	RP-171374	R5-172901	approved	Correction to RRC test case 8.5.4.1	14.0.1	agreed	R5	TEI10_Test	RP-76

Samsung Exhibit 1025, Page 1795 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

36.523-1	4020	-	Rel-14	F	RP-171374	R5-172442	approved	Correction to xSRVCC Test Cases 13.4.3.14, 13.4.3.16 and 13.4.3.18	14.0.1	agreed	R5	TEI10_Test	RP-76	
36.523-1	4021	-	Rel-14	F	RP-171365	R5-172443	approved	Correction to GCF WI-156 RRC Intra E-UTRAN measurements test cases to support Band > 64 – 8.3.1	14.0.1	agreed	R5	TEI9_Test	RP-76	
36.523-1	4024	1	Rel-14	F	RP-171377	R5-172909	approved	Correction to LTE Test Case 8.6.1.3	14.0.1	agreed	R5	TEI13_Test	RP-76	
36.523-1	4025	1	Rel-14	F	RP-171510	R5-172982	approved	Correction on RRC V2V test case 24.1.1	14.0.1	agreed	R5	LTE_V2X-U	RP-76	was approved by email after RAN #76
36.523-1	4026	1	Rel-14	F	RP-171348	R5-172884	approved	Correction on RRC eMTC test case 8.2.4.27	14.0.1	agreed	R5	LTE_MTCe	RP-76	
36.523-1	4031	1	Rel-14	F	RP-171352	R5-172991	approved	Correction of NB-IoT test case 22.2.5	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4033	1	Rel-14	F	RP-171352	R5-172992	approved	Correction to NB-IoT RLC test case 22.3.2.2	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4035	-	Rel-14	F	RP-171352	R5-172485	approved	Correction to NB-IoT RLC test case 22.3.2.3	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4039	-	Rel-14	F	RP-171352	R5-172491	approved	Correction to NB-IoT RLC test case 22.3.2.1	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4040	1	Rel-14	F	RP-171352	R5-172862	approved	Corrections to TC 22.5.4	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4041	1	Rel-14	F	RP-171352	R5-172863	approved	Remove Multi-PLMN test for TC 22.5.6	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4042	2	Rel-14	F	RP-171352	R5-173074	approved	Corrections to TC 22.5.7a	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4043	2	Rel-14	F	RP-171352	R5-173075	approved	Remove Multi-PLMN test for TC 22.5.7b	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4044	1	Rel-14	F	RP-171348	R5-172885	approved	Correction to MAC eMTC CeModeB HARQ process handling test case	14.0.1	agreed	R5	LTE_MTCe	RP-76	
36.523-1	4045	-	Rel-14	F	RP-171348	R5-172502	approved	Correction to MAC eMTC transmission and reception test case	14.0.1	agreed	R5	LTE_MTCe	RP-76	
36.523-1	4046	1	Rel-14	F	RP-171348	R5-172886	approved	Corrections to eMTC MAC TBS test case for "UL-SCH transport block size selection / DCI format 6-0B	14.0.1	agreed	R5	LTE_MTCe	RP-76	
36.523-1	4048	-	Rel-14	F	RP-171337	R5-172508	approved	Correction to Dual Connectivity test case 8.2.4.25.1	14.0.1	agreed	R5	LTE_SC_er	RP-76	
36.523-1	4049	2	Rel-14	F	RP-171337	R5-173044	approved	Correction to Dual Connectivity test case 8.2.4.25.2	14.0.1	agreed	R5	LTE_SC_er	RP-76	
36.523-1	4053	1	Rel-14	F	RP-171352	R5-172864	approved	Updates to NB-IoT test case 22.5.17	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4054	1	Rel-14	F	RP-171352	R5-172865	approved	Updates to NB-IoT test case 22.5.18	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4055	1	Rel-14	F	RP-171352	R5-172866	approved	Updates to NB-IoT test case 22.6.1	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4056	1	Rel-14	F	RP-171352	R5-172867	approved	Updates to NB-IoT test case 22.6.1a	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4069	1	Rel-14	F	RP-171337	R5-172958	approved	Change title of test case 8.2.4.25.6	14.0.1	agreed	R5	LTE_SC_er	RP-76	
36.523-1	4070	1	Rel-14	F	RP-171352	R5-172869	approved	Correction to NB-IOT test case 22.4.7	14.0.1	agreed	R5	NB_IOT-UE	RP-76	wrong rev number on CR cover
36.523-1	4071	1	Rel-14	F	RP-171352	R5-173076	approved	Corrections to NB-IoT test case 22.4.13	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4072	1	Rel-14	F	RP-171337	R5-172959	approved	Change title of test case 8.2.4.25.7	14.0.1	agreed	R5	LTE_SC_er	RP-76	
36.523-1	4074	1	Rel-14	F	RP-171376	R5-172913	approved	Correction to EMM PSM test case 9.2.3.1.1a	14.0.1	agreed	R5	TEI12_Test	RP-76	
36.523-1	4076	-	Rel-14	F	RP-171363	R5-172781	approved	Correction to EMM test case 9.2.3.2.1c	14.0.1	agreed	R5	TEI8_Test	RP-76	
36.523-1	4077	-	Rel-14	F	RP-171348	R5-172783	approved	Correction to GCF WI-254-A eMTC MAC test case 7.1.3.4a	14.0.1	agreed	R5	LTE_MTCe	RP-76	
36.523-1	4078	-	Rel-14	F	RP-171374	R5-172784	approved	Correction to CA EUTRA<>UTRA Handover test cases 8.4.2.7.x	14.0.1	agreed	R5	TEI10_Test	RP-76	
36.523-1	4079	1	Rel-14	F	RP-171375	R5-172910	approved	Correction to RRC Connection Establishment Failure test cases to support Band > 64	14.0.1	agreed	R5	TEI11_Test	RP-76	
36.523-1	4099	1	Rel-14	F	RP-171348	R5-173078	approved	Correction to GCF WI-081 TC 8.1.1.2 for Cat-M1 UE	14.0.1	agreed	R5	LTE_MTCe	RP-76	wrong CR number on CR cover
36.523-1	4086	2	Rel-14	F	RP-171352	R5-173077	approved	Correction to NB-IoT test case 22.5.14	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4090	1	Rel-14	F	RP-171363	R5-173011	approved	Correction to GCF WI-086 TC 8.1.3.6 for IMS disabled over UMTS	14.0.1	agreed	R5	TEI8_Test	RP-76	
36.523-1	4091	1	Rel-14	F	RP-171339	R5-172948	approved	Add test case Inter-frequency cell reselection / Extended frequency list Ericsson CR LTE_UTRA_Incl	14.0.1	agreed	R5	LTE_UTRA	RP-76	
36.523-1	4092	1	Rel-14	F	RP-171365	R5-172904	approved	Correction to RRC Intra E-UTRAN measurements test cases to support Band > 64 - Part 2	14.0.1	agreed	R5	TEI9_Test	RP-76	
36.523-1	4093	1	Rel-14	F	RP-171348	R5-172887	approved	Addition on new eMTC CIoT optimisation test case 23.2.1	14.0.1	agreed	R5	LTE_MTCe	RP-76	
36.523-1	4093a	-	Rel-14	F	RP-171348	R5-172832	approved	Addition of eMTC capabilities check in test case 8.5.4.1	14.0.1	agreed	R5	LTE_MTCe	RP-76	wrong CR number on CR cover, duplicated CR number
36.523-1	4094	-	Rel-14	F	RP-171352	R5-172833	approved	Correction to NB-IoT MAC test case 22.3.1.6	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4095	-	Rel-14	F	RP-171352	R5-172834	approved	Correction to NB-IoT MAC test case 22.3.1.3	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4096	-	Rel-14	F	RP-171352	R5-172835	approved	Correction to NB-IoT MAC test case 22.3.1.4	14.0.1	agreed	R5	NB_IOT-UE	RP-76	
36.523-1	4097	1	Rel-14	F	RP-171384	R5-173013	approved	Corrections to PC2 Test Case 6.1.2.5a	14.0.1	agreed	R5	TEI14_Test	RP-76	
36.523-1	4098	-	Rel-14	F	RP-171348	R5-172899	approved	Correction to GCF WI-081 TC 7.1.4.13 for Cat-M1 UE	14.0.1	agreed	R5	LTE_MTCe	RP-76	wrong rev number on CR cover
36.523-1	4100	2	Rel-14	F	RP-171348	R5-173079	approved	Correction to (Cat-M1) eMTC MAC test case 7.1.3.4a	14.0.1	agreed	R5	LTE_MTCe	RP-76	
36.523-1	4101	1	Rel-14	F	RP-171376	R5-173043	approved	Correction to LTE Test Case 8.5.4.1	14.0.1	agreed	R5	TEI12_Test	RP-76	
36.523-2	0992	-	Rel-14	F	RP-171335	R5-172051	approved	Editorial update to the title of test case 19.1.8	14.1.0	agreed	R5	LTE_D2D_F	RP-76	
36.523-2	0994	-	Rel-14	F	RP-171335	R5-172073	approved	Removing TDD Applicability - Direct Communication Security Aspects Test Cases	14.1.0	agreed	R5	LTE_D2D_F	RP-76	
36.523-2	0996	-	Rel-14	F	RP-171335	R5-172155	approved	Removing TDD Applicability - Direct Communication Test Cases	14.1.0	agreed	R5	LTE_D2D_F	RP-76	
36.523-2	0997	1	Rel-14	F	RP-171374	R5-173014	approved	Correction to applicability condition C179a	14.1.0	agreed	R5	TEI10_Test	RP-76	
36.523-2	0998	-	Rel-14	F	RP-171384	R5-172168	approved	Correction to PC2 PICS item	14.1.0	agreed	R5	TEI14_Test	RP-76	
36.523-2	0999	1	Rel-14	F	RP-171355	R5-172942	approved	New CA band combination CA_3C-8A - Updates of Table A.4.3.3.3-3	14.1.0	agreed	R5	LTE_CA_R	RP-76	
36.523-2	1000	1	Rel-14	F	RP-171384	R5-172952	approved	Maintenance of 36.523-2 for XML conversion	14.1.0	agreed	R5	TEI14_Test	RP-76	
36.523-2	1001	1	Rel-14	F	RP-171384	R5-172953	approved	Corrected use of ( ) in Table 4-1a	14.1.0	agreed	R5	TEI14_Test	RP-76	
36.523-2	1002	1	Rel-14	F	RP-171384	R5-173016	approved	Applicability of new TC for reselection using Pcompensation	14.1.0	agreed	R5	TEI14_Test	RP-76	
36.523-2	1003	1	Rel-14	F	RP-171355	R5-172943	approved	Addition of CA_2A-66A, CA_5A-66A and CA_13A-66A to TS 36.523-2	14.1.0	agreed	R5	LTE_CA_R	RP-76	
36.523-2	1004	-	Rel-14	F	RP-171355	R5-172379	approved	Addition of new CA configurations containing Band 66 to 36.523-2	14.1.0	agreed	R5	LTE_CA_R	RP-76	
36.523-2	1005	1	Rel-14	F	RP-171363	R5-173018	approved	Corrections to PICS naming in TS 36.523-2	14.1.0	agreed	R5	TEI8_Test	RP-76	
36.523-2	1006	1	Rel-14	F	RP-171340	R5-172940	approved	Updates of CA Physical Layer Baseline Implementation Capabilities for Rel13 CA configurations	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.523-2	1007	1	Rel-14	F	RP-171350	R5-172998	approved	Update of NB-IoT testcase applicabilities	14.1.0	agreed	R5	NB_IOT-UE	RP-76	
36.523-2	1008	-	Rel-14	F	RP-171348	R5-172505	approved	Correction to test case 7.1.7.2.3 title	14.1.0	agreed	R5	LTE_MTCe	RP-76	
36.523-2	1009	-	Rel-14	F	RP-171355	R5-172525	approved	Introduction of CA_1A-11A-28A to Annex A4.3.3	14.1.0	agreed	R5	LTE_CA_R	RP-76	
36.523-2	1010	-	Rel-14	F	RP-171355	R5-172529	approved	Introduction of CA_8A-11A-28A to Annex A4.3.3	14.1.0	agreed	R5	LTE_CA_R	RP-76	
36.523-2	1014	1	Rel-14	F	RP-171337	R5-172960	approved	Change title of test cases 8.2.4.25.6 and 8.2.4.25.7	14.1.0	agreed	R5	LTE_SC_er	RP-76	
36.523-2	1015	-	Rel-14	F	RP-171360	R5-172698	approved	Addition of new CA configuration CA_3A-69A to 36.523-2	14.1.0	agreed	R5	LTE_FDD_2	RP-76	
36.523-2	1016	-	Rel-14	F	RP-171340	R5-172700	approved	Addition of new CA configuration CA_2A-2A-12A to 36.523-2	14.1.0	agreed	R5	LTE_CA_Re	RP-76	
36.523-2	1017	1	Rel-14	F	RP-171377	R5-172923	approved	Adding missing UE categories to Annex A.4.3.2	14.1.0	agreed	R5	TEI13_Test	RP-76	
36.523-2	1020	1	Rel-14	F	RP-171363	R5-172922	approved	Correction to applicability conditions of EMM test cases 9.2.1.1.18 and 9.2.3.2.1c	14.1.0	agreed	R5	TEI8_Test	RP-76	
36.523-2	1021	1	Rel-14	F	RP-171348	R5-172888	approved	Correction to applicability conditions of legacy eICIC test cases for CAT M1 UEs	14.1.0	agreed	R5	LTE_MTCe	RP-76	
36.523-2	1025	-	Rel-14	F	RP-171348	R5-172894	approved	Applicability of protocol test cases for eMTC	14.1.0	agreed	R5	LTE_MTCe	RP-76	
36.523-3	3571	1	Rel-13	B	RP-171371	R5s170371	approved	Addition of GCF WI-257 NB-IoT test case 22.5.1	13.2.0	agreed	R5s	NB_IOT-UE	RP-76	
36.523-3	3575	1	Rel-13	B	RP-171371	R5s170372	approved	Addition of LTE-A PRO (Rel-13) eMTC Idle Mode test case 6.1.2.2c	13.2.0	agreed	R5s	LTE_MTCe	RP-76	
36.523-3	3579	1	Rel-13	F	RP-171371	R5s170373	approved	Correction to EUTRA PDCP handover test case 7.3.5.3	13.2.0	agreed	R5s	TEI8_Test	RP-76	
36.523-3	3580	1	Rel-13	B	RP-171371	R5s170374	approved	Addition of Rel-9 LTE<>UTRA MBFI test case Test case 6.2.3.34	13.2.0	agreed	R5s	TEI9_Test	RP-76	
36.523-3	3583	1	Rel-13	B	RP-171371	R5s170375	approved	Addition of LTE-A PRO (Rel-13) eMTC Layer 2 test case 7.1.7.1.13	13.2.0	agreed	R5s	LTE_MTCe	RP-76	

36.523-3	3584	1	Rel-13	B	RP-171371	R5s170407	approved	Addition of LTE-A PRO (Rel-13) eMTC Idle Mode test case 6.1.2.6a	13.2.0	agreed	R5s	LTE_MTCe	RP-76
36.523-3	3585	1	Rel-13	F	RP-171371	R5s170376	approved	Correction to EMM test case 9.4.6	13.2.0	agreed	R5s	TEI11_Test	RP-76
36.523-3	3587	1	Rel-13	F	RP-171371	R5s170379	approved	Correction to function t_EUTRA_UE_CategoryInfo_Init	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3588	1	Rel-13	B	RP-171371	R5s170380	approved	Addition of GCF Wi-257 NB-IoT test case 22.5.2	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3589	1	Rel-13	F	RP-171371	R5s170381	approved	Correction to EMM test case 9.2.3.3.5a for Multi-PDN UE	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3590	1	Rel-13	F	RP-171371	R5s170382	approved	Correction to Inter-RAT cell reselection test case 6.2.3.4a for IMS enabled UE	13.2.0	agreed	R5s	TEI9_Test	RP-76
36.523-3	3591	1	Rel-13	B	RP-171371	R5s170408	approved	Addition of LTE-A PRO (Rel-13) eMTC Layer 2 test case 7.1.7.2.2	13.2.0	agreed	R5s	LTE_MTCe	RP-76
36.523-3	3592	1	Rel-13	B	RP-171371	R5s170384	approved	Addition of LTE-A PRO (Rel-13) eMTC RRC test case 8.1.1.1a	13.2.0	agreed	R5s	LTE_MTCe	RP-76
36.523-3	3593	1	Rel-13	F	RP-171371	R5s170385	approved	Correction to function tl_NBIOT_InitCellIdentities_NAS	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3595	1	Rel-13	F	RP-171371	R5s170386	approved	Correction to function t_CheckUE_SupportedEUTRA_BandsExt	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3596	1	Rel-13	B	RP-171371	R5s170409	approved	Addition of GCF Wi-254-A Rel-13 eMTC Idle Mode test case 6.1.2.2d	13.2.0	agreed	R5s	LTE_MTCe	RP-76
36.523-3	3597	1	Rel-13	F	RP-171371	R5s170389	approved	Correction to EMM test case 9.2.1.2.1b	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3598	1	Rel-13	F	RP-171371	R5s170410	approved	Correction for selection expression for Rel-12 EUTRA MFBI test case 6.1.2.23	13.2.0	agreed	R5s	TEI12_Test	RP-76
36.523-3	3599	1	Rel-13	F	RP-171371	R5s170411	approved	Correction to xSRVCC TCs 13.4.3.2, 13.4.3.14, 13.4.3.16 and 13.4.3.18	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3601	1	Rel-13	B	RP-171371	R5s170412	approved	Addition of Rel-11 SIMTC test case 10.8.8	13.2.0	agreed	R5s	TEI11_Test	RP-76
36.523-3	3602	1	Rel-13	F	RP-171371	R5s170392	approved	Correction to Rel-11 eDDA testcase 8.2.2.6.3	13.2.0	agreed	R5s	TEI11_Test	RP-76
36.523-3	3603	1	Rel-13	F	RP-171371	R5s170393	approved	Correction to GCF Wi-082 NAS test cases 9.4.x	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3604	1	Rel-13	F	RP-171371	R5s170394	approved	Correction to function t_EUTRA_ARFCN_Value_y0e0	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3605	1	Rel-13	F	RP-171371	R5s170395	approved	Correction to eMDT Test Cases 8.6.2.3a, 8.6.2.10, 8.6.2.11 and 8.6.2.12	13.2.0	agreed	R5s	TEI11_Test	RP-76
36.523-3	3606	1	Rel-13	F	RP-171371	R5s170396	approved	Correction to Rel-10 ANR test cases test case 8.7.1	13.2.0	agreed	R5s	TEI10_Test	RP-76
36.523-3	3607	1	Rel-13	F	RP-171371	R5s170397	approved	Correction to LTE-A CA Test Cases 8.4.2.7.1, 8.4.2.7.2 and 8.4.2.7.3	13.2.0	agreed	R5s	TEI10_Test	RP-76
36.523-3	3608	1	Rel-13	F	RP-171371	R5s170398	approved	Correction to EMM test case 9.2.3.1.5a for Multi-PDN UE	13.2.0	agreed	R5s	TEI10_Test	RP-76
36.523-3	3609	-	Rel-13	F	RP-171371	R5s170217	approved	Correction to function t_EUTRA_NB_Authentication_S13	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3610	-	Rel-13	F	RP-171371	R5s170218	approved	Correction to EMM test case 9.2.1.2.11	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3611	-	Rel-13	F	RP-171371	R5s170219	approved	Correction to EMM test cases 9.2.1.1.7 and 9.2.1.1.7a	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3612	-	Rel-13	F	RP-171371	R5s170220	approved	Corrections to generic modules in ATS_17wk10 for Cat.M1 UEs	13.2.0	agreed	R5s	LTE_MTCe	RP-76
36.523-3	3613	-	Rel-13	F	RP-171371	R5s170221	approved	Correction to function t_EUTRA_508RRC_AddMod_1Scell for LTE-A CA test cases	13.2.0	agreed	R5s	TEI10_Test	RP-76
36.523-3	3614	-	Rel-13	F	RP-171371	R5s170222	approved	Correction GCF Wi-156 LTE test case 8.1.3.11	13.2.0	agreed	R5s	TEI9_Test	RP-76
36.523-3	3615	-	Rel-13	F	RP-171371	R5s170223	approved	Correction to GCF Wi-81 LTE test case 8.2.4.6	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3616	-	Rel-13	F	RP-171371	R5s170224	approved	Correction to GCF Wi-156 LTE test cases 8.3.1.13, 8.3.1.14 and 8.3.1.16	13.2.0	agreed	R5s	TEI9_Test	RP-76
36.523-3	3617	-	Rel-13	F	RP-171371	R5s170225	approved	Correction to EUTRA RRC test case 8.1.2.7	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3618	-	Rel-13	F	RP-171371	R5s170226	approved	Correction to GCF Wi-081 Rel-8 LTE test case 8.3.1.7	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3619	-	Rel-13	F	RP-171371	R5s170227	approved	Correction to Rel-11 GCF Wi-178 eMBMS CA testcases 17.4.11.1 and 17.4.11.2	13.2.0	agreed	R5s	TEI11_Test	RP-76
36.523-3	3620	-	Rel-13	F	RP-171371	R5s170229	approved	Corrections to EUTRA Idle Mode test case 6.1.2.3a for CAT-M1 device	13.2.0	agreed	R5s	TEI9_Test	RP-76
36.523-3	3621	-	Rel-13	F	RP-171371	R5s170230	approved	Corrections for EUTRA MAC test cases with CAT-M1 devices	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3622	-	Rel-13	F	RP-171371	R5s170233	approved	Corrections to generic functions for NB-IoT	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3623	-	Rel-13	F	RP-171371	R5s170234	approved	Corrections to MAC common part in ATS_17wk10 for Cat.NB1 UEs	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3624	-	Rel-13	F	RP-171371	R5s170235	approved	Corrections to RLC common part in ATS_17wk10 for Cat.NB1 UEs	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3625	-	Rel-13	B	RP-171371	R5s170236	approved	Addition of GCF Wi-257 NB-IoT test case 22.3.1.3	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3626	-	Rel-13	B	RP-171371	R5s170238	approved	Addition of GCF Wi-257 NB-IoT test case 22.3.1.4	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3627	-	Rel-13	B	RP-171371	R5s170240	approved	Addition of GCF Wi-257 NB-IoT test case 22.3.1.6	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3628	-	Rel-13	B	RP-171371	R5s170242	approved	Addition of GCF Wi-257 NB-IoT test case 22.3.2.1	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3629	-	Rel-13	B	RP-171371	R5s170244	approved	Addition of GCF Wi-257 NB-IoT test case 22.3.2.2	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3630	-	Rel-13	F	RP-171371	R5s170246	approved	Correction for: EUTRA RRC test case 8.5.4.1	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3631	-	Rel-13	F	RP-171371	R5s170247	approved	Updates to SI-BR and SI scheduling in the eMTC Test Environment	13.2.0	agreed	R5s	LTE_MTCe	RP-76
36.523-3	3632	-	Rel-13	B	RP-171371	R5s170248	approved	Addition of GCF Wi-257 NB-IoT test case 22.3.2.3	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3633	-	Rel-13	B	RP-171371	R5s170250	approved	Addition of GCF Wi-257 NB-IoT test case 22.3.3.1	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3634	-	Rel-13	B	RP-171371	R5s170252	approved	Addition of GCF Wi-257 NB-IoT test case 22.4.21	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3635	-	Rel-13	B	RP-171371	R5s170254	approved	Addition of GCF Wi-257 NB-IoT test case 22.5.3	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3636	-	Rel-13	B	RP-171371	R5s170256	approved	Addition of GCF Wi-257 NB-IoT test case 22.5.4	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3637	-	Rel-13	B	RP-171371	R5s170258	approved	Addition of GCF Wi-257 NB-IoT test case 22.3.3.2	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3638	-	Rel-13	B	RP-171371	R5s170260	approved	Addition of GCF Wi-257 NB-IoT test case 22.3.3.3	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3639	-	Rel-13	F	RP-171371	R5s170263	approved	Correction to function t_NBIOT_RRC_ConnectionRelease	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3640	-	Rel-13	F	RP-171371	R5s170264	approved	Correction to EMM test case 9.2.3.1.23 for Multi-PDN UE	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3641	-	Rel-13	F	RP-171371	R5s170265	approved	Correction to Inter-RAT Idle mode test case 6.2.3.4a for IMS enabled UE	13.2.0	agreed	R5s	TEI9_Test	RP-76
36.523-3	3642	-	Rel-13	F	RP-171371	R5s170266	approved	Correction to R12 MFBI test case 6.1.2.23	13.2.0	agreed	R5s	TEI12_Test	RP-76
36.523-3	3643	-	Rel-13	F	RP-171371	R5s170267	approved	Correction to GCF Wi-150 Rel-9 LTE test case 13.4.1.5 for Band > 64	13.2.0	agreed	R5s	TEI9_Test	RP-76
36.523-3	3644	-	Rel-13	F	RP-171371	R5s170268	approved	Correction to function t_EUTRA_CellInfo_SetSysInfo_NCEinSIB1	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3645	-	Rel-13	F	RP-171371	R5s170270	approved	Correction to CSG ID selection test case 6.3.5	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3647	-	Rel-13	F	RP-171371	R5s170272	approved	Correction to eMBMS test cases 17.4.x in band >64	13.2.0	agreed	R5s	TEI11_Test	RP-76
36.523-3	3648	-	Rel-13	F	RP-171371	R5s170273	approved	Correction to GCF Wi-081 Rel-8 LTE test cases 7.2.2.1, 7.2.2.2, 7.2.2.3, 7.2.2.4 and 7.2.2.5.1 for CAT	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3649	-	Rel-13	F	RP-171371	R5s170274	approved	Correction to GCF Wi-081 test case 7.1.2.1 (band>64)	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3650	-	Rel-13	F	RP-171371	R5s170275	approved	Correction to GCF Wi-162 Rel-10 CA test case 8.3.1.22.2	13.2.0	agreed	R5s	TEI10_Test	RP-76
36.523-3	3651	-	Rel-13	F	RP-171371	R5s170276	approved	Correction to inter-RAT MFBI test case 6.2.3.34	13.2.0	agreed	R5s	TEI9_Test	RP-76
36.523-3	3652	-	Rel-13	F	RP-171371	R5s170277	approved	Correction to Explicit UL Grant Assignment functions for Cat-M1 UEs	13.2.0	agreed	R5s	LTE_MTCe	RP-76
36.523-3	3653	-	Rel-13	F	RP-171371	R5s170278	approved	Correction to postamble of EUTRA CSG test cases	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3654	-	Rel-13	F	RP-171371	R5s170279	approved	Correction to EUTRA MAC CA test cases 7.1.2.11.x	13.2.0	agreed	R5s	TEI11_Test	RP-76
36.523-3	3655	-	Rel-13	B	RP-171371	R5s170280	approved	Addition of Rel-13 eDRX test case 9.2.4.1.1	13.2.0	agreed	R5s	TEI13_Test	RP-76
36.523-3	3656	-	Rel-13	F	RP-171371	R5s170282	approved	Correction to EUTRA Idle Mode test case 6.2.1.3 for Multi-PDN UE	13.2.0	agreed	R5s	TEI8_Test	RP-76
36.523-3	3657	-	Rel-13	B	RP-171371	R5s170284	approved	Addition of GCF Wi-257 NB-IoT test case 22.2.8	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3658	-	Rel-13	F	RP-171371	R5s170286	approved	Correction to function t_IPv6Packet_Create	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3659	-	Rel-13	F	RP-171371	R5s170287	approved	Correction to NB-IoT test case 22.4.2	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3660	-	Rel-13	F	RP-171371	R5s170288	approved	Correction to template cr_ESM_DATA_TRANSPORT	13.2.0	agreed	R5s	NB_IOT-UE	RP-76
36.523-3	3661	-	Rel-13	F	RP-171371	R5s170289	approved	Correction to NB-IoT test case 22.5.2	13.2.0	agreed	R5s	NB_IOT-UE	RP-76

36.523-3	3662	-	Rel-13	F	RP-171371	R5s170290	approved	Correction to function fl_NBIOT_CheckSuppportedBands	13.2.0	agreed	R5s	NB_IOT-UE	RP-76		
36.523-3	3663	-	Rel-13	F	RP-171371	R5s170295	approved	Correction to template cs_508_LogicalChannelConfig_DRB_UM	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3664	-	Rel-13	F	RP-171371	R5s170296	approved	Correction to GCF WI-081 testcases 7.1.5.1 and 7.1.5.2 with Cat-M1	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3665	-	Rel-13	F	RP-171371	R5s170298	approved	Correction for EUTRA capability check test case 8.5.4.1	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3666	-	Rel-13	F	RP-171371	R5s170300	approved	Correction to GCF WI-081 Rel-8 LTE test case 7.1.4.4	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3667	-	Rel-13	F	RP-171371	R5s170301	approved	Correction to GCF WI-081 Rel-8 LTE test cases 7.2.2.5.2, 7.2.2.9 for CAT-M1	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3669	-	Rel-13	F	RP-171371	R5s170303	approved	Correction to handling UE category	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3671	-	Rel-13	F	RP-171371	R5s170306	approved	Correction to function f_EUTRA_CA_InitFrequenciesIntraBand	13.2.0	agreed	R5s	TEI10_Test	RP-76		
36.523-3	3672	-	Rel-13	F	RP-171371	R5s170307	approved	Correction to EMM test case 10.3.1 for Multi-PDN UE	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3673	-	Rel-13	F	RP-171371	R5s170308	approved	Correction to EUTRA<>UTRAN test cases with IMS-enabled UE	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3674	-	Rel-13	F	RP-171371	R5s170309	approved	Correction to EMM test case 9.2.3.1.23 with Multi-PDN UE	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3678	-	Rel-13	B	RP-171371	R5s170325	approved	Addition of Rel-13 eDRX test case 9.2.4.1.2	13.2.0	agreed	R5s	TEI13_Test	RP-76		
36.523-3	3679	1	Rel-14	B	RP-171371	R5s170422	approved	Addition of TDD Band 41 power class 2 operation / High-Power UE test case 6.1.2.5a	13.2.0	agreed	R5s	TEI14_Test	RP-76		
36.523-3	3680	-	Rel-13	F	RP-171363	R5-172046	approved	Routine maintenance for TS 36.523-3	13.2.0	agreed	R5	TEI8_Test	RP-76		
36.523-3	3681	-	Rel-13	F	RP-171350	R5-172058	approved	NB-IoT: Test Model updates	13.2.0	agreed	R5	NB_IOT-UE	RP-76		
36.523-3	3682	1	Rel-13	F	RP-171348	R5-173005	approved	eMTC: Test Model updates	13.2.0	agreed	R5	LTE_MTCe2	RP-76		
36.523-3	3683	-	Rel-13	F	RP-171371	R5s170334	approved	Correction to eMTC Idle Mode test case 6.1.2.6a	13.2.0	agreed	R5s	LTE_MTCe2	RP-76		
36.523-3	3685	-	Rel-13	F	RP-171371	R5s170337	approved	Correction to EMM test case 9.2.3.1.5a for Multi-PDN UEs	13.2.0	agreed	R5s	TEI10_Test	RP-76		
36.523-3	3686	-	Rel-13	F	RP-171371	R5s170338	approved	Correction to MDT test case 8.6.9.2	13.2.0	agreed	R5s	TEI11_Test	RP-76		
36.523-3	3687	-	Rel-13	B	RP-171371	R5s170339	approved	Addition of GCF WI-257 NB-IoT test case 22.4.12	13.2.0	agreed	R5s	NB_IOT-UE	RP-76		
36.523-3	3689	-	Rel-13	F	RP-171371	R5s170342	approved	Correction to EMM test case 9.2.3.1.27 for CAT-M1 UEs	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3690	-	Rel-13	F	RP-171371	R5s170343	approved	Correction to GCF WI-081 TC 7.1.4.13 for Cat-M1 UE	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3692	1	Rel-13	F	RP-171365	R5-172924	approved	Addition of MFBI band combinations for Band 66	13.2.0	agreed	R5	TEI13_Test	RP-76		
36.523-3	3697	-	Rel-13	F	RP-171371	R5s170351	approved	Correction to GCF WI-257 NB-IoT test case 22.4.11	13.2.0	agreed	R5s	NB_IOT-UE	RP-76		
36.523-3	3698	-	Rel-13	F	RP-171371	R5s170352	approved	Correction to RRC test case 8.1.1.3 for CAT-M1 UEs	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3699	-	Rel-13	F	RP-171371	R5s170353	approved	Correction to function fl_DciDlInfo_Init for CAT-M1 UEs	13.2.0	agreed	R5s	LTE_MTCe2	RP-76		
36.523-3	3701	-	Rel-13	F	RP-171371	R5s170355	approved	Correction to GCF WI-081 TC 7.2.2.7, 7.2.2.8, 7.2.3.14 for Cat-M1 UE	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3702	-	Rel-13	F	RP-171371	R5s170356	approved	Correction to function f_ExecutionGuideline_InterBand	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3703	-	Rel-13	F	RP-171371	R5s170361	approved	Correction to PSM test case 9.2.1.1.7c	13.2.0	agreed	R5s	TEI12_Test	RP-76		
36.523-3	3704	-	Rel-13	F	RP-171371	R5s170362	approved	Correction to GCF WI-151 test case 8.1.3.12a	13.2.0	agreed	R5s	TEI9_Test	RP-76		
36.523-3	3706	-	Rel-13	F	RP-171371	R5s170366	approved	Correction to f_NBIOT_RRC_ConnectionRelease_Common	13.2.0	agreed	R5s	NB_IOT-UE	RP-76		
36.523-3	3707	-	Rel-13	F	RP-171371	R5s170367	approved	Correction to GCF WI-254 Rel-13 LTE test case 8.1.1.1a	13.2.0	agreed	R5s	LTE_MTCe2	RP-76		
36.523-3	3709	-	Rel-13	F	RP-171371	R5s170369	approved	Correction to GCF WI-086 SRVCC TC 13.4.3.2	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3710	-	Rel-13	F	RP-171371	R5s170370	approved	Correction to GCF WI-082 Test Case 9.2.1.1.1a	13.2.0	agreed	R5s	TEI8_Test	RP-76		
36.523-3	3718	-	Rel-14	F	RP-171370	R5s170414	approved	Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (prose), Annex A	13.2.0	agreed	R5s	TEI14_Test	RP-76		
36.873	0025	-	Rel-12	F	RP-171202	R1-1705091	approved	Correction on site specific effective height for TR36.873	12.4.0	agreed	R1	FS_LTE_3D	RP-76		
36.873	0026	-	Rel-12	F	RP-171202	R1-1706375	approved	TR36.873_CR_Correction_on_Rural_LSP	12.4.0	agreed	R1	FS_LTE_3D	RP-76		
36.873	0027	-	Rel-12	F	RP-171202	R1-1709140	approved	TR36.873_CR_Correction_for_LOS_probability	12.4.0	agreed	R1	FS_LTE_3D	RP-76		
36.873	0028	-	Rel-12	F	RP-171202	R1-1709141	approved	TR36.873_CR_Scaling_factor_notation	12.4.0	agreed	R1	FS_LTE_3D	RP-76		
36.873	0029	-	Rel-12	F	RP-171202	R1-1709142	approved	TR36.873_CR_Notation_of_log-normal_distributed_random_variables	12.4.0	agreed	R1	FS_LTE_3D	RP-76		
36.873	0030	-	Rel-12	F	RP-171202	R1-1709143	approved	TR36.873_CR_Missing_LOS_Doppler	12.4.0	agreed	R1	FS_LTE_3D	RP-76		
36.903	0323	1	Rel-13	F	RP-171344	R5-173236	approved	LAA: Test Tolerance analysis of LAA Scell event reporting	13.1.0	agreed	R5	LTE_LAA-U	RP-76		
36.903	0324	1	Rel-13	F	RP-171344	R5-173058	approved	LAA: Test Tolerance Analysis for RRM TC 9.1.55 and 9.1.56	13.1.0	agreed	R5	LTE_LAA-U	RP-76		
36.903	0325	1	Rel-13	F	RP-171348	R5-173259	approved	Test tolerance calculation for TC7.3.56,7.3.57,7.3.58,7.3.59	13.1.0	agreed	R5	LTE_MTCe2	RP-76	wrong rev number on CR cover	
36.903	0326	-	Rel-13	F	RP-171348	R5-172236	approved	Add Test Tolerance Analysis in 36.903 for TCs 5.1.16, 5.1.17 and 5.1.18	13.1.0	agreed	R5	LTE_MTCe2	RP-76		
36.903	0327	-	Rel-13	F	RP-171344	R5-172284	approved	Update of Test Tolerance analysis to include 8.26.7 and 8.26.8 E-UTRAN FDD/TDD-FS3 Intra-frequen	13.1.0	agreed	R5	LTE_LAA-U	RP-76		
36.903	0328	-	Rel-13	F	RP-171348	R5-172288	approved	Add Test Tolerance analysis for Contention Based Random Access Tests for Cat-M1 UEs in Enhanced	13.1.0	agreed	R5	LTE_MTCe2	RP-76		
36.903	0329	-	Rel-13	F	RP-171376	R5-172330	approved	Add Test Tolerance analysis for TS 36.521-3 Test cases 9.1.7.1_1+9.1.13.1_1	13.1.0	agreed	R5	TEI12_Test	RP-76		
36.903	0330	-	Rel-13	F	RP-171376	R5-172332	approved	Add Test Tolerance analysis for TS 36.521-3 Test cases 9.1.7.2_1+9.1.13.2_1	13.1.0	agreed	R5	TEI12_Test	RP-76		
36.903	0331	-	Rel-13	F	RP-171376	R5-172334	approved	Add Test Tolerance analysis for TS 36.521-3 Test cases 9.1.8.1_1+9.1.9.1_1	13.1.0	agreed	R5	TEI12_Test	RP-76		
36.903	0332	-	Rel-13	F	RP-171376	R5-172336	approved	Add Test Tolerance analysis for TS 36.521-3 Test cases 9.1.10.1_1+9.1.11.1_1	13.1.0	agreed	R5	TEI12_Test	RP-76		
36.903	0334	1	Rel-13	F	RP-171340	R5-173232	approved	Add Test Tolerance analysis for CA RRM test cases 8.16.51, 8.16.52, 8.16.53 and 8.16.54	13.1.0	agreed	R5	LTE_CA_Re	RP-76		
36.903	0335	2	Rel-13	F	RP-171348	R5-173069	approved	Add Test Tolerance analysis for Cat-M1 test cases 7.2.10, 7.2.11, 7.2.12 in CEModeB	13.1.0	agreed	R5	LTE_MTCe2	RP-76		
36.903	0336	1	Rel-13	F	RP-171344	R5-173241	approved	Test tolerance analysis for the test cases 9.1..60 and 9.1.61	13.1.0	agreed	R5	LTE_LAA-U	RP-76		
36.903	0337	2	Rel-13	F	RP-171344	R5-173060	approved	Test tolerance analysis for the test cases 8.26.3 and 8.26.4	13.1.0	agreed	R5	LTE_LAA-U	RP-76		
36.903	0338	1	Rel-13	F	RP-171350	R5-173247	approved	Test tolerance analysis for the test cases 6.1.15 and 6.1.16	13.1.0	agreed	R5	NB_IOT-UE	RP-76		
36.903	0339	2	Rel-13	F	RP-171350	R5-173062	approved	Test tolerance analysis for the test cases 7.1.17 and 7.1.18	13.1.0	agreed	R5	NB_IOT-UE	RP-76		
36.903	0340	1	Rel-13	F	RP-171350	R5-173251	approved	Test tolerance analysis for the test cases 7.2.9	13.1.0	agreed	R5	NB_IOT-UE	RP-76		
36.903	0341	1	Rel-13	F	RP-171350	R5-173253	approved	Test tolerance analysis for the test cases 7.3.62 and 7.3.63	13.1.0	agreed	R5	NB_IOT-UE	RP-76		
36.903	0342	-	Rel-13	F	RP-171374	R5-172662	approved	PCC-SCC swap update of Test Tolerance analyses for 10+20MHz TDD event triggered reporting on de	13.1.0	agreed	R5	TEI10_Test	RP-76		
36.903	0344	1	Rel-13	F	RP-171344	R5-173246	approved	Test Tolerance: Analysis of Test cases 8.26.9 and 8.26.10	13.1.0	agreed	R5	LTE_LAA-U	RP-76		
36.903	0345	1	Rel-13	F	RP-171336	R5-173230	approved	Test Tolerance analysis for TS 36.521-3 Test case 8.22.7 and 8.22.8	13.1.0	agreed	R5	LTE_SC_er	RP-76		
36.903	0346	-	Rel-13	F	RP-171336	R5-172732	approved	Test Tolerance analysis for TS 36.521-3 Test case 8.22.11 and 8.22.12	13.1.0	agreed	R5	LTE_SC_er	RP-76		
36.903	0347	-	Rel-13	F	RP-171344	R5-172745	approved	Test Tolerance: Analysis of Test cases 9.2.51 and 9.2.52	13.1.0	agreed	R5	LTE_LAA-U	RP-76		
36.903	0348	-	Rel-13	F	RP-171376	R5-172751	approved	Test Tolerance analyses updates for TC's 9.1.8.2, 9.1.9.2 to cater for FDD_B	13.1.0	agreed	R5	TEI12_Test	RP-76		
36.903	0349	2	Rel-13	F	RP-171350	R5-173434	approved	Test Tolerance analysis for the test cases 7.3.64 and 7.3.65	13.1.0	agreed	R5	NB_IOT-UE	RP-76		
36.903	0350	-	Rel-13	F	RP-171344	R5-173081	approved	Test tolerance analysis for 36.521-3 test cases 9.11.1 and 9.11.2	13.1.0	agreed	R5	LTE_LAA-U	RP-76		
36.905	0085	1	Rel-14	F	RP-171355	R5-173208	approved	TP analysis for TC 7.3A.5 for CA_4A-12A-30A	14.2.0	agreed	R5	LTE_CA_R	RP-76		
36.905	0086	-	Rel-14	F	RP-171355	R5-172114	approved	TP analysis for CA_46A-46A-66A, CA_46C-66A	14.2.0	agreed	R5	LTE_CA_R	RP-76		
36.905	0087	-	Rel-14	F	RP-171359	R5-172138	approved	Resubmission of Update TS 36.905 with Test Points Analysis for Band 48	14.2.0	agreed	R5	LTE_TDD_	RP-76		
36.905	0088	1	Rel-14	F	RP-171355	R5-173211	approved	Addition of CA_3C-8A in 36.905	14.2.0	agreed	R5	LTE_CA_R	RP-76		
36.905	0089	1	Rel-14	F	RP-171355	R5-173213	approved	A-MPR analyses for new Rel-14 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76		
36.905	0090	1	Rel-14	F	RP-171355	R5-173214	approved	Spurious emission TP analyses for new Rel-14 CA configurations	14.2.0	agreed	R5	LTE_CA_R	RP-76		
36.905	0091	1	Rel-14	F	RP-171340	R5-173293	approved	Addition of the Test point analysis about REFSENS for 5DL CA	14.2.0	agreed	R5	LTE_CA_Re	RP-76		

Samsung Exhibit 1025, Page 1798 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

36.905	0092	1	Rel-14	F	RP-171340	R5-173292	approved	Update of the Test point analysis about REFSENS for 3DL and 4DL CA	14.2.0	agreed	R5	LTE_CA_R	RP-76	
36.905	0093	-	Rel-14	F	RP-171376	R5-172357	approved	Update for NS_04, NS_22 and NS_23 test points	14.2.0	agreed	R5	TEI12_Test	RP-76	
36.905	0094	1	Rel-14	F	RP-171340	R5-173294	approved	Update of TpAnalysis4DLRefSens_7.3A.9(2A-2A-12B)	14.2.0	agreed	R5	LTE_CA_R	RP-76	
36.905	0095	1	Rel-14	F	RP-171355	R5-173218	approved	Addition of test points analysis for CA_1A-11A-28A	14.2.0	agreed	R5	LTE_CA_R	RP-76	
36.905	0096	1	Rel-14	F	RP-171355	R5-173219	approved	Addition of test points analysis for CA_8A-11A-28A	14.2.0	agreed	R5	LTE_CA_R	RP-76	
36.905	0097	1	Rel-14	F	RP-171355	R5-173389	approved	Addition of test point analysis for 2UL/2DL of CA_41A-42A	14.2.0	agreed	R5	LTE_CA_R	RP-76	
36.905	0098	1	Rel-14	F	RP-171340	R5-173304	approved	Addition of CA_3A-41A-42A in 36.905	14.2.0	agreed	R5	LTE_CA_R	RP-76	
36.905	0099	-	Rel-14	F	RP-171355	R5-172565	approved	Addition of CA_3A-3A-7A-7A in 36.905	14.2.0	agreed	R5	LTE_CA_R	RP-76	
36.905	0100	-	Rel-14	F	RP-171355	R5-172566	approved	Addition of CA_7A-7A-XA in 36.905	14.2.0	agreed	R5	LTE_CA_R	RP-76	
36.905	0101	1	Rel-14	F	RP-171340	R5-173300	approved	Addition of test point analysis for CA_8A-41C	14.2.0	agreed	R5	LTE_CA_R	RP-76	wrong rev number on CR cover
36.905	0102	1	Rel-14	F	RP-171355	R5-173394	approved	Addition of test point analysis for Rel-14 CA	14.2.0	agreed	R5	LTE_CA_R	RP-76	wrong rev number on CR cover
36.905	0104	1	Rel-14	F	RP-171355	R5-173222	approved	Addition of test points analysis for CA_3A-20A-32A	14.2.0	agreed	R5	LTE_CA_R	RP-76	
36.905	0106	-	Rel-14	F	RP-171355	R5-172649	approved	Addition of test points analysis for CA_xA-66A-66A and CA_66A-66C	14.2.0	agreed	R5	LTE_CA_R	RP-76	
36.905	0107	-	Rel-14	F	RP-171375	R5-172663	approved	Correction of PCC allocation rules for intra-band non-contiguous CA	14.2.0	agreed	R5	TEI11_Test	RP-76	
36.978	0003	-	Rel-13	F	RP-171356	R5-172265	approved	Resubmission of Addition of UE requirements for RSAP and RSARP	13.1.0	agreed	R5	LTE_MIMO	RP-76	
36.978	0004	-	Rel-13	F	RP-171356	R5-172266	approved	Resubmission of Introduction of a UE client application for the ATF	13.1.0	agreed	R5	LTE_MIMO	RP-76	
37.104	0321	1	Rel-14	B	RP-171279	R4-1704044	approved	Intorduction of new bands for NB-IoT in 37.104	14.3.0	agreed	R4	NB_IOT_R	RP-76	
37.104	0327	1	Rel-12	F	RP-171297	R4-1704380	approved	TS 37.104: Correction of reference	12.12.0	agreed	R4	TEI12	RP-76	
37.104	0328	1	Rel-13	A	RP-171297	R4-1704381	approved	TS 37.104: Correction of reference	13.5.0	agreed	R4	TEI12	RP-76	
37.104	0329	1	Rel-14	A	RP-171297	R4-1704382	approved	TS 37.104: Correction of reference	14.3.0	agreed	R4	TEI12	RP-76	
37.104	0776	1	Rel-14	F	RP-171282	R4-1704055	approved	CR on BS for protection of V2X UE in TS 37.104	14.3.0	agreed	R4	LTE_V2X-C	RP-76	
37.104	0777	1	Rel-13	F	RP-171300	R4-1705913	approved	Missing clarification note related to BS output power when considering NB-IoT	13.5.0	agreed	R4	NB_IOT-Co	RP-76	
37.104	0778	-	Rel-14	A	RP-171300	R4-1704829	approved	Missing clarification note related to BS output power when considering NB-IoT	14.3.0	agreed	R4	NB_IOT-Co	RP-76	
37.104	0779	2	Rel-13	F	RP-171299	R4-1706078	approved	Remove NB-IoT inband support for 1.4 MHz	13.5.0	agreed	R4	NB_IOT-Co	RP-76	
37.104	0780	-	Rel-14	A	RP-171299	R4-1704831	approved	Remove NB-IoT inband support for 1.4 MHz	14.3.0	agreed	R4	NB_IOT-Co	RP-76	
37.104	0782	-	Rel-13	F	RP-171299	R4-1705406	approved	Narrowband blocking requirement for NB-IoT guard band operation (TS 37.104)	13.5.0	agreed	R4	NB_IOT-Co	RP-76	
37.104	0783	-	Rel-14	A	RP-171299	R4-1705407	approved	Narrowband blocking requirement for NB-IoT guard band operation (TS 37.104)	14.3.0	agreed	R4	NB_IOT-Co	RP-76	
37.104	0784	1	Rel-13	F	RP-171300	R4-1706108	approved	Intermodulation performance requirement for NB-IoT operation (TS 37.104)	13.5.0	agreed	R4	NB_IOT-Co	RP-76	
37.104	0785	-	Rel-14	A	RP-171300	R4-1705415	approved	Intermodulation performance requirement for NB-IoT operation (TS 37.104)	14.3.0	agreed	R4	NB_IOT-Co	RP-76	
37.105	0048	-	Rel-13	F	RP-171305	R4-1703926	approved	CR to TS 37.105: BS demodulation requirements update	13.4.0	agreed	R4	AAS_BS_L	RP-76	
37.105	0049	-	Rel-13	B	RP-171305	R4-1703927	approved	CR to TS 37.105: Addition of 1.4 and 3 MHz channel bandwidths for Band 65	13.4.0	agreed	R4	AAS_BS_L	RP-76	
37.105	0059	1	Rel-13	F	RP-171305	R4-1706154	approved	CR to TS 37.105: Correction of the spurious emissions requirement	13.4.0	agreed	R4	AAS_BS_L	RP-76	
37.105	0060	1	Rel-14	A	RP-171305	R4-1706155	approved	CR to TS 37.105: Correction of the spurious emissions requirement	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.105	0061	-	Rel-14	A	RP-171305	R4-1705790	approved	CR to TS 37.105: BS demodulation requirements update	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.105	0062	-	Rel-14	A	RP-171305	R4-1705791	approved	CR to TS 37.105: Addition of 1.4 and 3 MHz channel bandwidths for Band 65	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.113	0067	1	Rel-13	F	RP-171285	R4-1704022	approved	CR on LAA BS for TS 37.113	13.3.0	agreed	R4	LTE_eLAA-	RP-76	
37.113	0068	-	Rel-14	A	RP-171285	R4-1703578	approved	CR on eLAA BS for TS 37.113	14.1.0	agreed	R4	LTE_eLAA-	RP-76	
37.114	0009	-	Rel-14	A	RP-171306	R4-1705792	approved	CR to TS 37.114: Isolation of Band 46 and NB-IoT from the AAS BS specification	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.114	0008	-	Rel-13	B	RP-171306	R4-1703929	approved	CR to TS 37.114: Isolation of Band 46 and NB-IoT from the AAS BS specification	13.2.0	agreed	R4	AAS_BS_L	RP-76	wrong CR number on CR cover
37.141	0493	1	Rel-14	F	RP-171282	R4-1704058	approved	CR on BS for protection of V2X UE in TS 37.141	14.3.0	agreed	R4	LTE_V2X-P	RP-76	
37.141	0496	1	Rel-12	F	RP-171297	R4-1704383	approved	TS 37.141: Correction of reference	12.12.0	agreed	R4	TEI12	RP-76	
37.141	0497	1	Rel-13	A	RP-171297	R4-1704384	approved	TS 37.141: Correction of reference	13.6.0	agreed	R4	TEI12	RP-76	
37.141	0498	1	Rel-14	A	RP-171297	R4-1704385	approved	TS 37.141: Correction of reference	14.3.0	agreed	R4	TEI12	RP-76	
37.141	0775	1	Rel-14	B	RP-171255	R4-1704063	approved	CR on eLAA BS for TS 37.141	14.3.0	agreed	R4	LTE_eLAA-	RP-76	
37.141	0776	2	Rel-13	F	RP-171302	R4-1705941	approved	Remove NB-IoT inband support for 1.4 MHz - Tests	13.6.0	agreed	R4	NB_IOT-Pe	RP-76	
37.141	0777	-	Rel-14	A	RP-171302	R4-1704833	approved	Remove NB-IoT inband support for 1.4 MHz - Tests	14.3.0	agreed	R4	NB_IOT-Pe	RP-76	
37.141	0778	1	Rel-14	B	RP-171279	R4-1705861	approved	Add NB-IoT support to Band 21	14.3.0	agreed	R4	NB_IOT_R	RP-76	
37.141	0780	-	Rel-13	F	RP-171300	R4-1705410	approved	Narrowband blocking requirement for NB-IoT guard band operation (TS 37.141)	13.6.0	agreed	R4	NB_IOT-Pe	RP-76	
37.141	0781	-	Rel-14	A	RP-171300	R4-1705411	approved	Narrowband blocking requirement for NB-IoT guard band operation (TS 37.141)	14.3.0	agreed	R4	NB_IOT-Pe	RP-76	
37.141	0782	1	Rel-13	F	RP-171303	R4-1706110	approved	Intermodulation performance requirement for NB-IoT operation (TS 37.141)	13.6.0	agreed	R4	NB_IOT-Pe	RP-76	
37.141	0783	-	Rel-14	A	RP-171303	R4-1705419	approved	Intermodulation performance requirement for NB-IoT operation (TS 37.141)	14.3.0	agreed	R4	NB_IOT-Pe	RP-76	
37.141	0784	1	Rel-13	F	RP-171302	R4-1706080	approved	Testing for BS supporting NB-IoT operation (TS 37.141)	13.6.0	agreed	R4	NB_IOT-Pe	RP-76	
37.141	0785	1	Rel-14	A	RP-171302	R4-1706081	approved	Testing for BS supporting NB-IoT operation (TS 37.141)	14.3.0	agreed	R4	NB_IOT-Pe	RP-76	
37.144	0005	1	Rel-14	B	RP-171271	R4-1704066	approved	Finalization of LTE Tablet TRP/TRS for bands 1, 3, 7, 19, 20, 21	14.2.0	agreed	R4	LTE_UTRA	RP-76	
37.145-1	0056	-	Rel-13	B	RP-171306	R4-1703937	approved	CR to TS 37.145-1: Introduction of Rel-13 bands: 45, 65, 66 and 68	13.2.0	agreed	R4	AAS_BS_L	RP-76	wrong CR number on CR cover
37.145-1	0026	-	Rel-13	B	RP-171306	R4-1703930	approved	CR to TS 37.145-1: Isolation of Band 46 from the AAS BS specification	13.2.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0027	-	Rel-13	B	RP-171306	R4-1703931	approved	CR to TS 37.145-1: Isolation of the NB-IoT from the AAS BS specification	13.2.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0028	1	Rel-13	F	RP-171306	R4-1704348	approved	CR to TS 37.145-1: MB-MSR update	13.2.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0029	-	Rel-13	F	RP-171306	R4-1703933	approved	CR to TS 37.145-1: BS demodulation requirements update	13.2.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0030	-	Rel-13	F	RP-171306	R4-1703934	approved	CR to TS 37.145-1: Correction of the 256QAM test requirement for EVM	13.2.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0031	-	Rel-13	F	RP-171306	R4-1703935	approved	CR to TS 37.145-1: Update of Rel-13 references to the UTRA, EUTRA and MSR specifications	13.2.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0057	1	Rel-13	F	RP-171306	R4-1704319	approved	CR to TS 37.145-1: Correction of the test setup for the Tx spurious emissions requirement	13.2.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0058	-	Rel-14	A	RP-171306	R4-1705793	approved	CR to TS 37.145-1: Isolation of Band 46 from the AAS BS specification	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0059	-	Rel-14	A	RP-171306	R4-1705794	approved	CR to TS 37.145-1: Isolation of the NB-IoT from the AAS BS specification	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0060	-	Rel-14	A	RP-171306	R4-1705795	approved	CR to TS 37.145-1: BS demodulation requirements update	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0061	-	Rel-14	A	RP-171306	R4-1705796	approved	CR to TS 37.145-1: Correction of the 256QAM test requirement for EVM	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0062	-	Rel-14	A	RP-171306	R4-1705797	approved	CR to TS 37.145-1: Update of Rel-13 references to the UTRA, EUTRA and MSR specifications	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0063	-	Rel-14	A	RP-171306	R4-1705798	approved	CR to TS 37.145-1: Introduction of Rel-13 bands: 45, 65, 66 and 68	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0064	-	Rel-14	A	RP-171306	R4-1705800	approved	CR to TS 37.145-1: Correction of the test setup for the Tx spurious emissions requirement	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.145-1	0065	-	Rel-14	A	RP-171306	R4-1705801	approved	CR to TS 37.145-1: MB-MSR update	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.145-2	0010	-	Rel-13	B	RP-171306	R4-1703938	approved	CR to TS 37.145-2: Isolation of Band 46 from the AAS BS specification	13.2.0	agreed	R4	AAS_BS_L	RP-76	
37.145-2	0011	-	Rel-14	A	RP-171306	R4-1705799	approved	CR to TS 37.145-2: Isolation of Band 46 from the AAS BS specification	14.0.0	agreed	R4	AAS_BS_L	RP-76	
37.171	0008	-	Rel-14	F	RP-171270	R4-1702881	approved	InDoPos: WLAN requirements (Rel-14)	14.1.0	agreed	R4	UTRA_LTE_	RP-76	
37.171	0012	-	Rel-14	F	RP-171270	R4-1704518	approved	InDoPos: Corrections to BT-LE requirements (Rel-14)	14.1.0	agreed	R4	UTRA_LTE_	RP-76	

37.171	0013	2	Rel-14	F	RP-171270	R4-1706269	approved	InDoPos; New WLAN delay test case in nominal conditions with LTE FDD and TDD (Rel-14)	14.1.0	agreed	R4	UTRA_LTE	RP-76			
37.171	0014	1	Rel-14	F	RP-171270	R4-1706028	approved	InDoPos; New WLAN delay test case in dynamic range conditions with LTE FDD and TDD (Rel-14)	14.1.0	agreed	R4	UTRA_LTE	RP-76			
37.171	0016	4	Rel-14	B	RP-171270	R4-1706292	approved	CR on test case for Bluetooth identification	14.1.0	agreed	R4	UTRA_LTE	RP-76			
37.544	0009	1	Rel-14	F	RP-171386	R5-173366	approved	Introduction of Multi-Probe Anechoic Chamber Specification and Validation Method	14.1.0	agreed	R5	LTE_MIMO	RP-76			
37.544	0010	1	Rel-14	F	RP-171384	R5-173368	approved	Updated minimum requirements for LTE Tablet and UTRA TRP/TRS	14.1.0	agreed	R5	LTE_UTRA	RP-76			
37.571-1	0197	-	Rel-14	F	RP-171376	R5-172179	approved	Add Minimum Performance Sub-tests for 3 GNSS	14.1.0	agreed	R5	TEI12_Test	RP-76			
37.571-1	0198	-	Rel-14	F	RP-171384	R5-172623	approved	Introduction of periodical reporting capability for GNSS	14.1.0	agreed	R5	TEI14_Test	RP-76			
37.571-1	0200	1	Rel-14	F	RP-171378	R5-173364	approved	Introduction of MBS Assistance Data Measurement Test Cases	14.1.0	agreed	R5	LTE_IPos_e	RP-76			
37.571-1	0201	1	Rel-14	F	RP-171377	R5-173414	approved	Addition of ACKs in step 5 of test procedures	14.1.0	agreed	R5	TEI13_Test	RP-76			
37.571-2	0082	1	Rel-14	F	RP-171365	R5-172963	approved	Merge GNSS sub-tests into one sub-test	14.0.0	agreed	R5	TEI9_Test	RP-76			
37.571-2	0083	1	Rel-14	F	RP-171378	R5-172967	approved	Introduction of MBS Assistance Data Signalling Sub-test 16	14.0.0	agreed	R5	LTE_IPos_e	RP-76			
37.571-2	0084	1	Rel-14	F	RP-171377	R5-172964	approved	Correction to tbs-ProvideCapabilities in several tables	14.0.0	agreed	R5	TEI13_TEI5	RP-76			
37.571-3	0070	1	Rel-14	F	RP-171365	R5-172965	approved	Merge GNSS sub-tests into one sub-test	14.0.0	agreed	R5	TEI9_Test	RP-76			
37.571-3	0071	-	Rel-14	F	RP-171376	R5-172180	approved	Add new applicability conditions for GPS, GLONASS and BDS	14.0.0	agreed	R5	TEI12_Test	RP-76			
37.571-3	0073	-	Rel-14	F	RP-171384	R5-172668	approved	Introduction of periodical reporting capability for GNSS	14.0.0	agreed	R5	TEI14_Test	RP-76			
37.571-3	0074	1	Rel-14	F	RP-171378	R5-173365	approved	Introduction of Conditions and Applicability for MBS Assistance Data Measurement Test Cases	14.0.0	agreed	R5	LTE_IPos_e	RP-76			
37.571-3	0075	1	Rel-14	F	RP-171378	R5-172968	approved	Introduction of Conditions and Applicability for MBS Assistance Data Signalling Sub-tests	14.0.0	agreed	R5	LTE_IPos_e	RP-76			
37.571-4	0083	1	Rel-13	F	RP-171373	R5s170383	approved	Corrections to UE Positioning test cases	13.2.0	agreed	R5s	TEI9_Test	RP-76			
37.571-4	0085	-	Rel-13	B	RP-171373	R5s170311	approved	Addition of LTE UE Positioning test case 7.3.4.1.10s	13.2.0	agreed	R5s	TEI12_Test	RP-76			
37.571-4	0086	-	Rel-13	B	RP-171373	R5s170313	approved	Addition of LTE UE Positioning test case 7.3.4.3.10s	13.2.0	agreed	R5s	TEI12_Test	RP-76			
37.571-4	0087	-	Rel-13	F	RP-171373	R5s170363	approved	Aligning name of PICS used in TTCN to the TS 37.571-3 definition	13.2.0	agreed	R5s	TEI9_Test	RP-76			
37.571-4	0088	-	Rel-13	F	RP-171372	R5s170416	approved	Update of TC list in 37.571-4 (prose), Annex A, due to merging of GNSS subtest	13.2.0	agreed	R5s	TEI9_Test	RP-76			
37.571-5	0164	1	Rel-14	F	RP-171365	R5-172966	approved	Merge GNSS sub-tests into one sub-test	14.0.0	agreed	R5	TEI9_Test	RP-76			
37.571-5	0165	-	Rel-14	F	RP-171376	R5-172181	approved	Add clarification of Sub-test clause for minimum performance tests	14.0.0	agreed	R5	TEI12_Test	RP-76			
37.571-5	0166	2	Rel-14	F	RP-171376	R5-173415	approved	Add Sub-tests for A-GPS, A-GLONASS and A-BDS for GNSS	14.0.0	agreed	R5	TEI12_Test	RP-76			
37.571-5	0167	1	Rel-14	F	RP-171378	R5-172969	approved	Introduction of MBS Assistance Data for Signalling and Measurement Tests	14.0.0	agreed	R5	LTE_IPos_e	RP-76			
37.977	0051	-	Rel-14	F	RP-171258	R4-1702935	approved	CR on updating PADs list	14.3.0	agreed	R4	LTE_MIMO	RP-76			
37.977	0053	2	Rel-14	F	RP-171258	R4-1705938	approved	CR to 37.977 Definition of RTS 2nd stage isolation	14.3.0	agreed	R4	LTE_MIMO	RP-76			
37.977	0054	1	Rel-14	B	RP-171258	R4-1704078	approved	CR to 37.977 to define RTS channel model validation limits	14.3.0	agreed	R4	UTRA_LTE	RP-76			
37.977	0056	1	Rel-14	F	RP-171258	R4-1705918	approved	CR on Channel model validation procedures for RTS	14.3.0	agreed	R4	LTE_MIMO	RP-76			
37.977	0057	-	Rel-14	F	RP-171258	R4-1704662	approved	CR on harmonization outcome	14.3.0	agreed	R4	LTE_MIMO	RP-76			
37.977	0058	3	Rel-14	F	RP-171258	R4-1706285	approved	RTS applicability for > 2 Rx	14.3.0	agreed	R4	LTE_MIMO	RP-76			
37.977	0059	-	Rel-14	F	RP-171258	R4-1705669	approved	CR on Theoretical V/H Limits	14.3.0	agreed	R4	LTE_MIMO	RP-76			
37.977	0060	3	Rel-14	B	RP-171258	R4-1706289	approved	CR on Channel Model Validation	14.3.0	agreed	R4	LTE_MIMO	RP-76			
38.802	0001	1	Rel-14	F	RP-171208	R1-1706355	approved	Correction for channel model references	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.802	0002	-	Rel-14	F	RP-171208	R1-1709832	approved	TR38.802_CR_Section_7.1.6_MIMO calibration	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.802	0003	-	Rel-14	F	RP-171208	R1-1709721	approved	CR on LDPC code [38.802]	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.803	0002	1	Rel-14	B	RP-171452	-	approved	Addition of background information on phase noise modelling	14.0.0	-	R4	FS_NR_new	RP-76	is a revision of CRpack RP-171253		
38.803	0003	1	Rel-14	F	RP-171254	R4-1704314	approved	CR for TR 38.803: Removing an error of conductive test of beam correspondence	14.0.0	agreed	R4	FS_NR_new	RP-76			
38.803	0004	2	Rel-14	F	RP-171452	-	approved	CR on Channel bandwidth/Transmission bandwidth configuration	14.0.0	-	R4	FS_NR_new	RP-76	is a revision of CRpack RP-171253		
38.803	0005	2	Rel-14	B	RP-171452	-	approved	CR to TR 38.803: Relation with the existing specifications (section 7)	14.0.0	-	R4	FS_NR_new	RP-76	is a revision of CRpack RP-171253		
38.803	0006	1	Rel-14	F	RP-171452	-	approved	CR to TR 38.803: RRM requirements cleanup	14.0.0	-	R4	FS_NR_new	RP-76	is a revision of CRpack RP-171253		
38.803	0009	-	Rel-14	F	RP-171254	R4-1705103	approved	OTA measurements in the radiative near field	14.0.0	agreed	R4	FS_NR_new	RP-76			
38.803	0010	-	Rel-14	F	RP-171254	R4-1705104	approved	Sampling grids for UE TRP measurements	14.0.0	agreed	R4	FS_NR_new	RP-76			
38.803	0011	1	Rel-14	B	RP-171452	-	approved	CR to TR38.803: Occupied bandwidth	14.0.0	-	R4	FS_NR_new	RP-76	is a revision of CRpack RP-171253		
38.900	0085	-	Rel-14	F	RP-171207	R1-1708744	approved	Correction for scope	14.2.0	agreed	R1	FS_6GHz_C	RP-76			
38.901	0001	1	Rel-14	F	RP-171208	R1-1706182	approved	Correction on site specific effective height for TR38.901	14.0.0	agreed	R1	FS_NR_new	RP-76	wrong rev number on CR cover		
38.901	0003	-	Rel-14	F	RP-171208	R1-1705803	approved	Correction for LOS probability	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.901	0004	-	Rel-14	F	RP-171208	R1-1705804	approved	Correction for scaling factor for ZOD generation	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.901	0005	-	Rel-14	F	RP-171208	R1-1705805	approved	Correction for modelling of intra-cluster angular and delay spreads	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.901	0007	-	Rel-14	F	RP-171208	R1-1706096	approved	TR38.901_CR_LCS_Radiation_Field_Notation	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.901	0008	-	Rel-14	F	RP-171208	R1-1706097	approved	TR38.901_CR_Mean_angle_definition	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.901	0009	-	Rel-14	F	RP-171208	R1-1706098	approved	TR38.901_CR_O2I_penetration_loss	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.901	0010	1	Rel-14	F	RP-171208	R1-1706381	approved	Correction on Rural LSP for TR38.901	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.901	0011	1	Rel-14	F	RP-171207	R1-1706382	approved	Clarification for spatial consistency procedure	14.0.0	agreed	R1	FS_6GHz_C	RP-76			
38.901	0013	-	Rel-14	F	RP-171208	R1-1709137	approved	TR38.901_CR_Scenarios_in_Simulation_Assumptions	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.901	0014	-	Rel-14	F	RP-171208	R1-1709138	approved	TR38.901_CR_TDL_Spatial_Filter	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.901	0015	1	Rel-14	F	RP-171208	R1-1709330	approved	Correction of spatial-consistency UE mobility modelling Procedure A	14.0.0	agreed	R1	FS_NR_new	RP-76			
38.912	0001	1	Rel-14	F	RP-171386	-	approved	CR to TR 38.912 on architecture and LDPC terminology	14.0.0	-	RP	NR_newRA	RP-76			
38.913	0009	-	Rel-14	F	RP-170967	-	approved	Update to TR 38.913 to take into account ITU-R KPIs	14.2.0	-	RP	FS_NG_SR	RP-76			
43.059	0084	3	Rel-14	F	RP-170923	R6-170313	approved	Multilateration - Miscellaneous corrections	14.0.0	agreed	R6	ePOS_GER	RP-76			
43.064	0114	2	Rel-14	B	RP-170924	R6-170302	approved	Introduction of uplink coverage class CC5 for UL MCL improvement	14.1.0	agreed	R6	CIoT_EC_G	RP-76			
44.018	1047	7	Rel-14	B	RP-170923	R6-170294	approved	Introduction of Multilateration	14.1.0	agreed	R6	ePOS_GER	RP-76			
44.018	1061	7	Rel-14	B	RP-170924	R6-170325	approved	Introduction of new UL coverage class CC5 for UL MCL improvement	14.1.0	agreed	R6	CIoT_EC_G	RP-76			
44.018	1063	1	Rel-13	F	RP-170928	R6-170236	approved	Protection Against Malicious Changes to System Information	13.5.0	agreed	R6	CIoT_EC_G	RP-76			
44.018	1064	1	Rel-14	A	RP-170928	R6-170237	approved	Protection Against Malicious Changes to System Information	14.1.0	agreed	R6	CIoT_EC_G	RP-76			
44.018	1065	1	Rel-14	F	RP-170925	R6-170265	approved	Introduction of enhanced DECOR for GERAN	14.1.0	agreed	R6	CIoT_EC_G	RP-76			
44.031	0227	8	Rel-14	B	RP-170923	R6-170323	approved	Introduction of Multilateration	14.0.0	agreed	R6	ePOS_GER	RP-76			
44.031	0228	3	Rel-14	B	RP-170923	R6-170266	approved	Introduction of Multilateration OTD	14.0.0	agreed	R6	ePOS_GER	RP-76			
44.060	1631	7	Rel-14	B	RP-170923	R6-170296	approved	Introduction of Multilateration	14.0.0	agreed	R6	ePOS_GER	RP-76			
44.060	1639	4	Rel-14	B	RP-170924	R6-170308	approved	Introduction of new UL coverage class CC5 for UL MCL improvement	14.0.0	agreed	R6	CIoT_EC_G	RP-76			
44.060	1641	2	Rel-14	F	RP-170925	R6-170291	approved	Introduction of enhanced DECOR for GERAN	14.0.0	agreed	R6	TEI14_eDec	RP-76			
45.001	0097	5	Rel-14	B	RP-170924	R6-170303	approved	Introduction of uplink coverage class CC5 for UL MCL improvement	14.1.0	agreed	R6	CIoT_EC_G	RP-76			
45.002	0206	4	Rel-14	B	RP-170924	R6-170304	approved	Introduction of uplink coverage class CC5 for UL MCL improvement	14.1.0	agreed	R6	CIoT_EC_G	RP-76			

Samsung Exhibit 1025, Page 1800 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

45.003	0145	5	Rel-14	B	RP-170924	R6-170318	approved	Introduction of uplink coverage class CC5 for UL MCL improvement	14.1.0	agreed	R6	CIoT_EC_C	RP-76
45.003	0147	1	Rel-13	F	RP-170928	R6-170232	approved	Correction of EC-PACCH mapping onto PDCHs	13.3.0	agreed	R6	CIoT_EC_C	RP-76
45.003	0148	1	Rel-14	A	RP-170928	R6-170233	approved	Correction of EC-PACCH mapping onto PDCHs	14.1.0	agreed	R6	CIoT_EC_C	RP-76
45.004	0027	2	Rel-14	B	RP-170924	R6-170310	approved	Introduction of ESAB	14.0.0	agreed	R6	CIoT_EC_C	RP-76
45.005	0599	3	Rel-14	B	RP-170924	R6-170301	approved	Performance requirements for Alternative Mappings for Higher Coverage Classes with 2 PDCHs	14.0.0	agreed	R6	CIoT_EC_C	RP-76
45.005	0603	1	Rel-14	B	RP-170923	R6-170270	approved	Receiver Performance for Extended Access Burst	14.0.0	agreed	R6	ePOS_GER	RP-76
45.005	0604	4	Rel-14	B	RP-170924	R6-170322	approved	Performance requirements for new uplink coverage class CC5 for UL MCL improvement	14.0.0	agreed	R6	CIoT_EC_C	RP-76
45.008	0649	4	Rel-14	B	RP-170924	R6-170319	approved	Introduction of new UL coverage class CC5 for UL MCL improvement	14.0.0	agreed	R6	CIoT_EC_C	RP-76
45.010	0071	6	Rel-14	B	RP-170923	R6-170297	approved	Introduction of Multilateration	14.0.0	agreed	R6	ePOS_GER	RP-76
48.008	0410	7	Rel-14	B	RP-170923	R6-170314	approved	Introduction of Multilateration	14.0.0	agreed	R6	ePOS_GER	RP-76
48.018	0430	6	Rel-14	B	RP-170923	R6-170282	approved	Introduction of Multilateration	14.2.0	agreed	R6	ePOS_GER	RP-76
48.018	0435	1	Rel-14	B	RP-170923	R6-170174	approved	Introduction of PS domain transport for Multilateration Timing Advance information transfer	14.2.0	agreed	R6	ePOS_GER	RP-76
48.018	0436	4	Rel-14	B	RP-170924	R6-170321	approved	Introduction of new UL coverage class CC5 for UL MCL improvement	14.2.0	agreed	R6	CIoT_EC_C	RP-76
48.018	0437	-	Rel-14	F	RP-170926	R6-170178	approved	Addition of DECOR rerouting cause code	14.2.0	agreed	R6	DECOR_GI	RP-76
48.018	0438	1	Rel-14	F	RP-170925	R6-170263	approved	Introduction of enhanced DECOR for GERAN	14.2.0	agreed	R6	TEI14_eDe	RP-76
48.018	0439	1	Rel-13	F	RP-170927	R6-170230	approved	Removing Unecessary References to eDRX for SGSN Paging Procedure	13.5.0	agreed	R6	eDRX_GSM	RP-76
48.018	0440	1	Rel-14	A	RP-170927	R6-170231	approved	Removing Unecessary References to eDRX for SGSN Paging Procedure	14.2.0	agreed	R6	eDRX_GSM	RP-76
49.031	0066	7	Rel-14	B	RP-170923	R6-170295	approved	Introduction of Multilateration	14.0.0	agreed	R6	ePOS_GER	RP-76
51.010-1	5142	-	Rel-13	F	RP-171363	R5-172145	approved	Correction to TC 26.7.4.5.4a	13.3.0	agreed	R5	TEI8_Test	RP-76
51.010-1	5143	-	Rel-13	F	RP-171363	R5-172146	approved	Correction to TC 42.4.2.3.4	13.3.0	agreed	R5	TEI8_Test	RP-76
51.010-1	5144	1	Rel-13	F	RP-171363	R5-172983	approved	Correction to TC 44.2.1.1.11	13.3.0	agreed	R5	TEI8_Test	RP-76
51.010-1	5145	1	Rel-13	F	RP-171363	R5-172984	approved	Correction to TC 44.2.1.2.7a	13.3.0	agreed	R5	TEI8_Test	RP-76
51.010-1	5146	1	Rel-13	F	RP-171363	R5-172985	approved	Correction to TC 44.2.3.1.9	13.3.0	agreed	R5	TEI8_Test	RP-76
51.010-1	5147	1	Rel-13	F	RP-171363	R5-172986	approved	Correction to TC 45.2.4.4	13.3.0	agreed	R5	TEI8_Test	RP-76
51.010-2	4397	1	Rel-13	F	RP-171362	R5-173338	approved	Correction to TC14.18.9.2 and condition C493	13.4.0	agreed	R5	TEI7_Test	RP-76
51.010-2	4398	1	Rel-13	F	RP-171361	R5-172987	approved	Correction to applicability of NITZ test cases	13.4.0	agreed	R5	TEI_Test	RP-76
51.021	0279	2	Rel-14	B	RP-170924	R6-170312	approved	Introduction of ESAB	14.0.0	agreed	R6	CIoT_EC_C	RP-76
51.021	0280	2	Rel-13	F	RP-170928	R6-170278	approved	Add performance requirement values for Testing EC-GSM-IoT channels	13.3.1	agreed	R6	CIoT_EC_C	RP-76
51.021	0281	2	Rel-14	A	RP-170928	R6-170279	approved	Add performance requirement values for Testing EC-GSM-IoT channels	14.0.0	agreed	R6	CIoT_EC_C	RP-76
51.021	0282	3	Rel-14	B	RP-170923	R6-170317	approved	Introduction of Multilateration	14.0.0	agreed	R6	ePOS_GER	RP-76
51.021	0284	-	Rel-14	B	RP-170923	R6-170284	approved	Introduction of Extended Acces Burst	14.0.0	agreed	R6	ePOS_GER	RP-76

Appendix 46

3GPP TSG RAN meeting #69
Phoenix, USA, Sep. 14 – 16, 2015

RP-151121

Agenda Item: 3

Source: ETSI MCC

Title: Draft Report of 3GPP TSG RAN meeting #68,
Malmö, Sweden, June 15 – 18, 2015

Document for: Approval

Draft Report of 3GPP TSG RAN meeting #68

held in Malmö, Sweden

June 15 – 18, 2015



colour code:
blue: text that will be revised in the final report
green: approved new TSs/TRs/WIs/SIs/Report/Exception
grey: outgoing LSs/LTIs
red: WI/SI closed/completed or moved to next REL
purple: pendingTdocs

The present document has been developed within the 3rd Generation Partnership Project (3GPP ™) and it has not been subject to any approval process by the 3GPP Organizational Partners.

Keywords
RAN, UTRA, LTE

3GPP

Postal address

3GPP support office address
650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet
http://www.3gpp.org

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© 2015, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).
All rights reserved.

UMTS™ is a Trade Mark of ETSI registered for the benefit of its members
3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners
LTE™ is a Trade Mark of ETSI currently being registered for the benefit of its Members and of the 3GPP Organizational Partners
GSM® and the GSM logo are registered and owned by the GSM Association

Samsung Exhibit 1025, Page 1804 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Contents

Meeting Organisation 6
Executive Summary 6
1 Opening of the Meeting 12
2 Reminders for usage of IT resources, IPR declaration and antitrust compliance 12
3 Approval of the Agenda 13
4 Approval of the meeting report of TSG-RAN #67 15
5 Reports from other meetings 16
5.1 Report from TSG SA 16
5.2 Report from PCG 16
5.3 Report from other meetings 17
6 Liaison activity of TSG RAN 17
6.1 Groups outside 3GPP 17
6.2 TSG SA, TSG CT, TSG GERAN 20
6.3 TSG RAN WG1, WG2, WG3, WG4, WG5, RAN ITU-R ad hoc 21
7 ITU-R Ad hoc 23
7.1 Status report 23
7.2 Submission to ITU-R 23
7.2.1 Submission to ITU-R WP5A 23
7.2.2 Submission to ITU-R WP5D 23
7.2.3 Other ITU-R submission 23
8 RAN WGs: WG Status Reports & CR Approvals up to Rel-10 24
8.1 TSG RAN WG1 24
8.1.1 Report from RAN WG1 including report on actions required from the previous meeting 24
8.1.2 Discussions on decisions from RAN WG1 24
8.1.3 Approval of CRs to REL-8 WIs and WIs of previous releases 24
8.1.4 Approval of CRs to Rel-9 WIs 24
8.1.5 Approval of CRs to Rel-10 WIs 24
8.1.6 Approval of CRs to Rel-11 WIs 24
8.1.7 Approval of linked CR packages led by RAN WG1 24
8.2 TSG RAN WG2 24
8.2.1 Report from RAN WG2 including report on actions required from the previous meeting 24
8.2.2 Discussions on decisions from RAN WG2 25
8.2.3 Approval of CRs to REL-8 WIs and WIs of previous releases 25
8.2.4 Approval of CRs to Rel-9 WIs 25
8.2.5 Approval of CRs to Rel-10 WIs 25
8.2.6 Approval of CRs to Rel-11 WIs 25
8.2.7 Approval of linked CR packages led by RAN WG2 25
8.3 TSG RAN WG3 25
8.3.1 Report from RAN WG3 including report on actions required from the previous meeting 25
8.3.2 Discussions on decisions from RAN WG3 26
8.3.3 Approval of CRs to REL-8 WIs and WIs of previous releases 26
8.3.4 Approval of CRs to Rel-9 WIs 26
8.3.5 Approval of CRs to Rel-10 WIs 26
8.3.6 Approval of CRs to Rel-11 WIs 26
8.3.7 Approval of linked CR packages led by RAN WG3 26
8.4 TSG RAN WG4 26
8.4.1 Report from RAN WG4 including report on actions required from the previous meeting 26
8.4.2 Discussions on decisions from RAN WG4 26
8.4.3 Approval of CRs to REL-8 WIs and WIs of previous releases 27
8.4.4 Approval of CRs to Rel-9 WIs 27
8.4.5 Approval of CRs to Rel-10 WIs 27

Samsung Exhibit 1025, Page 1805 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8.4.6 Approval of CRs to Rel-11 WIs 27
8.4.7 Approval of linked CR packages led by RAN WG4 27
8.5 TSG RAN WG5 27
8.5.1 Report from RAN WG5 including report on actions required from the previous meeting 27
8.5.2 Discussions on decisions from RAN WG5 27
8.5.3 Approval of CRs to closed WIs of REL-10 (incl. TEI10_Test) and previous releases 27
8.5.4 Approval of CRs to closed WIs of REL-11 (incl. TEI11_Test) 28
8.5.5 Approval of linked CR packages led by RAN WG5 29

9 Conformance Testing Work Items 30
9.1 Closed REL-12 work items 30
9.2 Open Rel-11 work items 30
9.3 Open Rel-12 work items 30
9.4 Open Rel-13 work items 34

10 Work Items with target Rel-12 (not related to conformance testing) 35
10.1 Closed UTRA only related WIs 35
10.2 Closed UTRA & LTE related WIs 35
10.3 Closed LTE only related WIs 35
10.4 Open UTRA & LTE only related WIs 36
10.5 Open LTE only related WIs (non-spectrum related) 36
10.6 Small Technical Enhancements and Improvements for Rel-12 [TEI12] 38

11 Work Items with target Rel-13 (not related to conformance testing) 39
11.1 Open UTRA related WIs (spectrum & non-spectrum related) 39
11.2 Open UTRA & LTE related WIs (non-spectrum related) 39
11.3 Open LTE only related WIs (non-spectrum related) 40
11.4 Open LTE only related WIs (spectrum and CA related) 47
11.5 Open LTE only related WIs (spectrum and not CA related) 72
11.6 Small Technical Enhancements and Improvements for Rel-13 [TEI13] 73

12 Study Items 74
12.1 Closed study items 74
12.2 Open UTRA related SIs 74
12.3 Open UTRA & LTE related SIs 75
12.4 Open LTE only related SIs 75

13 New Work Items/Study Items 85
13.1 New core functions 85
13.1.1 WIs/SIs led by RAN1 86
13.1.2 WIs/SIs led by RAN2 92
13.1.3 WIs/SIs led by RAN3 94
13.1.4 WIs/SIs led by RAN4 96
13.2 Spectrum related WIs/SIs 97
13.3 UE conformance testing WIs/SIs led by RAN5 104

14 UE capabilities/FGIs 105

15 Inter WG/TSG-related discussions & decisions 108

16 Outputs to other groups 112

17 Project management 113

18 Future meeting schedule 114

19 Any other business 114

20 Closing of the meeting 115

Annex A: List of participants 116

Annex B: List of Tdocs 117

Annex C: Incoming liaison statements (LSin) 118

Annex D: Outgoing liaison statements (LSout) 123

Samsung Exhibit 1025, Page 1806 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex E: List of Change Requests (CRs) 124

Annex F: Summary of RAN work items (WI) and study items (SI) 181

Annex G: Actions decided by RAN #68 185

Annex H: Agenda item 12.4.4: Report of ad hoc on REL-13 Study on possible additional configuration for LTE TDD 186

Annex I: History 192

Samsung Exhibit 1025, Page 1807 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Meeting Organisation

Meeting:	3GPP TSG RAN #68		
Meeting location:	Malmö, Sweden		
Duration:	Monday 15.06.2015 - Thursday 18.06.2015		
Host:	European Friends of 3GPP (EF3)		
TSG RAN Chairman:	Dino Flore (Qualcomm)	email: oflore@qti.qualcomm.com	
TSG RAN Vice chairman:	Takaharu Nakamura (Fujitsu)	email: n.takaharu@jp.fujitsu.com	
TSG RAN Vice chairman:	Giovanni Romano (Telecom Italia)	email: giovanni.romano@telecomitalia.it	
TSG RAN Vice chairman:	Sharat Chander (AT&T)	email: sharat.chander@att.com	
TSG RAN MCC Support:	Joern Krause (ETSI MCC)	email: Joern.Krause@etsi.org	
Email reflector:	3GPP_TSG_RAN@LIST.ETSI.ORG		
Technical documents:	ftp://ftp.3gpp.org/tsg_ran/TSGR_68/Docs		
next meetings:	TSG RAN #69	14.09. - 16.09.2015 Phoenix, USA	host: NAF3
	RAN workshop on 5G	17.09.-18.09.2015 Phoenix, USA	host: NAF3
	TSG RAN #70	07.12. - 10.12.2015 Sitges, Spain	host: EF3

Executive Summary

3GPP TSG RAN meeting #68 was held in Malmö, Sweden, June 15-18, 2015, hosted by the European Friends of 3GPP (EF3). The meeting had 207 participants (see Annex A) and 591 Technical Documents (see Annex B).

Main topics/decisions:

- **block approval**: RAN #68 continued to use "block approval process" for agreed CR packages from WGs and WI/SI status reports, i.e. these contributions were only discussed on request (flag) otherwise the CRs were considered approved and the % complete and target date of the status reports were considered approved.
- **time budget analysis (AI 13)**: RAN #68 assessed the modified time budget requests in WI/SI status reports for already approved WIs/SIs relative to the time budget status endorsed by RAN #67 in RP-150518; the RAN WG chairmen provided their estimates of remaining time budgets in their WGs (see WG status reports in AI 8); new WIs/SIs provided their time budget requests in the WI/SI descriptions (see AI 13); the resulting endorsed time budget allocations for all approved WIs/SIs after RAN #68 is provided in **RP-150982** (1 time unit ~ 2h). RAN5 WIs/SIs are excluded from this time budget handling.
- **REL-12 (AI 10)**: 3 Perf. part WIs still open (LTE_TDD_eIMTA-Perf, LTE_D2D_Prox-Perf, LTE_NAICS-Perf) while 6 other Perf. parts were completed (LCS_BDS-UEConTest, Cov_Enh_LTE-UEConTest, LTE_UTRA_IncMon-Perf, LC_MTC_LTE-Perf, LTE_SC_enh_L1-Perf, LTE_SC_enh_dualC-Perf). Record number of RAN5 REL-12 testing CRs.
- **UE capabilities/FGIs (AI 14)**:
  LS RP-151105 was sent to clarify the decisions about mandatory/optional REL-12 UE features.
  A way forward was endorsed in RP-151074 regarding TDD-FDD CA PCell mandatory support.
  CRs regarding new UE categories 15 & 16 in Rel-12 were approved (RP-150926, RP-150951).
  LS RP-151113 regarding rank3/4 in TM3 and TM4 for additional UE categories was sent in reply to R4-153907.
- **REL-13 (AI 11)**: Several SIs completed and related WIs started (see below).

Samsung Exhibit 1025, Page 1808 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- **LAA (AI 12.4.3)**: It was decided to have a workshop on License-Assisted Access (LAA) on Saturday 29.08.2015 in Beijing (immediately after the RAN WG meetings, at the same location) for further information exchange on this topic with interested industry organizations and regulators and LS with corresponding invitation was sent out in RP-151095. Further LSs were sent out in RP-151115 (on LAA capabilities and scope to answer some IEEE questions) and RP-1501098 (to inform ETSI BRAN about the completed SI TR 36.889 and the new approved WID in RP-151045).

- **RAN SI Study on possible additional configuration for LTE TDD (AI 12.4.4 and Annex H)**: The topic was mostly handled in a parallel session (see report RP-150983 or Annex H). The latest status of the SI is reflected in TR 36.825 v0.2.0 in RP-150984.

- **RAN SI Study on regulatory aspects for flexible duplex for E-UTRAN (AI 12.4.9)**: There was some debate how to document the SI results and finally it was agreed to cut and paste regulatory answers into the TR 36.882 (also those that come until Sep.15) and as conclusion it will be added that at least in one country and in some bands flexible duplex operation is possible. A TR update was postponed to RAN #69.

- **Cellular Internet of Things (AI 15)**: PCG way forward on "Clean Slate" approach was reported (RP-150582), the rapporteur of the GERAN SI FS_IoT_LC provided a status report about "Clean Slate" activities (RP-150589) and for information already a draft WID (RP-150870). An LS to SA on architecture for Clean Slate CIOT was approved in RP-151087 asking SA2 to progress their SI FS_AE_CIoT and to provide the status to RAN #69.

- **MSD calculation (AI 11.4.1.6, AI 11.4.2.25)**: controversial diiscussion about maximum sensitivity degradation (MSD) calculation for CA and CA_3A-40A/ CA_3A-40C ended with a way forward endorsed in RP-151108.

- **RAN enhancements for extended DRX in LTE (AI 11.3.11)**: RAN agreed that extended connected mode DRX cycle beyond 10.24 seconds is no longer pursued in the REL-13 WI LTE_extDRX-Core (see RP-150799).

- **ITU-R:** no incoming LSs/no submissions, see RP-150527

- Incoming Liaison Statements: 33, see Annex C

- Outgoing Liaison Statements: 8 (incl. 0 approved by email), see Annex D

- 71 closed work items (WI) in June 2015 (33 Core, 36 Perf., 2 Testing):

  - 1 RAN3 REL-13 Core part:
    - SON for AAS-based deployments (650134, UTRA_LTE_SON_AAS-Core) [no Perf. part]

  - RAN4 (32 Core, 36 Perf.):

    4 REL-12 Perf. parts for:
    - Increasing the min. number of carriers for UE monitoring in UTRA and E-UTRA (620242, LTE_UTRA_IncMon-Perf)
    - Low cost & enhanced coverage MTC UE for LTE (600212, LC_MTC_LTE-Perf)
    - E-UTRA Small cell enhancements - Physical layer aspects (620241, LTE_SC_enh_L1-Perf)
    - Dual Connectivity for LTE (620240, LTE_SC_enh_dualC-Perf)

    32 REL-13 Core & Performance parts for:
    - LTE Adv inter-band CA of Band 2 and Band 28 (650x38, LTE_CA_B2_B28)
    - Add. BW combination set for LTE Adv inter-band CA of Band 3 and Band 5 (670x64, LTE_CA_B3_B5_BWset)
    - LTE Adv inter-band CA of Band 3 and Band 31 (650x44, LTE_CA_B3_B31)
    - LTE Adv inter-band CA of Band 3 and Band 38 (650x37, LTE_CA_B3_B38)
    - LTE Adv inter-band CA of Band 3 and Band 40 (650x42, LTE_CA_B3_B40)
    - LTE Adv inter-band CA of Band 4 and Band 28 (650x39, LTE_CA_B4_B28)
    - Add. BW combination set for LTE Adv inter-band CA of Band 5 and Band 7 (670x63, LTE_CA_B5_B7_BWset)
    - LTE Adv inter-band CA of Band 5 and Band 40 (650x45, LTE_CA_B5_B40)
    - LTE Adv inter-band CA of Band 7 and Band 22 (630x33, LTE_CA_B7_B22)
    - LTE Adv inter-band CA of Band 20 and Band 31 (650x43, LTE_CA_B20_B31)
    - LTE Adv inter-band CA of Band 25 and Band 26 (660x81, LTE_CA_B25_B26)
    - LTE Adv 3 Band CA (3DL/1UL) of Band 1, Band 3 and Band 42 (670x65, LTE_CA_B1_B3_B42)
    - LTE Adv 3 Band CA (3DL/1UL) of Band 1, Band 7 and Band 28 (660x99, LTE_CA_B1_B7_B28)
    - LTE Adv 3 Band CA (3DL/1UL) of Band 1, Band 19 and Band 42 (670x66, LTE_CA_B1_B19_B42)
    - LTE Adv 3 Band CA (3DL/1UL) of Band 1, Band 21 and Band 42 (670x67, LTE_CA_B1_B21_B42)

Samsung Exhibit 1025, Page 1809 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- LTE Adv 3 Band CA (3DL/1UL) for Band 2, Band 2 and Band 12 (640x22, LTE_CA_B2_B2_B12)
- LTE Adv 3 Band CA (3DL/1UL) of Band 2, Band 5, and Band 29 (650x53, LTE_CA_B2_B5_B29)
- LTE Adv 3 Band CA (3DL/1UL) of Band 3, Band 3 and Band 5 (661x01, LTE_CA_B3_B3_B5)
- LTE Adv 3 Band CA (3DL/1UL) of Band 3, Band 3 and Band 8 (640x25, LTE_CA_B3_B3_B8)
- Add. BW combination set for LTE Adv 3 Band CA (3DL/1UL) of Band 3, Band 7 and Band 7 (660x88, LTE_CA_B3_B7_B7_BWset)
- LTE Adv 3 Band CA (3DL/1UL) of Band 3, Band 7 and Band 8 (660x93, LTE_CA_B3_B7_B8)
- LTE Adv 3 Band CA (3DL/1UL) of Band 3, Band 7 and Band 28 (661x02, LTE_CA_B3_B7_B28)
- LTE Adv 3 Band CA (3DL/1UL) of Band 3, Band 19 and Band 42 (670x68, LTE_CA_B3_B19_B42)
- LTE Adv 3 Band CA (3DL/1UL) of Band 3, Band 40 and Band 40 (660x98, LTE_CA_B3_B40_B40)
- LTE Adv 3 Band CA (3DL/1UL) of Band 7, Band 7 and Band 28 (660x89, LTE_CA_B7_B7_B28)
- LTE Adv 3 Band CA (3DL/1UL) of Band 8, Band 41 and Band 41 (650x49, LTE_CA_B8_B41_B41)
- LTE Adv 3 Band CA (3DL/1UL) of Band 19, Band 21 and Band 42 (670x69, LTE_CA_B19_B21_B42)
- LTE Adv 3 Band CA (3DL/1UL) of Band 21, Band 42 and Band 42 (660x85, LTE_CA_B21_B42_B42)
- LTE Adv 3 Band CA (3DL/1UL) of Band 38, Band 40 and Band 40 (650x51, LTE_CA_B38_B40_B40)
- LTE Adv 3 Band CA (3DL/1UL) for Band 41, Band 42 and Band 42 (640x32, LTE_CA_B41_B42_B42)
- LTE Adv intra-band contiguous CA in Band 42 for 3DL (650x47, LTE_CA_C_B42_3DL)
- LTE Adv intra-band non-contiguous CA in Band 42 for 3DL (670x84, LTE_CA_NC_B42_3DL)

- 2 RAN5 UE Conformance Test Aspects for:
  - REL-12, BeiDou Navigation Satellite System (BDS) Positioning Support for LTE and UMTS (640013, LCS_BDS-UEConTest)
  - REL-12, LTE Coverage Enhancements (650012, Cov_Enh_LTE-UEConTest)

- 8 closed REL-13 study items (SI) in June 2015:

  - RAN1: Study on small data transmission enhancement for UMTS (650013, FS_UTRA_SDATA) *1
  - RAN1: Study on Elevation Beamforming/Full-Dimension (FD) MIMO for LTE (650015, FS_LTE_EBF_FDMIMO) *1
  - RAN1: Study on Licensed-Assisted Access using LTE (650016, FS_LTE_LAA) *1
  - RAN2: Study on Downlink Enhancements for UMTS (650014, FS_UTRA_EDL) *2
  - RAN2: Study on Support of single-cell point-to-multipoint transmission in LTE (660066, FS_LTE_SC_PTM) *1
  - RAN3: Study on Multi-RAT Joint coordination (620045, FS_MultiRAT_JC) *3
  - RAN3: Study on Extension of Dual Connectivity in E-UTRAN (660067, FS_LTE_dualC_ext) *1
  - RAN3: Study on RAN sharing enhancements for UMTS (660069, FS_RSE_UTRA_GUSH) *1

  *1: follow-up WI started at RAN #68
  *2: multiple follow-up WIs started at RAN #68
  *3: existing WID LTE_WLAN_radio was revised to incorporate aspects of this SI (see RP-151114)

- 84 new approved work items (WI) in June 2015 (43 Core, 39 Perf., 3 Testing):

  - 3 RAN1 REL-13:
    - Core part: Downlink TPC Enhancements for UMTS RP-151044
    - Core part: Licensed-Assisted Access using LTE RP-151045
    - Core part: Elevation Beamforming/Full-Dimension (FD) MIMO for LTE RP-151085

  - 3 RAN2:
    - REL-13, Core part: L2/L3 Downlink enhancements for UMTS RP-151043
    - REL-13, Core part: Support of single-cell point-to-multipoint transmission in LTE RP-151110
    - **REL-14**, Core part: Power saving enhancements for UMTS RP-151092

  - 3 RAN3 REL-13:
    - Core part: Extension of Dual Connectivity in E-UTRAN RP-151008
    - Core part: Dedicated Core Networks RP-151048
    - Core part: RAN sharing enhancements for UMTS RP-151086

  - RAN4 (34 Core, 39 Perf.):
    REL-13 Performance parts:
    - Perf. part: Downlink TPC Enhancements for UMTS RP-151044
    - Perf. part: Licensed-Assisted Access using LTE RP-151045
    - Perf. part: Elevation Beamforming/Full-Dimension (FD) MIMO for LTE RP-151085
    - Perf. part: Support of single-cell point-to-multipoint transmission in LTE RP-151110

Samsung Exhibit 1025, Page 1810 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Perf. part: Interference mitigation for downlink control channels of LTE RP-151107

REL-13 Core & Performance parts:
- Introduction of 1447-1467MHz Band for TD-LTE in China RP-151037
- Add. BW combination set for LTE Adv inter-band CA of Band 2 and Band 12 RP-150585
- Add. BW combination set 2 for LTE Adv inter-band CA of Band 4 and Band 12 RP-150947
- LTE Adv 3 Band CA (3DL/1UL) of Band 1, Band 8 and Band 11 RP-150609
- LTE Adv 3 Band CA (3DL/1UL) of Band 3, Band 20 and Band 32 RP-150864
- LTE Adv 3 Band CA (3DL/1UL) for Band 7, Band 42 and Band 42 RP-151012
- LTE Adv 3 Band CA (3DL/1UL) for Band 20, Band 42 and Band 42 RP-151013
- LTE Adv 3 Band CA (3DL/1UL) for Band 3, Band 7 and Band 38 RP-151014
- LTE Adv 3 Band CA (3DL/1UL) of Band 28, Band 41 and Band 41 RP-151111
- LTE Adv 3 Band CA (3DL/1UL) of Band 28, Band 42 and Band 42 RP-151112
- LTE Adv 4 Band CA (4DL/1UL) of Band 41, Band 41, Band 42 and Band 42 RP-150627
- LTE Adv 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 7 and Band 12 RP-150628
- LTE Adv 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 19 and Band 42 RP-150632
- LTE Adv 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 42 and Band 42 RP-150633
- LTE Adv 4 Band CA (4DL/1UL) of Band 1, Band 19, Band 42 and Band 42 RP-150634
- LTE Adv 4 Band CA (4DL/1UL) of Band 3, Band 19, Band 42 and Band 42 RP-150635
- LTE Adv 4 Band CA (4DL/1UL) of Band 1, Band 19, Band 21 and Band 42 RP-150636
- LTE Adv 4 Band CA (4DL/1UL) of Band 1, Band 21, Band 42 and Band 42 RP-150637
- LTE Adv 4 Band CA (4DL/1UL) of Band 19, Band 21, Band 42 and Band 42 RP-150638
- LTE Adv 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 5 and Band 12 RP-150728
- LTE Adv 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 5 RP-150731
- LTE Adv 4-Band CA (4DL/1UL) of Band 2, Band 2, Band 12 and Band 12 RP-150732
- LTE Adv 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 5 and Band 30 RP-151015
- LTE Adv 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 12 and Band 30 RP-151016
- LTE Adv 4 Band CA (4DL/1UL) of Band 4, Band 4, Band 29 and Band 30 RP-151017
- LTE Adv 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 5 and Band 12 RP-151018
- LTE Adv 4 Band CA (4DL/1UL) of Band 2, Band 5, Band 12 and Band 12 RP-151019
- LTE Adv intra-band contiguous CA in Band 5 RP-151035
- Add. BW combination set for LTE Adv intra-band non-contiguous CA in Band 4 RP-151034
- LTE Adv intra-band non-contiguous CA in Band 5 RP-151036
- LTE Adv intra-band non-contiguous CA in Band 42 for 4DL RP-151102

REL-14 Core & Performance parts:
- 700MHz E-UTRA FDD Band for Arab Region RP-151042
- European 700 Suppl. DL band (738-758 MHz) in E-UTRA and LTE CA (2DL/1UL) with Band 20 RP-150861
- LTE Adv 3DL/2UL mixed intra- and inter-band CA RP-150817

- 3 RAN5 UE Conformance Test Aspects for:
  - REL-12, E-UTRA Small cell enhancements - Physical layer aspects RP-150714
  - REL-12, Dual connectivity for LTE RP-150840
  - REL-13, Core Requirements for Uplink 64QAM for E-UTRA RP-150812

- 4 new approved study items (SI) in June 2015:
  - RAN1: **REL-14**, Feasibility Study on LTE-based V2X Services RP-151109
    Note: Priority will be given to V2V services until RAN#70.
  - RAN3: REL-13, Study on Network Assistance for Network Synchronization in LTE RP-151084
  - RAN4: REL-13, Study on LTE Adv inter-band CA of Band 20 and Band 28 RP-151101
  - RAN4: **REL-14**, Study on High Power LTE UE for Band 41 RP-151104

- 0 new approved Technical Specifications (TS), i.e. now under CR control

- 10 new approved Technical Reports (TR), i.e. now under CR control:
  - RAN1 REL-13 TR 25.705 FS_UTRA_SDATA RP-150844
  - RAN1REL-13 TR 36.889 FS_LTE_LAA RP-150879
  - RAN1 REL-13 TR 36.897 FS_LTE_EBF_FDMIMO RP-150735
  - RAN2 REL-13 TR 25.706 FS_UTRA_EDL RP-150682
  - RAN2 REL-13 TR 36.890 FS_LTE_SC_PTM RP-150697
  - RAN3 REL-13 TR 25.756 FS_RSE_UTRA_GUSH RP-150685

Samsung Exhibit 1025, Page 1811 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- RAN3 REL-13 TR 36.875	FS_LTE_dualC_ext	RP-150939
- RAN3 REL-13 TR 37.870	FS_MultiRAT_JC	RP-150808
- RAN4 REL-13 TR 36.833-5-42	LTE_CA_C_B42_3DL-Core	RP-150650
- RAN4 REL-13 TR 36.833-6-42	LTE_CA_NC_B42_3DL-Core	RP-150723

- 0 new Technical Specifications (TS) provided for information

- 2 new Technical Reports (TR) provided for information:

- RAN1 REL-13 TR 25.766	FS_UTRA_NAICS	RP-150680
- RAN4 REL-13 TR 36.883	LTE_UL64QAM-Core	RP-150689

Samsung Exhibit 1025, Page 1812 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

- Change request statistics (see also Annex E): 1193 CRs handled with 1173 approved CRs.

Phase	Cat	all CRs	Approved CRs	approved RAN1	approved RAN2	approved RAN3	approved RAN4	approved RAN5
Rel-8	F	1	1	0	0	0	0	1
Rel-9	F	1	1	0	0	0	0	1
Rel-10	B	11	10	0	0	0	4	6
Rel-10	C	1	1	0	1	0	0	0
Rel-10	F	43	43	1	4	0	11	27
Rel-11	A	15	15	1	5	0	9	0
Rel-11	B	11	10	0	0	0	6	4
Rel-11	F	101	101	1	2	0	29	69
Rel-12	A	37	37	2	7	0	28	0
Rel-12	B	187	179	0	1	0	121	57
Rel-12	C	3	2	0	2	0	0	0
Rel-12	D	2	2	0	1	0	1	0
Rel-12	F	737	731	16	61	12	76	566
Rel-13	B	38	36	0	4	4	28	0
Rel-13	F	5	4	0	0	0	4	0
sum		1193	1173	21	88	16	317	731

Samsung Exhibit 1025, Page 1813 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

1 Opening of the Meeting

TSG RAN chairman Mr. Dino Flore (Qualcomm) opened the meeting 3GPP TSG RAN #68 on Monday June 15th, 2015 at 9am.
On behalf of the host, the European Friends of 3GPP, Krister Sällberg (Ericsson) welcomed the delegates to Malmö, Sweden and explained organisational issues of the meeting.

NOTE: The TSG meetings #68 will be carried out in the 1 week TSG set up (see RP-131328, RAN/CT at the beginning and SA at the end of the week).

2 Reminders for usage of IT resources, IPR declaration and antitrust compliance

The TSG RAN chairman made the following three announcements to remind the delegates of this meeting:

RAN chair's reminder regarding responsible behaviour regarding IT resources of the meeting:

Delegates are reminded that they share the meeting IT resources with their fellow delegates. You should not abuse the service by using bandwidth-hogging applications such as movie downloads, streaming video, web-based gaming, etc during the meeting. Use the internet service in your hotel rooms for this!
Delegates must respect the law of the hosting country*, and should not visit prohibited internet sites.*
In cases of persistent abuse of the internet bandwidth, MCC may restrict individual's use of the service.
In particular, the PCG has laid down the following network usage conditions:
1. Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws.
2. Users shall not engage in non-work related activities that are consume excessive bandwidth or cause significant degradation of the performance of the network.
Since the network is a shared resource, users should exercise some basic etiquette when using the 3GPP network at a meeting. It is understood that high bandwidth applications such as downloading large files or video streaming might be required for business purposes, but delegates should be strongly discouraged in performing these activities for personal use. Downloading a movie or doing something in an interactive environment for personal use essentially wastes bandwidth that others need to make the meeting effective. The meeting chairman should remind end users that the network is a shared resource; the more one user grabs, the less there is for another. Email and its attachments already take up significant bandwidth (certain email programs are not very bandwidth efficient). In case of need the chair can ask the delegates to restrict IT usage to things that are essential for the meeting itself.

1. ***DON'T place your WiFi device in ad-hoc mode***
2. ***DON'T set up a personal hotspot in the meeting room***
3. ***DO try 802.11a if your WiFi device supports it***
4. ***DON'T manually allocate an IP address***
5. ***DON'T be a bandwidth hog by streaming video, playing online games, or downloading huge files***
6. ***DON'T use packet probing software which clogs the local network (e.g., packet sniffers or port scanners)***

Based on the report of the PCG ad hoc group on IT improvements:
http://www.3gpp.org/ftp/PCG/PCG_27/DOCS/PCG27_13r1.zip
see also http://www.3gpp.org/Delegates-Corner#outil_sommaire_14

RAN chair's reminder regarding IPRs:

The attention of the delegates to the meeting of this Technical Specification Group was drawn to the fact that 3GPP Individual Members have the obligation under the IPR Policies of their respective Organizational Partners to inform their respective Organizational Partners of

Samsung Exhibit 1025, Page 1814 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Essential IPRs they become aware of.
The delegates were asked to take note that they were thereby invited:

- ***to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP.***
- ***to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Information Statement and the Licensing declaration forms***

Based on http://www.3gpp.org/3gpp-calendar/89-call-for-ipr-meetings

RAN chair's reminder regarding antitrust and competition law:

The attention of the delegates to the meeting was drawn to the fact that 3GPP activities were subject to all applicable antitrust and competition laws and that compliance with said laws was therefore required by any participant of the meeting, including the Chairman and Vice-Chairmen and were invited to seek any clarification needed with their legal counsel. The leadership would conduct the present meeting with impartiality and in the interests of 3GPP. Delegates were reminded that timely submission of work items in advance of TSG/WG meetings was important to allow for full and fair consideration of such matters.

Based on http://www.3gpp.org/about-3gpp/legal-matters/21-3gpp-calendar/1616-statement-of-antitrust-compliance

3 Approval of the Agenda

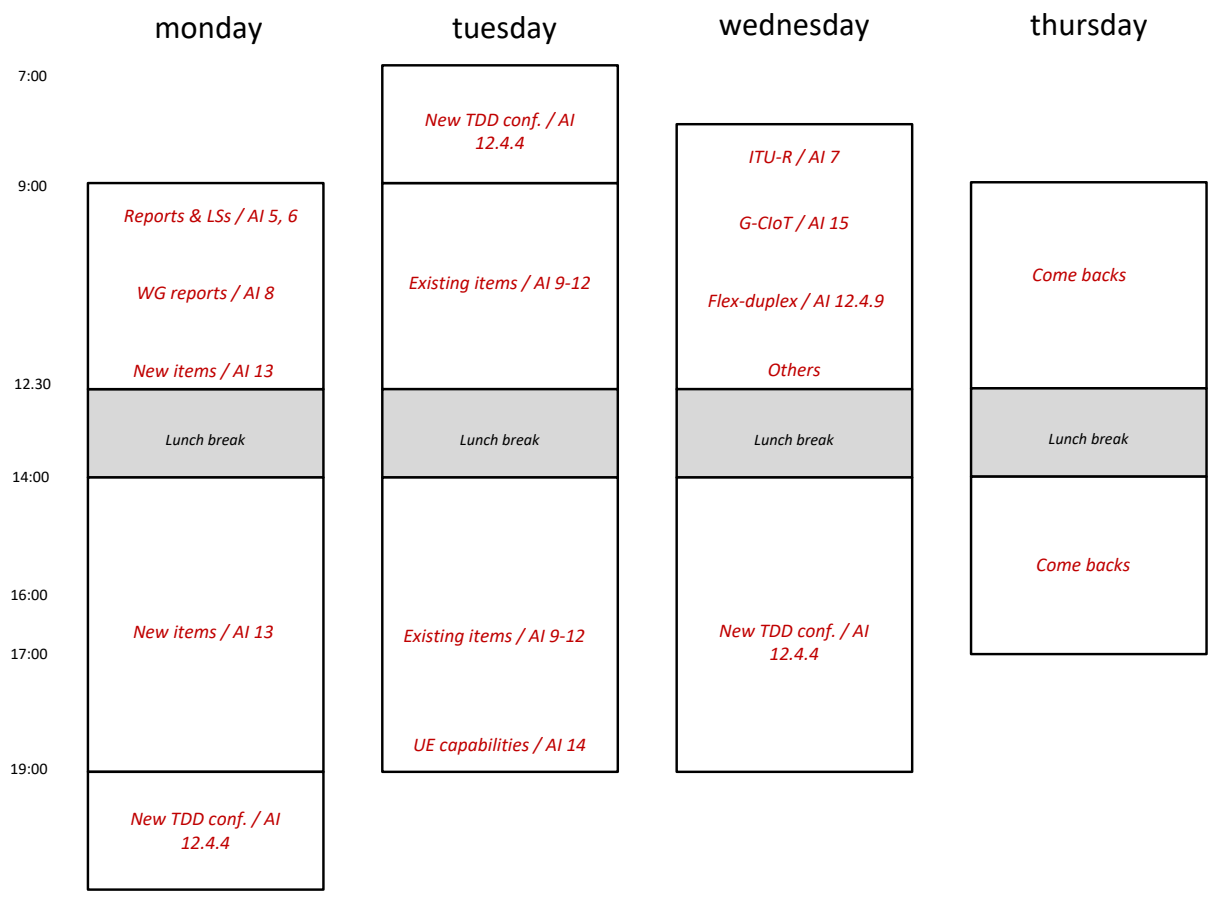
NOTE: Agreed CR packages of RAN WGs (if not flagged for discussion) will be approved without presentation. % complete and target dates of WI/SI status reports (if not flagged for discussion) will be approved without presentation.

RP-150525 Agenda for RAN #68 held in Malmö, Sweden, 15.06.-18.06.2015 RAN chairman (Qualcomm)
Agenda
conclusion: revised in RP-150586 before RAN #68 (to include AI 11.6)

RP-150586 Agenda for RAN #68 held in Malmö, Sweden, 15.06.-18.06.2015 RAN chairman (Qualcomm)
Agenda
discussion: Telefonica: separate report from 12.4.4 ad hoc sessions?
RAN chair: yes, on Thu; ITU-R AI7 will be treated today but on Wed we still start at 8am
Telecom Italia: Tue 6pm there is a GSMA meeting
RAN chair: we can try to finish by 6pm if not possible then GSMA will have to start at 7pm
conclusion: approved

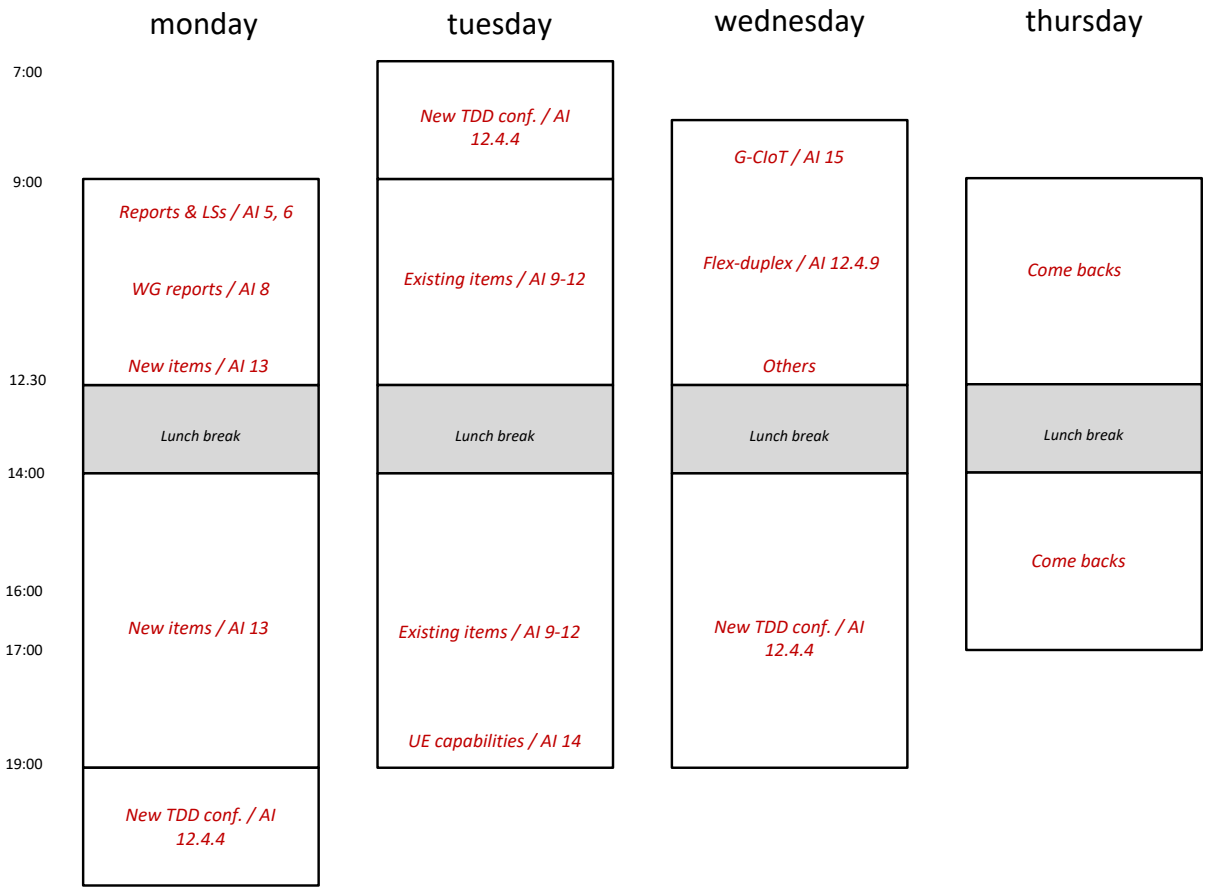
Samsung Exhibit 1025, Page 1815 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

tentative meeting schedule as distributed by the RAN chair on 11.06.2015 over the RAN reflector:



revised into:

Samsung Exhibit 1025, Page 1816 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614



4 Approval of the meeting report of TSG-RAN #67

RP-150526 Draft report of RAN #67 held in Shanghai, China, 09.03.-12.03.2015 ETSI MCC Report
conclusion: revised in RP-150581

RP-150581 Report of RAN #67 held in Shanghai, China, 09.03.-12.03.2015 ETSI MCC Report
conclusion: approved

Samsung Exhibit 1025, Page 1817 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

5 Reports from other meetings

5.1 Report from TSG SA

TSG SA #67 was held in Shanghai, China, March 11-13, 2015. Due to the one week TSG set up RAN and SA meetings are overlapping and the reporting from SA is reduced:

Reports:
RAN: SP-150152
CT: SP-150136
GERAN: SP-150121

SA1: SP-150037
SA2: SP-150014
SA3: SP-150073
SA4: SP-150079
SA5: SP-150054
SA6: SP-150114

REL-12:
stage 1 freeze: March 2013 (#59)
stage 2 freeze: Dec. 2013 (#62)
stage 3 freeze: Sep. 2014 (#65)
ASN.1 freeze: March 2015 (#67) (equivalent to CT formal interface specification freeze)

REL-13:
stage 1 freeze: Sep. 2014 (#65)
stage 2 freeze: June 2015 (#68)*
stage 3 freeze: Dec. 2015 (#70)*
ASN.1 freeze: March 2016 (#71)* (equivalent to CT formal interface specification freeze)

*: planned dates

discussion: No comments

5.2 Report from PCG

RAN chairman reported from PCG #34 held on 28.04.2015 in Sophia Antipolis, France
(see also email distributed via RAN reflector on 01.05.2015):

GERAN CIoT activities:
PCG agreed the way forward in PCG34_39r2 on the handling of GERAN CIoT activities, which contains a significant development for RAN. The main decision is that the normative work of the "Clean Slate" track of the activity will be done in RAN. This is a considerable piece of work that will be moved to RAN (today it is taking most of GERAN time). For those of you not familiar with it, the "Clean Slate" track of the activity is studying a brand new radio interface to address the low end of CIoT market. The main rationale for moving the normative work of the activity to RAN is that OPs wanted RAN supervision for such an important development, given that RAN has a broader participation of companies. However it was requested that this transition is done without disruption to the “Clean Slate” activity and without impacting the existing work in RAN. More details are available in the way forward document which should be self-explanatory. As you can see, at next plenary GERAN will present the latest status of the activity.

GERAN / RAN reorg:
As part of the way forward in PCG34_39r2, RAN and GERAN Chairs were tasked to come up with a proposal to next PCG for a possible merge of GERAN into RAN. Some initial thoughts were discussed at the meeting based on the input proposals in PCG34_29 and PCG34_30. The proposal should take a holistic view of RAN activities and make sure that does not impact any of the existing work.

Samsung Exhibit 1025, Page 1818 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Branding:
Discussions took place on branding based on the inputs in PCG34_15, PCG34_23, PCG34_28, PCG34_31 and PCG34_33. PCG in principle agreed that we will create a new marker for LTE from Rel-13. An open selection process will take place to choose the name & logo that will be presented at next PCG for final approval. The process will be started soon with a call for proposals on the RAN reflector. The discussion will then move to a dedicated reflector. The hope is to involve marketing people in the companies so that we maximize the chances to select a successful name. The discussion will be led by Balazs & Kevin Flynn (3GPP Marcomm Officer). There is also an understanding that later we will do a similar exercise for "5G". But the final decision and details on this will be decided at next PCG.

Other discussions to note:
Further discussion took place on Working Procedures changes, including TSG leadership balance, based on the input from the WP AH group in PCG34_24. No agreement was reached. The group decided to postpone discussion on this to next meeting.

ATIS had a proposal to change the way we handle LS to regulators, PCG34_32. But after some discussion, the proposal was not agreed.

TSDSI is now officially a new 3GPP OP.

Next PCG meeting: #35 on 22.10.2015 in ?, USA.

discussion: No comments

5.3 Report from other meetings

LAA (License-Assisted Access):

RP-150564 Report about Study on Licensed-Assisted Access to Unlicensed Spectrum provided by SI rapporteur to IEEE 802 Interim Session in Vancouver, Canada on 12.05.2015 Ericsson (rapporteur)
Report REL-13 FS_LTE_LAA
provided for information; this is the status report provided by the FS_LTE_LAA SI rapporteur to IEEE 802
conclusion: noted

RP-150565 Report about Study on Licensed-Assisted Access to Unlicensed Spectrum provided by SI rapporteur in a phone conference of the Wi-Fi Alliance (WFA) CoX TG (coexistence task group) on 19.05.2015 Ericsson (rapporteur)
Report REL-13 FS_LTE_LAA
provided for information; this is the status report provided by the FS_LTE_LAA SI rapporteur in a phone conference of the Wi-Fi Alliance (WFA) CoX TG (coexistence task group) on 19.05.2015
conclusion: noted

6 Liaison activity of TSG RAN

6.1 Groups outside 3GPP

NGMN (Next Generation Mobile Networks):

RP-150542 Liaison on NGMN 5G White Paper
(NGMN_LS_150323; to: SA, SA1, RAN, CT; cc: -; contact: NGMN Office) NGMN
LSin - -
RAN action requested; compare RP-150019;
LS presented by Telefonica
conclusion: noted, Huawei drafted a reply LS in RP-150726

RP-150726 Draft Response LS to NGMN_LS_150323 = RP-150542 on NGMN 5G Initiative
(to: NGMN; cc: -; contact: Huawei) Huawei
LSout - -
discussion: RAN chairman: "subject to REL-13 completion on time" should be removed;

Samsung Exhibit 1025, Page 1819 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Ericsson: not sure that we need to have such a detailed answer, otherwise the part about channel modelling needs to be revised as well
RAN chair: just have the first paragraph
Samsung: if 3rd and 4th paragraph do we then also remove the references?
RAN chair: no reference [2] will remain
conclusion: revised in RP-151000 to update the LS

RP-151000 Draft Response LS to NGMN_LS_150323 = RP-150542 on NGMN 5G Initiative (to: NGMN Forum -- 5G Initiative Steering Committee; cc: -; contact: Huawei) Huawei LSout - -
revision on RP-150726
discussion: Telefonica: we have not treated beyond 6GHz, the LS says "discussion on 5G" we should say "work on 5G"
Deutsche Telekom, ALU: "work" could be misinterpreted as WI
RAN chair: ok, then we leave it as it is
conclusion: revised in RP-151088

RP-151088 Response LS to NGMN_LS_150323 = RP-150542 on NGMN 5G Initiative (to: NGMN Forum -- 5G Initiative Steering Committee; cc: -; contact: Huawei) RAN LSout - -
conclusion: approved

IEEE802 LMSC (Local and Metropolitan Area Network Standards Committee):

RP-150543 LS regarding clarification of LBT Categories and LAA/802.11 Coexistence (IEEE802_LMSC_LS_150318; to: RAN, RAN1; cc: IEEE 802.19 Coexistence WG; contact: Chairman IEEE 802 LMSC) IEEE 802 LMSC
LSin REL-13 FS_LTE_LAA
conclusion: LS will be treated under AI 12.4.3

RP-150566 LS as follow-up regarding LAA (IEEE802_LMSC_LS_150518; to: RAN, RAN1; cc: IEEE 802, IEEE 802.19 Coexistence WG; contact: Chairman IEEE 802 LMSC) IEEE 802 LMSC
LSin REL-13 FS_LTE_LAA
conclusion: LS will be treated under AI 12.4.3

ETSI TC BRAN (Broadband Radio Access Networks):

RP-150545 Reply LS to RP-150505 on Licensed-Assisted Access (BRAN(15)000015r2; to: RAN, RAN1; cc: -; contact: Cisco) ETSI TC BRAN
LSin REL-13 FS_LTE_LAA
conclusion: LS will be treated under AI 12.4.3

ETSI TC EE (Environmental Engineering):

RP-150546 LS on Cooperation for Energy Efficiency Measurements (EE(15)000003r1; to: SA5, SA, RAN2, RAN3; cc: RAN, ETSI TC ATTM; contact: Alcatel-Lucent) ETSI TC EE
LSin REL-12 -
no explicit RAN action requested
conclusion: noted, no LS answer

ETSI TC ITS (Intelligent Transport Systems):

RP-150548 Reply LS to SP-150166 = RP-150558 on information regarding V2X study in 3GPP (ITS(15)000063 rev 1; to: SA, SA1; cc: RAN, IEEE1609, US SAE; contact: ITS Chairman) ETSI TC ITS
LSin REL-14 FS_V2XLTE
conclusion: LS will be treated under AI 11.3.5 (in connection with RP-150558)

ISO:

RP-150549 LS on Internet of Things (ISO_IEC_JTC1_WG 10_LS_150224; to: GERAN, RAN, SA, Industrial Internet Consortium (IIC), NIST CPS PWG, ETSI TC Smart M2M, ETSI IoT Group, GS1, ITU-T, OMG, OGC, OMA, W3C, OASIS, IEEE P2413, UPnP, IETF, OnM2M; cc: -; contact: Convenor ISO/IEC JTC 1/WG 10) ISO/IEC JTC 1/WG 10
LSin - -
no RAN action requested; compare other IoT LSs under AI 15.
conclusion: noted, no LS answer

Samsung Exhibit 1025, Page 1820 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

ITU-T:

RP-150552 LS on Wireless Fronthaul Transport Requirements over Access Systems
(ITU-T_COM15_LS232_E; to: NGMN, RAN3, RAN4, RAN1; cc: RAN; contact: Huawei) ITU-T SG15
LSin - -
no RAN action requested
conclusion: noted, no LS answer

RP-150573 LS on Establishment of new Focus Group on "IMT-2020"
(ITU-T_COM13_L107_E; to: RAN, CT, SA; cc: IEEE 802.1/802.3, IEEE SA, ETSI ISG NFV, ARIB, ATIS, CCSA, TTA, TTC, OIF, ONF, NGMN Alliance, GSMA and IETF/IRTF; contact: OFCOM Switzerland) ITU-T SG13
LSin - -
no RAN action requested
conclusion: noted, no LS answer

RP-150574 LS on work on time synchronization and future target requirements
(ITU-T_COM15-LS225-E; to: RAN; cc: RAN1, RAN3, RAN4; contact: Ericsson) ITU-T SG15
LSin - -
RAN4 has prepared an LS answer to RP-150574 in RP-150571
conclusion: LS will be treated under AI 6.3 (in connection with RP-150571)

ETSI ISG IP6:

RP-150562 LS about ETSI ISG IP6 creation and interaction with other groups
(IP6(15)001031; to: RAN, CT, SA, OneM2M, ETSI ISG NFV, ETSI ISG MEC, ETSI TC SmartM2M, ETSI TC NTECH; cc: -; contact: ETSI ISG IP6 chairman) ETSI ISG IP6
LSin - -
ISG = Industry Specification Group; no RAN action requested
conclusion: noted, no LS answer

CTIA:

RP-150550 LS on CTIA Test Plan for Wireless Device Over-the-Air Performance
(CTIA_LS_150311; to: RAN, RAN4, RAN5, GSMA TSGAP, GCF SG, GCF OTA Task Force, COST IC1004 TWG-O; cc: -; contact: Spirent Communications) CTIA
LSin REL-13 LTE_MIMO_OTA-Core, LTE_UTRA_TRP_TRS-Core
conclusion: LS will be treated under AI 11.2.4

CEPT ECC PT1 (Electronic Communications Committee):

RP-150561 Response LS to RP-150509 on 3GPP RAN requesting information on the current regulations regarding regional/band-specific regulatory possibilities/constraints of utilizing UL spectrum for transmission from the network to UEs
(ECC-PT1(15)066_A06; to: RAN; cc: ETSI TC ERM; ETSI TC MSG TFES; contact: Agence nationale des fréquences) CEPT ECC PT1
LSin REL-13 FS_LTE_flex_duplex_reg
conclusion: LS will be treated under AI 12.4.9

FCC:

RP-150575 Reply LS to RP-150509 on 3GPP RAN Study on regulatory aspects for flexible duplex for E-UTRAN
(FCC_150605; to: RAN; cc: -; contact: FCC Chief Engineer) FCC
LSin REL-13 FS_LTE_flex_duplex_reg
conclusion: LS will be treated under AI 12.4.9

ARIB:

RP-150576 Reply LS to RP-150509 on 3GPP RAN Study on regulatory aspects for flexible duplex for E-UTRAN
(ARIB_150612; to: RAN; cc: -; contact: Fujitsu) ARIB
LSin REL-13 FS_LTE_flex_duplex_reg
conclusion: LS will be treated under AI 12.4.9

APT Wireless Group (Asia-Pacific Telecommunity):

RP-150544 Reply LS to SP-140886 regarding scope and status relevant to PPDR work items and study items
(APT/AWG/2015/LS-1; to: SA, RAN; cc: ITU-R WP5A, ITU-R WP5D; contact: Chairman APT

Samsung Exhibit 1025, Page 1821 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Wireless Group) APT Wireless Group
LSin - -
PPDR = Public Protection and Disaster Relief; RAN action requested
discussion: Huawei: 2 features are missing, we would like send answer LS on the 2 missing features (eMBMS congestion, single cell PTM)
Telefonica: these features were missing from original SA LS
RAN chair: the LS RP-150544 will be discussed in SA as well
Ericsson: single cell PTM is a REL-13 SI and we may start a WI this week, will SA look at RAN features as well? D2D enhancements are also missing
Nokia Networks: they ask for feedback for Feb. 2016 so no need to rush with an answer
Huawei: original SA LS included also SIs
conclusion: noted, no LS answer from RAN; REL-12 eMBMS congestion, REL-13 single cell PTM SI and D2D enhancements were missing in the original SA LS and should be mentioned to SA when this LS RP-150544 is handled in SA

Arab Spectrum Management Group:

RP-150563 LS on Standardization of New E-UTRA Band and OOBE Limits Requirement (ASMG_3_1303_150514; to: RAN; cc: RAN4; contact: Etisalat) ASMG
LSin REL-13 -
conclusion: LS will be treated under AI 13.2

GTI (Global TD-LTE):

RP-150577 LS on new power class for 3GPP Band 41 (GTI_150615; to: RAN; cc: -; contact: GTI Secretariat) GTI
LSin REL-13 -
conclusion: LS will be treated under AI 13.2 (together with RP-150591)

6.2 TSG SA, TSG CT, TSG GERAN

Internet of Things (GERAN REL-13 SI):

RP-150559 Reply LS to GPC150122 and S3-151201 on work split for Study on Cellular IoT (SP-150170; to: SA2, SA3, GERAN; cc: SA1, RAN; contact: Huawei) SA
LSin REL-13 FS_IoT_LC
conclusion: LS will be treated under AI 15.

RP-150547 LS on LTE/UMTS coexistence studies for FS_IoT_LC (GPC150305; to: RAN4; cc: RAN, GERAN, SA; contact: Vodafone) GERAN1 CIoT ad hoc
LSin REL-13 FS_IoT_LC
conclusion: LS will be treated under AI 15.

V2X (SA1 REL-14 SI):

RP-150558 LS on information regarding V2X study in 3GPP (SP-150166; to: ETSI TC ITS, US SAE, US ITSA, Korean Ministry of Land, Infrastructure and Transport, GSMA Connected Living, IEEE; cc: RAN, SA1; contact: Nokia Networks) SA
LSin REL-14 FS_V2XLTE
conclusion: LS will be treated under AI 11.3.5.

RP-150557 Reply LS to RP-142312 on LTE based Vehicular Communication (S1-151629; to: RAN; cc: SA; contact: LG) SA1
LSin REL-14 FS_V2XLTE
conclusion: LS will be treated under AI 11.3.5.

RP-150556 Reply LS to ITS(15)000063rev1 = RP-150548 on V2X Study in 3GPP SA1 (S1-151605; to: ETSI TC ITS ; cc: SA, RAN, IEEE1609, US SAE; contact: LG) SA1
LSin REL-14 FS_V2XLTE
conclusion: LS is withdrawn as it turned out that S1-151605 was not agreed in SA1

MSR (Multi Standard Radio):

RP-150567 Reply LS to R4-152566 = RP-150560 on CRs for MSR specifications (GP-150663; to: RAN, RAN4 ; cc: -; contact: Ericsson) GERAN1
LSin REL-9 RInImp9-RFmulti

Samsung Exhibit 1025, Page 1822 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: LS will be treated under AI 6.3 (together with RP-150560).

DECOR (Dedicated Core Network):

RP-150569 LS on Request for specification of Dedicated Core Network (DECOR) feature
(S2-151997; to: CT4, RAN3; cc: RAN; contact: NTT DOCOMO) SA2
LSin REL-13 DECOR
DECOR is an SA2 REL-13 WI started in June 14 (WID: SP-140707); no RAN action requested or request for a RAN3 WI?; note: A related WI proposal is submitted under AI 13.1.3 in RP-150826
conclusion: noted, no LS answer

6.3 TSG RAN WG1, WG2, WG3, WG4, WG5, RAN ITU-R ad hoc

LAA (License-Assisted Access):

RP-150551 Response LS to IEEE802_LMSC_LS_150318 = RP-150543 on Clarification of LBT Categories
(R1-152182; to: IEEE802 LMSC; cc: RAN; contact: Qualcomm) RAN1
LSin REL-13 FS_LTE_LAA
conclusion: LS will be treated under AI 12.4.3

RP-150553 Response LS to IEEE802_LMSC_LS_150318 = RP-150543 on LAA-802.11 Coexistence
(R1-152183; to: IEEE802 LMSC, RAN; cc: -; contact: Qualcomm) RAN1
LSin REL-13 FS_LTE_LAA
conclusion: LS will be treated under AI 12.4.3

RP-150570 Response LS to IEEE802_LMSC_LS_150518 = RP-150566 related to LAA-802.11 Coexistence
(R1-153659; to: IEEE 802 LAN/MAN Standards Committee; cc: RAN; contact: Qualcomm) RAN1
LSin REL-13 FS_LTE_LAA
conclusion: LS will be treated under AI 12.4.3

UE category:

RP-150554 LS on new UE categories in Rel-12
(R1-152220; to: RAN2; cc: RAN; contact: Huawei) RAN1
LSin REL-12 TEI12
conclusion: LS will be treated under AI 14

RP-150572 LS regarding rank3/4 in TM3 and TM4 for additional UE categories
(R4-153907; to: RAN, RAN1, RAN2; cc: -; contact: Nokia) RAN4
LSin REL-13 LTE_4Rx_AP_DL
conclusion: LS will be treated under AI 14

ProSe (Proximity Services):

RP-150555 Reply LS to S2-150691 on public safety discovery
(R2-151723; to: SA2; cc: RAN1, SA3, RAN; contact: Intel) RAN2
LSin REL-13 eProSe-Ext
conclusion: LS will be treated under AI 11.3.5

MSR (Multi Standard Radio):

RP-150560 LS on CRs for MSR specifications
(R4-152566; to: GERAN1; cc: RAN; contact: Ericsson) RAN4
LSin REL-9 RInImp9-RFmulti
MSR = Multi Standard Radio; includes a REL-12 CR to TS 37.141; no RAN action requested
conclusion: noted, no LS answer

RP-150567 Reply LS to R4-152566 = RP-150560 on CRs for MSR specifications
(GP-150663; to: RAN, RAN4 ; cc: -; contact: Ericsson) GERAN1
LSin REL-9 RInImp9-RFmulti
MSR = Multi Standard Radio; RInImp9-RFmulti was a REL-9 WI; no RAN action requested
GERAN1: "TSG GERAN WG1 has reviewed and endorsed the GERAN-related parts in the provided CR to 3GPP TS 37.141 for Rel-13."
conclusion: noted, no LS answer

Samsung Exhibit 1025, Page 1823 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

UL 64QAM:

RP-150568 Reply LS to R2-150733 = RP-150042 on per-band UL 64 QAM support
(R4-153813; to: RAN2; cc: RAN, RAN1; contact: Vodafone) RAN4
LSin REL-12 LTE-L23, TEI12
conclusion: LS will be treated under AI 14

Time synchronization:

RP-150574 LS on work on time synchronization and future target requirements
(ITU-T_COM15-LS225-E; to: RAN; cc: RAN1, RAN3, RAN4; contact: Ericsson) ITU-T SG15
LSin - -
RAN action requested; LS was shifted from AI 6.1
conclusion: noted, RAN4 has prepared an LS answer to RP-150574 in RP-150571

RP-150571 Draft reply LS to ITU-T SG15/COM15-LS225-E =RP-150574 on work on time synchronization and future target requirements
(R4-153594; to:RAN; cc: RAN1, RAN3; contact: Ericsson) RAN4
LSin - -
RAN action requested; note: Although RP-150571 is unfortunately written like a reply from RAN4 to ITU-T SG15, this LS was not yet sent out and has to be sent from RAN
conclusion: noted, no LS answer to RAN4; LS will be used to reply to RP-150574; Ericsson will provide the RAN reply in RP-151001

RP-151001 Reply LS to ITU-T SG15/COM15-LS225-E =RP-150574 on work on time synchronization and future target requirements (to: ITU-T SG15; cc: RAN1, RAN3, RAN4; contact: Ericsson) RAN
LSout - -
reply to RP-150574 which is based on RP-150571
conclusion: approved

Samsung Exhibit 1025, Page 1824 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

7 ITU-R Ad hoc

7.1 Status report

RP-150527 Status Report ITU-R Ad hoc ITU-R Ad hoc Contact (Telecom Italia) Report
WP1A: 3-10 June 2015
WP5D: 10-18 June 2015
WP5A: 06-16 July 2015
WRC 2015: 2-27 November 2015
Due to the WRC meeting, there will not be any further WP meeting in 2H2015.
conclusion: noted

7.2 Submission to ITU-R

7.2.1 Submission to ITU-R WP5A

No contributions.

7.2.2 Submission to ITU-R WP5D

No contributions.

7.2.3 Other ITU-R submission

No contributions.

Samsung Exhibit 1025, Page 1825 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8 RAN WGs: WG Status Reports & CR Approvals up to Rel-10

Note: REL-4, REL-5, REL-6 and REL-7 were closed after RAN #65, i.e. no CRs to these releases will be considered anymore.

8.1 TSG RAN WG1

8.1.1 Report from RAN WG1 including report on actions required from the previous meeting

RP-150528 Status Report RAN WG1 RAN1 chairman (NTT DOCOMO) Report
conclusion: noted

RP-150529 List of CRs from RAN WG1 ETSI MCC Info
conclusion: noted

8.1.2 Discussions on decisions from RAN WG1

No contributions

8.1.3 Approval of CRs to REL-8 WIs and WIs of previous releases

RP-150931 CR to 36.213 to clarify HARQ-ACK repetition RAN1 CR36.2130493 2 F REL-12 LTE-Phys, TEI12
conclusion: approved

8.1.4 Approval of CRs to Rel-9 WIs

No contributions

8.1.5 Approval of CRs to Rel-10 WIs

RP-150932 CRs to 36.213 to clarify PUCCH Format 3 Resource Derivation for TDD UL/DL Configuration 5RAN1 CRset REL-10 LTE_CA-Core
conclusion: approved

8.1.6 Approval of CRs to Rel-11 WIs

RP-150934 CRs to 25.214 clarifying Multiflow RAN1 CRset REL-11 HSDPA_MFTX-Core
conclusion: approved

8.1.7 Approval of linked CR packages led by RAN WG1

No contributions

8.2 TSG RAN WG2

8.2.1 Report from RAN WG2 including report on actions required from the previous meeting

RP-150530 Status Report RAN WG2 RAN2 chairman (Ericsson) Report
discussion: AT&T: ext.DRX: is it clear how far you can go? minutes?
RAN2 chair: yes
conclusion: noted

Samsung Exhibit 1025, Page 1826 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150531 List of CRs from RAN WG2 ETSI MCC Info
conclusion: noted

8.2.2 Discussions on decisions from RAN WG2

No contributions

8.2.3 Approval of CRs to REL-8 WIs and WIs of previous releases

RP-150916 RAN2 agreed CRs on various REL-8 Work Items RAN2 CR set REL-8 LTE-L23, TEI10, RANimp-UplinkEnhState, TEI12
conclusion: approved

8.2.4 Approval of CRs to Rel-9 WIs

No contributions

8.2.5 Approval of CRs to Rel-10 WIs

RP-150917 RAN2 agreed CRs on various REL-10 Work Items RAN2 CR set REL-10 MDT_UMTSLTE-Core, ANR_UTRAN-Core, eMDT_UMTSLTE-Core, LTE_eDL_MIMO-Core, LTE_UL_MIMO-Core, LTE_CA-Core, MBMS_LTE_enh-Core, TEI12
discussion: MCC: For the RAN2 agreed 36.331 CR R2-152921 in RP-150917 the RAN2 email discussion [90#01] identified the need for a 36.306 CR which is provided in company CR RP-150745
NTT DOCOMO: ongoing discussion on 36.331 CR
conclusion: all CRs approved except R2-152921;
R2-152921 is rejected

RP-150745 Additional MIMO/CSI capability for intra-band contiguous CA Intel Corporation CR 36.306 0284 - F REL-12 LTE_CA-Core, TEI12
company contribution; RAN2 email discussion [90#01] identified the need for this 36.306 CR in connection with 36.331 CR R2-152921 in RP-150917;
conclusion: revised in RP-150980

RP-150980 Additional MIMO/CSI capability for intra-band contiguous CA Intel Corporation CR 36.306 0284 1 F REL-12 LTE_CA-Core, TEI12
revision of RP-150745; company contribution; RAN2 email discussion [90#01] identified the need for this 36.306 CR in connection with 36.331 CR R2-152921 in RP-150917;
conclusion: rejected

RP-151023 Way forward on MIMO/CSI capability for intra-band contiguous CANTT DOCOMO, INC., Intel Disc REL-12 LTE_CA-Core, TEI12
related to company CR RP-150980 and R2-152921 in RP-150917
conclusion: endorsed

8.2.6 Approval of CRs to Rel-11 WIs

RP-150918 RAN2 agreed CRs on various REL-11 Work Items RAN2 CR set REL-11 SPIA_IDC_LTE-Core, TEI11, TEI12
conclusion: approved

8.2.7 Approval of linked CR packages led by RAN WG2

No contributions

8.3 TSG RAN WG3

8.3.1 Report from RAN WG3 including report on actions required from the previous meeting

RP-150532 Status Report RAN WG3 RAN3 chairman (Huawei) Report
4TU available for next quarter

Samsung Exhibit 1025, Page 1827 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

discussion: slide 11: ext Dual Connectivity: "Additional enhancements for the support of Dual Connectivity were discussed without RAN3 common understanding on standard normative need" so SI completed?
RAN3 chair: aspects were considered to be up to implementation
conclusion: noted

RP-150533 List of CRs from RAN WG3 ETSI MCC Info
conclusion: noted

8.3.2 Discussions on decisions from RAN WG3

No contributions

8.3.3 Approval of CRs to REL-8 WIs and WIs of previous releases

No contributions

8.3.4 Approval of CRs to Rel-9 WIs

RP-150941 CRs to Rel-9 WIs from RAN3 RAN3 CR25.4231868 2 F REL-12 RANimp-DC_HSUPA, TEI12
conclusion: approved

8.3.5 Approval of CRs to Rel-10 WIs

No contributions

8.3.6 Approval of CRs to Rel-11 WIs

No contributions

8.3.7 Approval of linked CR packages led by RAN WG3

No contributions

8.4 TSG RAN WG4

8.4.1 Report from RAN WG4 including report on actions required from the previous meeting

RP-150534 Status Report RAN WG4 RAN4 chairman (Nokia Networks) Report
discussion: AT&T Slide 24: It is not clear from the report that even though SIR Control tests were agreed to in RAN4, that these would be performed in the upcoming CATR harmonization tests. The SIR control test should be moved up in priority in order to achieve alignment with the tests already agreed to in CTIA which also better reflect real world conditions.
Vodafone: slide 42: RAN4 should be tasked to finish PCell mandatory support discussion by Dec.
Ericsson: slide 55: need to review the activity situation on the WIs as well, for some WIs there is still work to be done in other WGs so we could reduce RAN4 time budget
RAN4 chair: is discussion as usual
ALU: is it clear on how much we can go into the minus with the time budget?
RAN4 chair: today we are already in the minus for RRM and demodulation sessions for next quarter without taking new topics on board
conclusion: noted; RAN4 is requested to conclude PCell mandatory support discussion by Dec

RP-150535 List of CRs from RAN WG4 ETSI MCC Info
conclusion: noted

8.4.2 Discussions on decisions from RAN WG4

No contributions

Samsung Exhibit 1025, Page 1828 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

8.4.3 Approval of CRs to REL-8 WIs and WIs of previous releases

No contributions

8.4.4 Approval of CRs to Rel-9 WIs

RP-150953 RAN4 CRs to Rel-9 WIs RAN4 CR37.141set REL-9RInImp9-RFmulti
conclusion: approved

8.4.5 Approval of CRs to Rel-10 WIs

RP-150954 RAN4 CRs to Rel-10 WIs RAN4 CRset REL-10 LTE_CA-Core, RInImp8-UMTSLTE3500, TEI10
conclusion: approved

8.4.6 Approval of CRs to Rel-11 WIs

RP-150955 RAN4 CRs to Rel-11 WIs RAN4 CRset REL-11 eICIC_enh_LTE-Perf, LTE_CA_B41-Perf, LTE_CA_B7-Core, LTE_CA_enh-Core, LTE_CA_enh-Perf, LTE_Relay2-Core, LTE_Relay2-Perf, MB_MSR_RF-Perf, TEI11
conclusion: approved

8.4.7 Approval of linked CR packages led by RAN WG4

No contributions

8.5 TSG RAN WG5

8.5.1 Report from RAN WG5 including report on actions required from the previous meeting

RP-150537 Status Report RAN WG5 RAN5 Chairman (Sprint) Report
discussion: RAN5 chair: slide 8: just to indicate that one LSout R5-152150 to GCF is not included here
conclusion: noted

RP-150538 List of CRs from RAN WG5 ETSI MCC Info
conclusion: noted

RP-150539 Status Report MCC TF160 (for approval) ETSI MCC TF160 Leader Report
conclusion: approved

8.5.2 Discussions on decisions from RAN WG5

No contributions

8.5.3 Approval of CRs to closed WIs of REL-10 (incl. TEI10_Test) and previous releases

RP-150881 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel 99 Conformance Testing(TEI_Test) RAN5 CRset F R99 TEI_Test
conclusion: approved

RP-150882 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-7 Conformance Testing(TEI7_Test) RAN5 CRset F REL-7 TEI7_Test
conclusion: approved

RP-150883 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 1) RAN5 CRset F REL-8 TEI8_Test
conclusion: approved

Samsung Exhibit 1025, Page 1829 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150884 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 2) RAN5 CRset F REL-8 TEI8_Test
conclusion: approved

RP-150885 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-8 Conformance Testing(TEI8_Test) (Batch 3) RAN5 CRset F REL-8 TEI8_Test
conclusion: approved

RP-150886 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-9 Conformance Testing(TEI9_Test) (Batch 1) RAN5 CRset F REL-9 TEI9_Test
conclusion: approved

RP-150887 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-9 Conformance Testing(TEI9_Test) (Batch 2) RAN5 CRset F REL-9 TEI9_Test
conclusion: approved

RP-150888 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 1) RAN5 CRset F REL-10 TEI10_Test
conclusion: approved

RP-150889 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 2) RAN5 CRset F REL-10 TEI10_Test
MCC: late submission
conclusion: approved

RP-150890 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-10 Conformance Testing (TEI10_Test) (Batch 3) RAN5 CRset F REL-10 TEI10_Test
conclusion: approved

RP-150893 CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (prose), Annex A RAN5 CR34.229-3 0285 - F REL-10 TEI11_Test MCC: late submissionMCC: late submission
conclusion: approved

RP-150894 CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (TTCN), Annex A RAN5 CR34.229-3 set - F/B REL-10 TEI8_Test, TEI9_Test, TEI11_Test
TTCN batch; 32 Test Cases; MCC: late submissionMCC: late submission
conclusion: approved

8.5.4 Approval of CRs to closed WIs of REL-11 (incl. TEI11_Test)

RP-150891 CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A RAN5 CR34.123-3 3331 - F REL-11 TEI7_Test
MCC: late submission
conclusion: approved

RP-150892 CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (TTCN), Annex A RAN5 CR34.123-3 set - F/B REL-11 TEI5_Test, TEI6_Test, TEI7_Test, TEI8_Test, TEI9_Test, TEI10_Test, TEI12_Test
TTCN batch; 40 Test Cases; MCC: late submissionMCC: late submission
conclusion: approved

RP-150895 CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (prose), Annex A RAN5 CR36.523-3 2631 - F REL-11 TEI8_Test
MCC: late submission
conclusion: approved

RP-150896 CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (TTCN), Annex A RAN5 CR36.523-3 set - F/B REL-11 TEI8_Test, TEI9_Test, TEI10_Test, TEI11_Test, TEI12_Test
TTCN batch; 151 Test Cases; MCC: late submission

Samsung Exhibit 1025, Page 1830 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

R5s150126, R5s150128, R5s150130, R5s150124 based on old v12.0.0 (as on CR cover) or latest version 12.1.0?
conclusion: all CRs approved except R5s150126, R5s150128, R5s150130, R5s150124 which are revised in RP-151040

RP-151040 CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (TTCN), Annex A RAN5 CR36.523-3 set - F/B REL-11 TEI8_Test, TEI9_Test, TEI10_Test, TEI11_Test, TEI12_Test
revision of RP-150896; TTCN batch; 151 Test Cases; MCC: late submission
conclusion: approved

RP-150899 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-11 Conformance Testing (TEI11_Test) RAN5 CRset F REL-11 TEI11_Test
MCC: late submission
conclusion: approved

8.5.5 Approval of linked CR packages led by RAN WG5

No contributions

Samsung Exhibit 1025, Page 1831 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

9 Conformance Testing Work Items

9.1 Closed REL-12 work items

Note: For closed WIs of earlier releases see 8.5.

No contributions.

9.2 Open Rel-11 work items

9.2.1 UE Conformance Test Aspects for UE Over the Air (Antenna) conformance testing methodology – Laptop Mounted Equipment Free Space Test [UEAnt_FSTest-UEConTest]

RP-150603 Status report for WI UE Conformance Test Aspects - UE Over the Air (Antenna) conformance testing methodology - Laptop Equipment Free Space Test, rapporteur: ZTE RAN5 Report REL-11 UEAnt_FSTest-UEConTest
conclusion: noted, approved: 95%, June 16

9.2.2 Conformance Test Aspects: Small Technical Enhancements and Improvements for Rel-11 [TEI11_Test]

See AI 8.5.4 instead.

9.3 Open Rel-12 work items

9.3.1 UE Conformance Test Aspects – Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL [LTE_CA_Rel12_3DL-UEConTest]

RP-150593 Status Report for WI UE Conformance Test Aspects - Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL, rapporteur: Microsoft RAN5 Report REL-12 LTE_CA_Rel12_3DL-UEConTest
conclusion: noted, approved: 35%, Dec.15

RP-150594 Revised WID: UE Conformance Test Aspects - Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL Microsoft Corporation WID rev RAN5 REL-12 LTE_CA_Rel12_3DL-UEConTest
last approved WID: RP-150079; change of rapporteurship from Microsoft to Huawei; additions to supporting companies
conclusion: approved

RP-150900 RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – Further Rel-12 Configurations for LTE Advanced Carrier Aggregation with 3DL (LTE_CA_Rel12_3DL-UEConTest) RAN5 CRset F REL-12 LTE_CA_Rel12_3DL-UEConTest
MCC: company CR RP-150948 intends to replace R5-152013 of RP-150900
conclusion: all CRs of RP-150900 are approved apart from R5-152013 which is revised in RP-15948

RP-150790 Addition of Chapter 7 3DL CA Test Configuration Tables KDDI, Intel CR36.521-1 1856 2 F REL-12 LTE_CA_Rel12_3DL-UEConTest
company contribution to update RAN5 agreed CR R5-152013;
conclusion: revised in RP-150948 as RP-150790 has changes on changes

RP-150948 Addition of Chapter 7 3DL CA Test Configuration Tables KDDI, Intel CR36.521-1 1856 3 F REL-12 LTE_CA_Rel12_3DL-UEConTest
company contribution to update RAN5 agreed CR R5-152013 in RP-150900;
conclusion: approved

9.3.2 UE Conformance Test Aspects - BeiDou Navigation Satellite System (BDS) Positioning Support for LTE and UMTS [LCS_BDS-UEConTest]

Samsung Exhibit 1025, Page 1832 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150656 Status Report for WI UE Conformance Test Aspects - BeiDou Navigation Satellite System (BDS) Positioning Support for LTE and UMTS; rapporteur: CATT RAN5 Report REL-12 LCS_BDS-UEConTest
conclusion: noted, approved: 100%, June 15; WI is completed

RP-150901 RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects - BeiDou Navigation Satellite System (BDS) Positioning Support for LTE and UMTS (LCS_BDS-UEConTest) RAN5 CRset F REL-12 LCS_BDS-UEConTest
conclusion: approved

9.3.3 UE Conformance Test Aspects - LTE Coverage Enhancements
[Cov_Enh_LTE-UEConTest]

RP-150631 Status report for WI: UE Conformance Test Aspects - LTE Coverage Enhancements, rapporteur: China Telecom RAN5 Report REL-12 Cov_Enh_LTE-UEConTest
discussion: MCC: target date change
conclusion: noted, approved: 100%, June 15; WI is completed

RP-150902 RAN5 agreed non TTCN CR(s) WI UE Test part: LTE Coverage Enhancements (Cov_Enh_LTE-UEConTest)RAN5 CRset F REL-12 Cov_Enh_LTE-UEConTest
conclusion: approved

9.3.4 UE Conformance Test Aspects – WLAN/3GPP Radio Interworking
[UTRA_LTE_WLAN_interw-UEConTest

RP-150629 Status Report for WI UE Conformance Test Aspects - WLAN/3GPP Radio Interworking; rapporteur: Intel RAN5 Report REL-13 UTRA_LTE_WLAN_interw-UEConTest
conclusion: revised in RP-150929

RP-150929 Status Report for WI UE Conformance Test Aspects - WLAN/3GPP Radio Interworking; rapporteur: Intel RAN5 Report REL-13 UTRA_LTE_WLAN_interw-UEConTest
discussion: MCC: late submission
conclusion: noted, approved: 20%, Dec.15

RP-150903 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - WLAN/3GPP Radio Interworking (UTRA_LTE_WLAN_interw-UEConTest) RAN5 CRset F REL-12 UTRA_LTE_WLAN_interw-UEConTest
conclusion: approved

9.3.5 UE Conformance Test Aspects - DCH Enhancements for UMTS
[**New WI:** UTRA_DCHenh-UEConTest]

RP-150764 Status report for WI UE Conformance Test Aspects - DCH Enhancements for UMTS; rapporteur: Qualcomm RAN5 Report REL-12 UTRA_DCHenh-UEConTest
conclusion: noted, approved: 15%, Dec.15

RP-150904 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - DCH Enhancements for UMTS (UTRA_DCHenh-UEConTest) RAN5 CRset F REL-12 UTRA_DCHenh-UEConTest
conclusion: approved

9.3.6 UE Conformance Test Aspects - L-band for Supplemental Downlink in E-UTRA and UTRA [**New WI:** LTE_UTRA_SDL_BandL-UEConTest]

RP-150830 Status report for WI UE Conformance Test Aspects - L-band for Supplemental Downlink in E-UTRA and UTRA, rapporteur: Ericsson RAN5 Report REL-12 LTE_UTRA_SDL_BandL-UEConTest
discussion: MCC: target date change
conclusion: noted, approved: 85%, Sep.15

RP-150835 Revised WID: UE Conformance Test Aspects - L-band for Supplemental Downlink in E-UTRA and UTRA Ericsson WID rev RAN5 REL-12 LTE_UTRA_SDL_BandL-UEConTest
last approved WID: RP-150134; update of title, adding new TR and change target date by 3 months to Sept.15
conclusion: approved

Samsung Exhibit 1025, Page 1833 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150905 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - L-band for Supplemental Downlink in E-UTRA and UTRA to E-UTRAN (LTE_UTRA_SDL_BandL-UEConTest) RAN5 CRset F REL-12 LTE_UTRA_SDL_BandL-UEConTest
conclusion: approved

9.3.7 UE Conformance Test Aspects - Codec for Enhanced Voice Services (EVS)
[**New WI:** EVS_codec-UEConTest]

RP-150831 Status report for WI UE Conformance Test Aspects - Codec for Enhanced Voice Services (EVS), rapporteur: Ericsson RAN5 Report REL-12 EVS_codec-UEConTest
conclusion: noted, approved: 25%, Dec.15

RP-150836 Revised WID: UE Conformance Test Aspects - Codec for Enhanced Voice Services (EVS) Ericsson WID revRAN5 REL-12 EVS_codec-UEConTest
last approved WID: RP-150137; adds TS 36.508 to impacted TSs
conclusion: approved

RP-150906 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Codec for Enhanced Voice Services (EVS) (EVS_codec-UEConTest) RAN5 CRset F REL-12 EVS_codec-UEConTest
conclusion: approved

9.3.8 UE Conformance Test Aspects - Further DL MIMO Enhancement for LTE-Advanced
[**New WI:** LTE_eDL_MIMO_enh-UEConTest]

RP-150606 Status report for WI UE Conformance Test Aspects - Further DL MIMO Enhancement for LTE-Advanced, rapporteur: ZTE RAN5 Report REL-12 "LTE_eDL_MIMO_enh-UEConTest
conclusion: noted, approved: 10%, March 16

RP-150907 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Further DL MIMO Enhancement for LTE-Advanced (LTE_eDL_MIMO_enh-UEConTest) RAN5 CRset F REL-12 LTE_eDL_MIMO_enh-UEConTest
conclusion: approved

9.3.9 UE Conformance Test Aspects – LTE Device-to-Device Proximity Services
[**New WI:** LTE_D2D_Prox-UEConTest]

RP-150765 Status report for WI UE Conformance Test Aspects - Device-to-Device Proximity Services; rapporteur: Qualcomm RAN5 Report REL-12 LTE_D2D_Prox-UEConTest
conclusion: noted, approved: 10%, Dec.15

RP-150908 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects – UE Conformance Test Aspects – LTE Device-to-Device Proximity Services (LTE_D2D_PROX-UEConTest)RAN5 CRset F REL-12 LTE_D2D_PROX-UEConTest
conclusion: approved

9.3.10 UE Conformance Test Aspects - Low cost & enhanced coverage MTC UE for LTE
[**New WI:** LC_MTC_LTE-UEConTest]

RP-150833 Status report for WI UE Conformance Test Aspects - Low cost & enhanced coverage MTC UE for LTE, rapporteur: Ericsson RAN5 Report REL-12 LC_MTC_LTE-UEConTest
conclusion: noted, approved: 13%, Dec.15

RP-150838 Revised WID: UE Conformance Test Aspects - Low cost & enhanced coverage MTC UE for LTE Ericsson WID revRAN5 REL-12 LC_MTC_LTE-UEConTest
last approved WID: RP-150135; adds missing impacted TSs (TS 36.509 and TS 37.571-1) and TRs (TR 36.903, TR 36.904)
conclusion: approved

RP-150909 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Low cost & enhanced coverage MTC UE for LTE (LC_MTC_LTE-UEConTest) RAN5 CRset F REL-12 LC_MTC_LTE-UEConTest
conclusion: approved

Samsung Exhibit 1025, Page 1834 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

9.3.11 UE Conformance Test Aspects - Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL [New WI: LTE_CA_Rel12_2UL-UEConTest]

RP-150834 Status report for WI UE Conformance Test Aspects - Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL, rapporteur: Ericsson RAN5 Report REL-12 LTE_CA_Rel12_2UL-UEConTest
conclusion: noted, approved: 29%, Dec.15

RP-150839 Revised WID: UE Conformance Test Aspects - Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL Ericsson WID rev RAN5 REL-12 LTE_CA_Rel12_2UL-UEConTest last approved WID: RP-150136; adding missing TRs
conclusion: withdrawn

RP-150910 RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – Further Rel-12 configurations for LTE Advanced Carrier Aggregation with 2UL (LTE_CA_Rel12_2UL-UEConTest) RAN5 CR set F REL-12 LTE_CA_Rel12_2UL-UEConTest
conclusion: approved

9.3.12 UE Conformance Test Aspects - Smart Congestion Mitigation in E-UTRAN [New WI: SCM_LTE-UEConTest]

RP-150794 Status report for WI UE Conformance Test Aspects - Smart Congestion Mitigation in E-UTRAN, rapporteur: NTT DOCOMO, INC. RAN5 Report REL-12 SCM_LTE-UEConTest
conclusion: noted, approved: 60%, Sep.15

RP-150797 Revised WID: UE Conformance Test Aspects - Smart Congestion Mitigation in E-UTRAN NTT DOCOMO, INC. WID rev RAN5 REL-12 SCM_LTE-UEConTest
last approved WID: RP-150202; affected specs updated
conclusion: approved

RP-150911 RAN5 agreed non TTCN CR(s) WI UE Conformance Test Aspects - Smart Congestion Mitigation in E-UTRAN (SCM_LTE-UEConTest) RAN5 CR set F REL-12 SCM_LTE-UEConTest
conclusion: approved

9.3.13 UE Conformance Test Aspects - Performance Requirements of Interference Cancellation and Suppression Receiver for SU-MIMO for E-UTRA [New WI: LTE_SUMIMO_RX-UEConTest]

RP-150692 Status report for WI: UE Conformance Test Aspects - Performance Requirements of Interference; rapporteur: Huawei RAN5 Report REL-12 LTE_SUMIMO_RX-UEConTest
conclusion: noted, approved: 5%, March 16

9.3.14 Conformance Test Aspects: Small Technical Enhancements and Improvements for Rel-12 [TEI12_Test]

RP-150897 CR to 37.751-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (prose), Annex A RAN5 CR37.571-4 0050 - F REL-12 TEI8_Test MCC: late submission
MCC: late submission
conclusion: approved

RP-150898 CR to 37.571-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (TTCN), Annex A RAN5 CR37.571-4 set - B REL-12 TEI8_Test, TEI9_Test, TEI12_Test
TTCN batch; 9 Test Cases; MCC: late submission
conclusion: approved

RP-150912 RAN5 agreed non TTCN CR(s) under WI Small Technical Enhancements and Improvements for Rel-12 Conformance Testing (TEI12_Test) RAN5 CR set F REL-12 TEI12_Test
conclusion: approved

Samsung Exhibit 1025, Page 1835 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

9.4 Open Rel-13 work items

9.4.1 UE Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom [LTE_UTRA_TRP_TRS-UEConTest]

RP-150604 Status report for WI UE Conformance Test Aspects - LTE UE TRP and TRS and UTRA Hand Phantom, rapporteur: ZTE RAN5 Report REL-13 LTE_UTRA_TRP_TRS-UEConTest
conclusion: noted, approved: 25%, June 16

RP-150913 RAN5 agreed non TTCN CR(s) under WI UE Conformance Test Aspects – LTE UE TRP and TRS and UTRA Hand Phantom (LTE_UTRA_TRP_TRS-UEConTest) RAN5 CRset F REL-13 LTE_UTRA_TRP_TRS-UEConTest
MCC: late submission
conclusion: withdrawn

Samsung Exhibit 1025, Page 1836 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

10 Work Items with target Rel-12 (not related to conformance testing)

10.1 Closed UTRA only related WIs

RAN2:

RP-150919 RAN2 agreed CRs on closed REL-12 UTRA Work Items RAN2 CR set REL-12 EDCH_enh-Core, UTRA_DCHenh-Core, UTRA_HetNet_enh-Core
conclusion: approved

RAN3:

RP-150942 Corrections of EUL enhancements RAN3 CR set REL-12 EDCH_enh-Core
conclusion: approved

10.2 Closed UTRA & LTE related WIs

RAN2:

RP-150920 RAN2 agreed CRs on closed REL-12 UTRA & LTE Work Items RAN2 CR set REL-12 UTRA_LTE_WLAN_interw-Core, LTE_UTRA_IncMon-Core
conclusion: approved

RAN4:

RP-150956 RAN4 CRs to Closed UTRA & LTE related WIs RAN4 CR 37.9770011 - F REL-12 HSPA_LTE_measRP_MIMO-Perf
CR is included in RP-150966
conclusion: withdrawn

10.3 Closed LTE only related WIs

RAN1:

RP-150933 CRs to 36.213 on corrections to Dual connectivity for LTE RAN1 CR set REL-12 LTE_SC_enh_dualC-Core
conclusion: approved

RP-150935 CRs to 36.211, 36213 on corrections to D2D feature RAN1 CR set REL-12 LTE_D2D_Prox-Core
conclusion: approved

RP-150936 CRs to 36.212, 36213 on corrections to eIMTA feature RAN1 CR set REL-12 LTE_TDD_eIMTA-Core
conclusion: approved

RAN2:

RP-150921 RAN2 agreed CRs on closed REL-12 LTE Work Items RAN2 CR set REL-12 LTE_D2D_Prox-Core, LTE_SC_enh_dualC-Core, LTE_TDD_eIMTA-Core, LTE_CA_TDD_FDD-Core, LC_MTC_LTE-Core, GCSE_LTE-MBMS_CM-Core, TEI12
Note 1: 36.300 CR R2-152054 is linked with 36.331 CR R2-152077.
Note 2: The CRs R2-152925, R2-152926 and R2-152927 were originally from RAN3.
conclusion: approved

RP-150922 RAN2 agreed CR on Correction on the SL-TF-IndexPair values for ProSe Direct Discovery RAN2 CR 36.331 1834 1 F REL-12 LTE_D2D_Prox-Core
discussion: MCC: company CR RP-150811 is provided to revise RP-150922
conclusion: revised in RP-150811

RP-150811 Correction on the SL-TF-IndexPair values for ProSe Direct Discovery Rohde & Schwarz CR 36.331 1834 2 F REL-12 LTE_D2D_Prox-Core
company contribution in order to replace RAN2 agreed CR R2-152910 in RP-150922

Samsung Exhibit 1025, Page 1837 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

RAN3:

RP-150943 Dual Connectivity for LTE CRs RAN3 CR set REL-12 LTE_SC_enh_dualC-Core, LTE_SC_enh_L1-Core
conclusion: approved

RAN4:

RP-150957 RAN4 CRs to Closed LTE only related WIs RAN4 CR set REL-12 LC_MTC_LTE-Core, LTE_D2D_Prox-Core, LTE_NAICS, LTE_SC_enh_dualC-Core, LTE_SUMIMO_RX-Perf, LTE_UTRA_IncMon-Core, LTE_UTRA_SDL_BandL-Core, LTE_SC_enh_L1-Core, MBMS_LTE_OS
conclusion: approved

RP-150958 RAN4 CRs to Closed LTE Carriere aggregation related WIs RAN4 CR set REL-12 LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A5-Core, LTE_CA_NC_2UL-Core, LTE_CA_B1_B3_B5-Perf, LTE_CA_B1_B3_B8-Perf, LTE_CA_B1_B3_B19-Perf, LTE_CA_B1_B3_B20-Perf, LTE_CA_B1_B3_B26-Perf, LTE_CA_B1_B5_B7-Perf, LTE_CA_B1_B7_B20-Perf, LTE_CA_B1_B18_B28-Perf, LTE_CA_B1_B19_B21-Perf, LTE_CA_B2_B2_B5-Perf, LTE_CA_B2_B2_B13-Perf, LTE_CA_B2_B4_B4-Perf, LTE_CA_B2_B4_B5-Perf, LTE_CA_B2_B4_B12-Perf, LTE_CA_B2_B4_B13-Perf, LTE_CA_B2_B4_B29-Perf, LTE_CA_B2_B5_B12-Perf, LTE_CA_B2_B5_B13-Perf, LTE_CA_B2_B5_B30-Perf, LTE_CA_B2_B12_B30-Perf, LTE_CA_B2_B29_B30-Perf, LTE_CA_B3_B7_B20-Perf, LTE_CA_B4_B4_B5-Perf, LTE_CA_B4_B4_B7-Perf, LTE_CA_B4_B4_B12-Perf, LTE_CA_B4_B4_B13-Perf, LTE_CA_B4_B5_B12-Perf, LTE_CA_B4_B5_B13-Perf, LTE_CA_B4_B5_B30-Perf, LTE_CA_B4_B7_B12-Perf, LTE_CA_B4_B12_B30-Perf, LTE_CA_B4_B29_B30-Perf, LTE_CA_B7_B8_B20-Perf, LTE_CA_B2_B2_B13-Core, LTE_CA_B2_B4_B4-Core, LTE_CA_B2_B12_B12-Core, LTE_CA_B1_B3_B26-Core, LTE_CA_B1_B19_B21-Core, LTE_CA_B2_B2_B5-Core, LTE_CA_B2_B5_B13-Core, LTE_CA_B4_B4_B5-Core, LTE_CA_B4_B5_B13-Core, LTE_CA_B4_B4_B12-Core, LTE_CA_B3_B3_B8-Core, LTE_CA_B41_B42_B42-Core, LTE_CA_B2_B2_B13-Perf, LTE_CA_B4_B4_B13-Perf, LTE_CA_B26_B41_B41-Core, LTE_CA_C_B39-Perf, LTE_CA_Mult-Perf, LTE_CA_C_B41_3DL-Perf, LTE_CA_NC_B41_3DL-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA-Core, LTE_CA_C_B40_3DL, LTE_CA_C_B41_3DL, LTE_CA_2UL-A4-Core, LTE_CA_B1_B18_B28-Core, LTE_CA_B1_B3_B26-Core, LTE_CA_C_B39-Core, LTE_CA_C_B41_3DL-Core, LTE_CA_Mult-Perf
conclusion: approved

10.4 Open UTRA & LTE only related WIs

10.4.1 Perf. part: Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA [LTE_UTRA_IncMon-Perf] Core part completed in Dec.14

RP-150596 Status Report for WI Perf. part: Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA; rapporteur: Ericsson RAN4 Report REL-12 LTE_UTRA_IncMon-Perf
conclusion: noted, approved: 100%, June 15; WI is completed

RP-150959 CRs to Increasing the minimum number of carriers for UE monitoring in UTRA and E-UTRA - Perf. Part RAN4 CR set REL-12 LTE_UTRA_IncMon-Perf
conclusion: approved

10.5 Open LTE only related WIs (non-spectrum related)

10.5.1 Perf. part: Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation [LTE_TDD_eIMTA-Perf] Core part completed in June 14

Samsung Exhibit 1025, Page 1838 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150651 Status report for WI Perf. part: Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation; rapporteur: CATT RAN4 Report REL-12 LTE_TDD_eIMTA-Perf
discussion: MCC: target date change
conclusion: noted, approved: 95%, Sep.15

RP-150960 CRs to Further Enhancements to LTE TDD for DL-UL Interference Management and Traffic Adaptation - Perf. Part RAN4 CR 36.101 set REL-12 LTE_TDD_eIMTA-Perf
conclusion: approved

10.5.2 Perf. part: Low cost & enhanced coverage MTC UE for LTE [LC_MTC_LTE-Perf]
Core part completed in Dec.14

RP-150915 Status report for WI Perf. part: Low cost & enhanced coverage MTC UE for LTE; rapporteur: Vodafone RAN4 Report REL-12 LC_MTC_LTE-Perf
discussion: MCC: late submission
conclusion: noted, approved: 100%, June 15; WI is completed

RP-150940 Revised WID for Perf. part: Low cost & enhanced coverage MTC UE for LTE Vodafone WID rev RAN4 REL-12 LC_MTC_LTE-Perf
last approved WID: RP-140522; rapporteur corrected
conclusion: approved

RP-150961 CRs to Low cost & enhanced coverage MTC UE for LTE - Perf. Part RAN4 CR set REL-12 LC_MTC_LTE-Perf
conclusion: approved

10.5.3 Perf. part: E-UTRA Small cell enhancements - Physical layer aspects [LTE_SC_enh_L1-Perf]
Core part completed in Dec.14

RP-150690 Status report for WI Perf. part: E-UTRA Small cell enhancements - Physical layer aspects, rapporteur: Huawei RAN4 Report REL-12 LTE_SC_enh_L1-Perf
conclusion: noted, approved: 100%, June 15; WI is completed

RP-150962 CRs to E-UTRA Small cell enhancements - Physical layer aspects - Perf. Part RAN4 CR set REL-12 LTE_SC_enh_L1-Perf
conclusion: approved

10.5.4 Perf. part: Dual Connectivity for LTE [LTE_SC_enh_dualC-Perf] Core part completed in Dec.14

RP-150791 Status Report for WI Perf Part.: Dual Connectivity for LTE, rapporteur: NTT DOCOMO, INC. RAN4 Report REL-12 LTE_SC_enh_dualC-Perf
conclusion: noted, approved: 100%, June 15; WI is completed

RP-150963 CRs to Dual Connectivity for LTE - Perf Part RAN4 CR set REL-12 LTE_SC_enh_dualC-Perf
conclusion: approved

10.5.5 Perf. part: LTE Device to Device Proximity Services [LTE_D2D_Prox-Perf]
Core part completed in March 15

RP-150760 Status report for WI Perf Part: LTE Device to Device Proximity Services: rapporteur: Qualcomm RAN4 Report REL-12 LTE_D2D_Prox-Perf
conclusion: noted, approved: 70%, Sep.15

RP-150964 CRs to LTE Device to Device Proximity Services - Perf. Part RAN4 CR 36.133 3012 2 F REL-12 LTE_D2D_Prox-Perf
conclusion: approved

10.5.6 Perf. part: Network-Assisted Interference Cancellation and Suppression for LTE [LTE_NAICS-Perf] Core part completed in Dec.14

RP-150862 Status Report for WI: Perf. part: Network-Assisted Interference Cancellation and Suppression for LTE; rapporteur: Mediatek RAN4 Report REL-12 LTE_NAICS-Perf
discussion: Ericsson: The TU allocation request of 2 TUs for RAN4#76 is overestimated compared to the amount of work remaining in RAN4 for closing the NAICS performance WI.
MCC: target date change

Samsung Exhibit 1025, Page 1839 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Ericsson: demodulation and CSI CRs almost complete so 0.5TUs should be enough
Mediatek: RAN4 chair proposed to reduce from 2TUs to 1.5TUs and we would accept this, considers 1.5TUs as minimum
RAN4 chair: we should finalize all REL-12 WIs at the next meeting and recommended 1.5TUs
conclusion: noted, approved: 85%, Sep.15; 1.5TU is agreed

RP-150865 CR for Rel-12 NAICS definitions Mediatek CR36.1013005 2 B REL-12 LTE_NAICS-Perf
company contribution replacing agreed RAN4 CR R4-153652; finallyRP-150865 was withdrawn as revision was not necessary
conclusion: withdrawn

RP-150866 Revised WID: Perf. part: Network-Assisted Interference Cancellation and Suppression for LTE Mediatek WID rev RAN4 REL-12 LTE_NAICS-Perf
last approved WID: RP-141634
conclusion: withdrawn

RP-150871 WI Exception: Network Assisted Interference Cancellation and Suppression Mediatek Disc REL-12 LTE_NAICS-Perf
conclusion: withdrawn (exception request sheets are only used at the freeze of the REL)

10.6 Small Technical Enhancements and Improvements for Rel-12 [TEI12]

RAN1:
RP-150937 CRs to 36.212, 36213 on corrections to Rel-12 RAN1 CRset REL-12 TEI12
conclusion: approved

RAN2:
RP-150923 RAN2 agreed CRs on Small Technical Enhancements and Improvements for Rel-12 RAN2 CRset REL-12 TEI12
conclusion: approved

RAN3:
RP-150944 TEI12 CRs RAN3 CRset REL-13 TEI12
conclusion: approved

RAN4:
RP-150965 RAN4 CRs to Small Technical Enhancements and Improvements for Rel-12RAN4 CRset REL-12 TEI12
conclusion: approved

Samsung Exhibit 1025, Page 1840 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11 Work Items with target Rel-13 (not related to conformance testing)

11.1 Open UTRA related WIs (spectrum & non-spectrum related)

11.1.1 HSPA Dual-Band UL carrier aggregation [HSUPA_DB_MC]

RP-150761 Status report for WI HSPA Dual-Band UL carrier aggregation; rapporteur: Qualcomm RAN4 Report REL-13 HSUPA_DB_MC
discussion: MCC: late submission
conclusion: noted, approved: Core: 40%, Dec.15; Perf.: 0%, March 16

11.1.2 Core part: Support of EVS over UTRAN CS [EVSoCS_UTRAN-Core]

RP-150759 Status report for WI Support of EVS over UTRAN CS; rapporteur: Qualcomm RAN2 Report REL-13 EVSoCS_UTRAN-Core
discussion: MCC: late submission
conclusion: noted, approved: 25%, Sep.15; note: time budget change

11.1.3 Core part: Multiflow Enhancements for UTRA [**New WI:** HSDPA_MFTX_enh-Core]

RP-150827 Status report for WI Core part: Multiflow Enhancements for UTRA, rapporteur: Nokia Networks RAN2 Report REL-13 HSDPA_MFTX_enh-Core
conclusion: noted, approved: 80%, Sep.15; note: time budget change

RP-150837 Revised WID: Core part: Multiflow Enhancements for UTRA Nokia Networks WID rev RAN2 REL-13 HSDPA_MFTX_enh-Core
discussion: Ericsson: 25.306 is not affected and has to be removed
conclusion: revised in RP-151021

RP-151021 Revised WID: Core part: Multiflow Enhancements for UTRA Nokia Networks WID rev RAN2 REL-13 HSDPA_MFTX_enh-Core
conclusion: approved

RP-150924 RAN2 agreed CR on Introduction of the Multiflow 3F-4C configuration RAN2 CR 25.308 0167 - B REL-13 HSDPA_MFTX_enh-Core
conclusion: approved

11.1.4 Core part: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network [**New WI:** CSPS_Coord-UTRA-Core]

RP-150842 Status report for WI Core part: RAN aspects for improvements to CS/PS coordination in UTRAN Shared Network; rapporteur: Ericsson RAN3 Report REL-13 CSPS_Coord-UTRA-Core
conclusion: noted, approved: 45%, Sep.15

11.2 Open UTRA & LTE related WIs (non-spectrum related)

11.2.1 Core part: LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Requirements [LTE_UTRA_TRP_TRS-Core] (WI was shifted from REL-12 to REL-13)

TRP = total radiated power, TRS = total radiated sensitivity

RP-150615 Status report of LTE UE TRP & TRS and UTRA Hand Phantom related UE TRP and TRS Requirements; rapporteur: Nokia Corporation RAN4 Report REL-13 LTE_UTRA_TRP_TRS-Core
conclusion: noted, approved: 40%, Dec.15

11.2.2 Base Station (BS) RF requirements for Active Antenna System (AAS) [AAS_BS_LTE_UTRA]

(WIs were shifted from REL-12 to REL-13)

Samsung Exhibit 1025, Page 1841 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150687 Status report for WI: Base Station (BS) RF requirements for Active Antenna System (AAS), rapporteur: Huawei RAN4 Report REL-13 AAS_BS_LTE_UTRA
conclusion: noted, approved: Core: 75%, Dec.15; Perf.: 20%, June 16

11.2.3 Core part: SON for AAS-based deployments [UTRA_LTE_SON_AAS-Core]

RP-150727 Status report for WI core part: SON for AAS-based deployments; rapporteur: Nokia Networks RAN3 Report REL-13 UTRA_LTE_SON_AAS-Core
conclusion: noted, approved: 100%, June 15; WI is completed

RP-150945 SON for AAS-based deployments RAN3 CR set REL-12 UTRA_LTE_SON_AAS-Core
conclusion: approved

11.2.4 Core part: Radiated requirements for the verification of multi-antenna reception performance of UEs [UTRA_LTE_MIMO_OTA-Core]

RP-150550 LS on CTIA Test Plan for Wireless Device Over-the-Air Performance (CTIA_LS_150311; to: RAN, RAN4, RAN5, GSMA TSGAP, GCF SG, GCF OTA Task Force, COST IC1004 TWG-O; cc: -; contact: Spirent Communications) CTIA LSin REL-13 LTE_MIMO_OTA-Core, LTE_UTRA_TRP_TRS-Core
CTIA = Cellular Telecommunications & Internet Association; no RAN action requested; will be presented by Spirent
conclusion: noted, no LS answer

RP-150746 Status report for WI Core Part: Radiated requirements for the verification of multi-antenna reception performance of UEs; rapporteur: Intel RAN4 Report REL-13 UTRA_LTE_MIMO_OTA-Core
conclusion: noted, approved: 15%, Dec.15

RP-150966 CRs to Radiated requirements for the verification of multi-antenna reception performance of Ues - Core part RAN4 CR37.977 set REL-13 UTRA_LTE_MIMO_OTA-Core
conclusion: approved

11.2.5 Core part: RAN aspects of Application specific Congestion control for Data Communication [**New WI:** ACDC-RAN-Core]

RP-150661 Status report for WI RAN aspects of Application specific Congestion control for Data Communication; rapporteur: LG ELectronics RAN2 Report REL-13 ACDC-RAN-Core
discussion: MCC: time unit change
conclusion: noted, approved: 25%, Dec.15

RP-150662 Revised WID: Core part: RAN aspects of Application specific Congestion control for Data CommunicationLG Electronics Inc. WID rev RAN2 REL-13 ACDC-RAN-Core
last approved WID: RP-150512
conclusion: approved

11.3 Open LTE only related WIs (non-spectrum related)

11.3.1 Core part: Enhanced Signalling for Inter-eNB Coordinated Multi-Point (CoMP) for LTE [COMP_LTE_IeNB_sig-Core]

RP-150845 Status report for WI Core part: Enhanced signalling for inter-eNB CoMP for LTE; rapporteur: Samsung RAN3 Report REL-13 COMP_LTE_IeNB_sig-Core
conclusion: withdrawn

RP-150846 Status report for WI Core part: Enhanced signalling for inter-eNB CoMP for LTE; rapporteur: Samsung RAN3 Report REL-13 COMP_LTE_IeNB_sig-Core
discussion: MCC: target date change
conclusion: noted, approved: 90%, Sep.15

RP-150925 RAN2 agreed CR on introduction of enhanced inter-eNB CoMP RAN2 CR36.300 0711 4 B REL-13 COMP_LTE_IeNB_sig-Core
NOTE: CR is originally from RAN3

Samsung Exhibit 1025, Page 1842 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

11.3.2 Further LTE Physical Layer Enhancements for MTC [LTE_MTCe2_L1]

RP-150583 Status report for WI Further LTE Physical Layer Enhancements for MTC; rapporteur: Ericsson RAN1 Report REL-13 LTE_MTCe2_L1
discussion: MCC: late submission
Huawei: time budget increase in RAN1 should be considered together with new WIs/SIs, slower progress in RAN2 so no need to hurry in RAN1
RAN2 chair: does not agree to this observation
conclusion: noted, approved: Core: 45%, Dec.15; Perf.: 0%, June 16; note: time budget change (was confirmed)

RP-150597 Status report for WI Further LTE Physical Layer Enhancements for MTC; rapporteur: Ericsson RAN1 Report REL-13 LTE_MTCe2_L1
conclusion: withdrawn as misused by another Tdoc; see RP-150583 instead

11.3.3 Core part: RAN Aspects of RAN Sharing Enhancements for LTE [RSE-RAN_LTE-Core]

RP-150875 Status report for WI Core Part: RAN Aspects of RAN Sharing Enhancements for LTE; rapporteur: NEC RAN3 Report REL-13 RSE-LTE_RAN-Core
discussion: MCC: late submission
conclusion: noted, approved: 75%, Sep.15

11.3.4 LTE Carrier Aggregation Enhancement Beyond 5 Carriers [LTE_CA_enh_b5C]

RP-150769 Status report for LTE Carrier Aggregation Enhancement Beyond 5 Carriers, rapporteur: Nokia RAN1 Report REL-13 LTE_CA_enh_b5C
conclusion: noted, approved: Core: 40%, Dec.15; Perf.: 0%, June 16; note: time unit change in RAN4

RP-150758 Revised Work Plan for LTE Carrier Aggregation Enhancement Beyond 5 Carriers NTT DOCOMO, INC., Nokia Networks Disc REL-13 LTE_CA_enh_b5C
conclusion: noted

RP-150771 Revised WID: LTE Carrier Aggregation Enhancement Beyond 5 Carriers Nokia Networks, NTT DoCoMo Inc. WID revRAN1 REL-13 LTE_CA_enh_b5C
last approved WID: RP-150277; note: rapporteur so far is Nokia Corporation
conclusion: approved

RP-150967 CRs to LTE Carrier Aggregation Enhancement Beyond 5 Carriers RAN4 CR36.1013011 1 B REL-13 LTE_CA_enh_b5C-Core
conclusion: approved

11.3.5 Enhanced LTE Device to Device Proximity Services [LTE_eD2D_Prox]

SA2 REL-13 eProSe-Ext:

RP-150555 Reply LS to S2-150691 on public safety discovery
(R2-151723; to: SA2; cc: RAN1, SA3, RAN; contact: Intel) RAN2
LSin REL-13 eProSe-Ext
no RAN action requested
conclusion: noted, no LS answer

SA1 REL-14 SI FS_V2XLTE:

RP-150558 LS on information regarding V2X study in 3GPP
(SP-150166; to: ETSI TC ITS, US SAE, US ITSA, Korean Ministry of Land, Infrastructure and Transport, GSMA Connected Living, IEEE; cc: RAN, SA1; contact: Nokia Networks) SA
LSin REL-14 FS_V2XLTE
no RAN action requested
conclusion: noted, no LS answer

RP-150548 Reply LS to SP-150166 = RP-150558 on information regarding V2X study in 3GPP
(ITS(15)000063 rev 1; to: SA, SA1; cc: RAN, IEEE1609, US SAE; contact: ITS Chairman) ETSI TC ITS
LSin REL-14 FS_V2XLTE

Samsung Exhibit 1025, Page 1843 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

no RAN action requested; moved from AI 6.1
conclusion: noted, no LS answer

RP-150557 Reply LS to RP-142312 on LTE based Vehicular Communication (S1-151629; to: RAN; cc: SA; contact: LG) SA1 LSin REL-14 FS_V2XLTE
no explicit RAN action requested
SA1 had agreed on Study on LTE support for V2X services (FS_V2XLTE) for Release 14, which was approved in SA#67 (03/2015) with Target Completion in SA#70 (12/2015). SA1 recognises that there are important V2V, V2I and V2P use cases. SA1 has prioritised work on V2V services over V2I and V2P. SA1 recently agreed to several potential requirements for V2V which are captured together with some potential requirements on V2I and V2P in the attached draft TR.
conclusion: noted, no LS answer

RAN2 REL-13 WI LTE_eD2D_Prox:

RP-150795 Status Report for WI: Enhanced LTE Device to Device Proximity Services RAN2 Report REL-13 LTE_eD2D_Prox
discussion: MCC: target date for Perf. part not provided
Telecom Italia: we will have several RAN4 WIs going on on D2D in the future?
conclusion: noted, approved: Core: 32%, DEc.15; Perf.: 0%, June 16

11.3.6 Core part: UE core requirements for uplink 64 QAM [LTE_UL64QAM-Core]

RP-150688 Status report for WI: Core part: UE core requirements for uplink 64 QAM, rapporteur: Huawei RAN4 Report REL-13 LTE_UL64QAM-Core
conclusion: noted, approved: 90%, Sep.15

RP-150689 TR 36.883 v1.0.0 Introducing UL 64QAM, for information Huawei TR 36.883 RAN4 REL-13 LTE_UL64QAM-Core
RAN4 TR 36.883 is provided for information
conclusion: noted

RP-150691 Revised WID: Core part: UE core requirements for uplink 64 QAM Huawei WID rev RAN4 REL-13 LTE_UL64QAM-Core
last approved WID: RP-142222; to fix TR number
conclusion: approved

11.3.7 Perf. part: Performance requirements of MMSE-IRC receiver for LTE BS [LTE_MMSE_IRC_BS-Perf]

RP-150630 Status report for WI Perf. Part: Performance requirements of MMSE-IRC receiver for LTE BS, rapporteur: China Telecom RAN4 Report REL-13 LTE_MMSE_IRC_BS-Perf
conclusion: noted, approved: 35%, June 16

11.3.8 Perf. part: CRS Interference Mitigation for LTE Homogenous Deployments [LTE_CRSIM-Perf]

RP-150584 Status report for WI Perf. part: CRS Interference Mitigation for LTE Homogenous Deployments; rapporteur: Ericsson RAN4 Report REL-13 LTE_CRSIM-Perf
conclusion: noted, approved: 20%, March 16

RP-150598 Status report for WI Perf. part: CRS Interference Mitigation for LTE Homogenous Deployments; rapporteur: Ericsson RAN4 Report REL-13 LTE_CRSIM-Perf
conclusion: withdrawn as misused by another Tdoc; see RP-150584 instead

11.3.9 Dual Connectivity enhancements for LTE [**New WI:** LTE_dualC_enh]

RP-150744 Status report for WI: Dual Connectivity enhancements for LTE; rapporteur: NTT DOCOMO, INC. RAN2 Report REL-13 LTE_dualC_enh
conclusion: noted, approved: Core: 25%, Dec.15; Perf.: 0%, June 16; note: time budget change

Samsung Exhibit 1025, Page 1844 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.3.10 Multicarrier Load Distribution of UEs in LTE [**New WI:** LTE_MC_load]

RP-150610 Status report for WI: WI Multicarrier Load Distribution of UEs in LTE; rapporteur: ZTE RAN2 Report REL-13 LTE_MC_load
conclusion: noted, approved: Core: 40%, Dec.15; Perf.: 0%, Dec.15

RP-150611 Revised WID: Multicarrier Load Distribution of UEs in LTE ZTE WID rev RAN2 REL-13 LTE_MC_load last approved WID: RP-150491
conclusion: approved

11.3.11 Core part: RAN enhancements for extended DRX in LTE [**New WI:** LTE_extDRX-Core]

RP-150798 Status Report for WI Core Part: on RAN enhancements for extended DRX in LTE; rapporteur: Qualcomm RAN2 Report REL-13 LTE_extDRX-Core
conclusion: noted, approved: 15%, Dec.15

RP-150799 Extended connected mode DRX Qualcomm Incorporated Disc REL-13 LTE_extDRX-Core
Proposal 1: RAN agrees to one of the following proposals regarding extended connected mode DRX:
Proposal 1a: RAN agrees that extended connected mode DRX cycle beyond 10.24 seconds is no longer pursued in the release-13 WI [1].
Proposal 1b: RAN agrees to update the WI [1] by allocating additional TUs to RAN2 and RAN4 in order to complete the study on benefits and impacts of connected mode DRX cycle beyond 10.24s.
Proposal 2:If the proposal 1 is agreed, RAN informs SA about the agreement in this TSG meeting cycle.
discussion: AT&T: when discussing RAN2 report we talked about idle: is this for connected mode only? answer: yes
Mediatek: correct the TU allocation is a bit low for RAN2
Ericsson: we should not debate Core network impacts here; SA2 has a mechanism for UE is stationary so no extra mobility ; 10sec limitation is rather arbitrary
TeliaSonera: would support to have more than 10sec (for MTC); worried about misalignment between RAN and SA
Mediatek: SA2 left study open is scheduled for discussion in July, thinks there is good synchronisation with RAN2
Samsung: listening in idle mode does not come for free, prefers option 1a.
ALU: supports 1a. (we have not enough TUs)
NTT DOCOMO: supports 1a.
Ericsson: it is strange that we accept new WIs for RAN2 but we have a problem to extend the time budget for existing WI
Microsoft: supports 1a.
Interdigital: supports 1a., even if we increase time budget we may not conclude so we need tomake a choice
Orange: we need to have views on the gains
Deutsche Telekom: also on the drawbacks of going >10sec, supports 1a.
LG: does not see a gain to go beyond 10sec
conclusion: noted, proposal 1a is agreed
Panasonic: In offline discussions I heard the proposal applies also to low cost MTC. Is it correct?
RAN chair: of course if is not included under this WI it is then also not covered under another WI
Vodafone: fine with proposal 1a
RAN chair: will report to SA that we agreed proposal 1a.

11.3.12 LTE-WLAN Radio Level Integration and Interworking Enhancement [**New WI:** LTE_WLAN_radio]

RP-150823 Status report for WI LTE-WLAN Radio Level Integration and Interworking Enhancement, rapporteur: Intel Corporation RAN2 Report REL-13 LTE_WLAN_radio
discussion: MCC: time budget increased (but not indicated) as scope of the WI increased (follow-up WI aspects of FS_MultiRAT_JC included);
CATT: Suggests to replace "asking to evaluate this method" in the following sentence: "RAN2 have also discussed an eNB-assisted WLAN PSK authentication which is intended to allow authentication between UE and WLAN without CN interaction and agreed to send a LS to SA3 *asking to evaluate this method*." by

Samsung Exhibit 1025, Page 1845 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

"*asking to evaluate its feasibility and security impacts, and also the feasibility of not using any WLAN authentication and encryption.*" as this reflects better the current status of RAN2 discussion.

conclusion: revised in RP-151081 (TU corrected and SA3 LS related comment)

RP-151081 Status report for WI LTE-WLAN Radio Level Integration and Interworking Enhancement, rapporteur: Intel Corporation RAN2 Report REL-13 LTE_WLAN_radio

discussion: Broadcom: unclear whether node or interface?
RAN3 chair: we will discuss this in RAN3

conclusion: noted, approved: Core: 30%, Dec.15; Perf.: 0%, Dec.15; RAN3: only 2 TU agreed

RP-150677 Clarification of the Scope of Rel-13 LTE and WLAN Integration WI (LTE_WLAN_radio) AT&T, Sprint, T-Mobile USA, CableLabs, Interdigital Communications, BlackBerry UK Limited, Broadcom Corporation, Alcatel-Lucent Disc REL-13 LTE_WLAN_radio

Proposal:

- *The WI shall include solutions that fulfil the original requirements without requiring either software or firmware updates to legacy WLANs or major architectural changes on the terminal.*
- *Amend the WID if necessary or alternatively RAN plenary shall provide guidance to RAN2 to allow inclusion of acceptable ways forward for legacy WLANs to be supported with no modifications.*

discussion: Microsoft and TCT: support the proposal
Intel: proposal is to specify 2 solutions?
AT&T: is possible
Deutsche Telekom: worried that we introduce another option, were the gains investigated
AT&T: is simply for UE manufacturers and does not touch legacy WLAN
Telefonica: supports to not upgrade legacy WLAN; WI has some architectural changes in the UE? This is part of the WI.
AT&T: some people call UEs terminal others do not
T-Mobile: no "major" architectural changes
Orange: supports the alternative but does not oppose the proposal if it can be done in REL-13
Ericsson: flow control with impacts on APs would be needed to really achieve gains; worried about fragmentation of solutions and
Broadcom: on average you have 50 users on an AP here in the room, you have enough diversity for proper load balancing
AT&T: if we cannot include legacy WLAN the WI has no benefit for us
RAN chair: proposal is a request to add a 2nd requirement (with existing APs)
Nokia Networks: agrees with AT&T that we suffer now because we had no SI; agrees that it is not yet clear whether the change will provide the required gains

conclusion: noted

RP-150753 On the impacts of LTE - WLAN Aggregation Solutions on WLAN Nodes and terminal Broadcom Corporation Disc REL-13 LTE_WLAN_radio

proposal: recommends the adoption of a solution with minimal impacts on the terminal and WLAN infrastructure as the base for the LTE- WLAN aggregation in Release 13

discussion: Deutsche Telekom: simplified master eNode design, can this be confirmed by network vendors?
Ericsson: this is not clear
Broadcom: per paket scheduling and corresponding feedback is not useful
Ericsson: you have heading compression in eNode and ... so it not coming for free,
Broadcom: per flow decision over one access only: no feedback from different interface cards , no buffering etc.
Intel: having detailed technical discussion here at RAN is difficult, thinks that several claims in this proposal are wrong

conclusion: noted

RP-150792 Architectural aspects of WLAN-3GPP aggregation BlackBerry UK Limited, Sony Disc REL-13 LTE_WLAN_radio

adoption of IP tunnel to convey PDCP PDUs between the UE and MeNB is viable from a UE implementation perspective

conclusion: noted

RP-150822 Supporting Legacy APs for WiFi Aggregation Alcatel-Lucent Disc REL-13 LTE_WLAN_radio-Core

Samsung Exhibit 1025, Page 1846 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Proposal#1: Legacy WLAN should be supported for LTE-WiFi aggregation
Proposal#2: The IP tunnelling approach is a possible solution for supporting LTE-WiFi aggregation over legacy WLAN
Observation#1: Impact to the RAN specification is very minimal. The only RRC signalling required for the tunnelling is probably only the eNB/UE routable IP address and other parameters required by the tunnelling (if any)
Proposal#3: While IP tunnelling above and below PDCP is possible, it is proposed to adopt a solution at IP level above PDCP (i.e., PDCP SDU) which minimizes UE impact and only requires a very minimal RRC addition for RAN.
conclusion: noted

RP-151004 Update of LTE-WiFi WI with support of legacy APs Alcatel-Lucent, Alcatel-Lucent Shanghai Bell, AT&T, Sprint, NextNav, T-Mobile USA, Broadcom Corporation, Sequans Communications, CableLabs, Blackberry, Sony Disc REL-13 LTE_WLAN_radio
related to RP-150822: illustration of how WID for LTE_WLAN_radio would change when RP-150822 is considered
discussion: Microsoft: supports this proposal
Deutsche Telekom: this works with every AP?
Broadcom: yes
Intel: paper is about PDCP but changes to WI are still not so clear
Broadcom: gateway exists in all scenarios as no direct access to AP exists
TeliaSonera: confirms as said by Nokia Networks that having a WI without proper SI is not useful; it is already difficult to complete the REL-13 WI in time so we should not extend the scope of the WI as gains are not clear
T-Mobile: our intention is to support legacy APs and we demonstrated that this is not taking a lot of time to provide what we are requesting
ALU: this solution avoids market fragmentation
AT&T: we need transition capabilities
conclusion: noted, offline discussion, rapporteur: ALU, see RP-151047

RP-151047 Way forward on legacy LAN support for LTE-WLAN integration Alcatel-Lucent Disc REL-13 LTE_WLAN_radio
related to RP-151004
discussion: Deutsche Telekom: offline discussions were not announced, 0.5TU is completely inappropriate time allocation
Broadcom: there is no flow control between S-GW and eNB and it works fine, so does not see a problem
Qualcomm: concerned about bypassing PDCP
AT&T: likes the proposal
Vodafone: shares view with Deutsche Telekom and Qualcomm; adding full architecture in 0.5TU is not realistic
Blackberry: does not consider that this has a big impact, 0.5TU is realistic
Microsoft: we could turn it back in a SI
LG: concerns about all 3 bullets, adding new option, 2a of Dual Connectivity was excluded, 0.5TU is not realistic
CATT: also some concerns but does not object, sees some security problems
Huawei: wondering about "can be done without standardization"
Broadcom: did not say this, that's why we have a proposal here
AT&T: we do not want touch legacy APs
Deutsche Telekom: we could have a SI as Microsoft said
Orange: does not agree with Deutsche Telekom
Sprint: supports AT&T that this is needed
RAN chair: suggests to have a separate WI for this
T-Mobile: as long as the additional WI is approved we would be fine
RAN chair: we could approve it at RAN #69 giving people some more time to discuss it
Deutsche Telekom: it is important to support legacy APs and the discussion is strange as it is claimed that this is the only solution, this is not true
Broadcom: this discussion started from RAN2 discussion and enough support was shown there, we show the benefits for one year, what extra information is needed?
Verizon: we decided for Sep. to not approve a new WIs
RAN chair: SIs going for a WI will be considered and we could put this "new WI" in the same class

Samsung Exhibit 1025, Page 1847 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Vodafone: we need to clarify in Sep. how this solution improves the situation compared the solutions we have already
ALU: we do not have a solution, explained this offline
DT: aggregation point is in RAN but there are solutions outside of RAN
RAN chair: it is clarified that we need a RAN level aggregation here for legacy APs
LG: how can you start with a WI without having this studied?
ALU: we just need to provide one IP address
Qualcomm: we want to understand better the requirements and may come up with another solution
Broadcom: topic was studied for a year
NTT DOCOMO: all data is delivered to Wifi so where is the agggregation?
conclusion: noted, plan is to approve a new WI for RAN level aggregation with legacy APs for this at RAN #69

RP-150824 Revised WID: LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation
WID (rev) RAN2 REL-13 LTE_WLAN_radio
last approved WID: RP-150510; note: This revised WID is increasing the scope of the WI to also cover WI aspects of the SI FS_MultiRAT_JC (which would otherwise cause overlapping WIs);
conclusion: revised in RP-150976

RP-150976 Revised WID: LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation
WID rev RAN2 REL-13 LTE_WLAN_radio
discussion: Ericsson: RAN3 objectives ares not so clear
RAN chair: can be updated offline
RAN3 chair: indicated before the meeting that we should not have more than 2TUs for RAN3
RAN chair: ok, will be updated
Broadcom: we have not concluded that parameters of SI are enough so may take longer
conclusion: revised in RP-151022

RP-151022 Revised WID: LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation
WID rev RAN2 REL-13 LTE_WLAN_radio
discussion: Broadcom: parameters that may be exchanged between WLAN and eNB: SI identified some parameters but they are not sufficient
RAN chair: if we remove "that were considered beneficial in TR 37.870 and"?
Broadcom: would be ok for us
Ericsson: looks as if RAN3 would redo the study
Nokia Networks: maybe there is a way in between, to not limit to TR 37.870 but to also not ignore the TR
Broadcom: IEEE has send us a table of parameters
Intel: we could say "e.g. TR, 37.870"
conclusion: revised in RP-151114

RP-151114 Revised WID: LTE-WLAN Radio Level Integration and Interworking Enhancement Intel Corporation
WID rev RAN2 REL-13 LTE_WLAN_radio
conclusion: approved

11.3.13 LTE DL 4 Rx antenna ports [**New WI:** LTE_4Rx_AP_DL]

RP-150803 Status Report for WI: LTE DL 4 Rx antenna ports, rapporteur: Ericsson RAN4 Report REL-13
LTE_4Rx_AP_DL
conclusion: noted, approved: Core: 25%, Dec.15; Perf.: 15%, June 16

RP-150757 Discussion on release applicability for TM3/4 with 3 and 4 layers Intel Corporation Disc REL-13
LTE_4Rx_AP_DL
conclusion: withdrawn

Samsung Exhibit 1025, Page 1848 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4 Open LTE only related WIs (spectrum and CA related)

NOTE: For the WIs under agenda item 11.4 no separate status reports per WI will be provided but a Tdoc will be submitted to agenda item 11.4 by RAN4 with a collection of all % complete and target dates for each WI.

RP-150536 Status Report of RAN4 CA WIs RAN4 chairman (Nokia Networks) Report - -
discussion: MCC: Instead of separate SRs for each CA WI, RAN4 provides a single spreadsheet for REL-13 CA WIs tracking completion level, target date and any other essential information.
conclusion: noted, % complete and target dates are approved as in RP-150013 unless modified in the table below in red

RAN #68 agenda	UID	Acronym	REL	target after RAN #68	% complete	rapporteur	Open issues / Other notes
11.4.1.01	650141	LTE_CA_B1_B40-Core	REL-13	Dec. 15	70	KT	Identified this combo requires MSD in RAN4 #75; note: % complete was 80% at RAN #67 and reduced due to scope extension (unfortunately no WID update was provided)
11.4.1.01	650241	LTE_CA_B1_B40-Perf	REL-13	Dec. 15	70	KT	Identified this combo requires MSD in RAN4 #75; note: % complete was 80% at RAN #67 and reduced due to scope extension (unfortunately no WID update was provided)
11.4.1.02	650138	LTE_CA_B2_B28-Core	REL-13	June 15	100	Huawei	Implemented through agreed "big CRs" R4-153932 for TS 36.101 and R4-153757 for TS 36.104 in RAN4#75.
11.4.1.02	650238	LTE_CA_B2_B28-Perf	REL-13	June 15	100	Huawei	Implemented through agreed "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and R4-153758 for TS 36.141 in RAN4#75.
11.4.1.03	670164	LTE_CA_B3_B5_BWset-Core	REL-13	June 15	100	Samsung	UE CR 36.101 R4-153932 (big CR)
11.4.1.03	670264	LTE_CA_B3_B5_BWset-Perf	REL-13	June 15	100	Samsung	Release independent CR Rel-10 R4-153933 (big CR) Release independent CR Rel-11 R4-153934 (big CR) Release independent CR Rel-12 R4-153935 (big CR) Release independent CR Rel-13 R4-153936 (big CR)
11.4.1.04	650144	LTE_CA_B3_B31-Core	REL-13	June 15	100	Huawei	Agreed CRs: R4-153932,R4-153757
11.4.1.04	650244	LTE_CA_B3_B31-Perf	REL-13	June 15	100	Huawei	Agreed CRs: R4-153758, R4-153933, R4-153934, R4-153935, R4-153936
11.4.1.05	650137	LTE_CA_B3_B38-Core	REL-13	June 15	100	Nokia Networks	TS 36.101 CR agreed in R4-153932. TS 36.104 CR agreed in R4-153757.
11.4.1.05	650237	LTE_CA_B3_B38-Perf	REL-13	June 15	100	Nokia Networks	TS 36.307 CRs agreed in R4-153935 and R4-153936. TS 36.141 CR agreed in R4-153758.
11.4.1.06	650142	LTE_CA_B3_B40-Core	REL-13	June 15	100	KT	Company CR will be submitted in RAN68 (RP-150668, RP-150669,RP-150670,RP-150671,RP-150672)
11.4.1.06	650242	LTE_CA_B3_B40-Perf	REL-13	June 15	100	KT	Company CR will be submitted in RAN68 (RP-150668, RP-150669,RP-150670,RP-150671,RP-150672)
11.4.1.07	660182	LTE_CA_B3_B41-Core	REL-13	Sep. 15	65	China Telecom	Partial relaxation values and CRs
11.4.1.07	660282	LTE_CA_B3_B41-Perf	REL-13	Sep. 15	65	China Telecom	UE release independence CRs.
11.4.1.08	650139	LTE_CA_B4_B28-Core	REL-13	June 15	100	Huawei	Implemented through agreed "big CRs" R4-153932 for TS 36.101 and R4-153757 for TS 36.104 in RAN4#75.
11.4.1.08	650239	LTE_CA_B4_B28-Perf	REL-13	June 15	100	Huawei	Implemented through agreed "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and R4-153758 for TS 36.141 in RAN4#75.

Samsung Exhibit 1025, Page 1849 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #68 agenda	UID	Acronym	REL	target after RAN #68	% complete	rapporteur	Open issues / Other notes
11.4.1.09	670163	LTE_CA_B5_B7_BWset-Core	REL-13	June 15	100	Nokia Networks	TS36.101 CR in R4-153932 is agreed in RAN4 (within big CRs.) All issues are closed and included in TR36.852-13 (approved TP R4-151282). WID revision (RP-150602) is proposed in RAN#68 to change the affected spec, TR36.852-13, from the new spec to the exiting spec, which is a core part of the WI.
11.4.1.09	670263	LTE_CA_B5_B7_BWset-Perf	REL-13	June 15	100	Nokia Networks	TS36.307 Release independence CRs, R4-153933, R4-153934, R4-153935 and R4-153936 are agreed in RAN4 for Rel-10/11/12/13 (within big CRs).
11.4.1.10	650145	LTE_CA_B5_B40-Core	REL-13	June 15	100	SK Telecom	TS 36.101 CR agreed in R4-153932; TS 36.104 CR agreed in R4-153737
11.4.1.10	650245	LTE_CA_B5_B40-Perf	REL-13	June 15	100	SK Telecom	TS 36.307 CRs agreed in R4-153935, R4-153936; TS 36.141 CR agreed in R4-153758
11.4.1.11	630133	LTE_CA_B7_B22-Core	REL-13	June 15	100	Ericsson	The band combination was implemented in the approved "big CRs" R4-153932 and R4-153757 for TS 36.101 and TS 36.104, respectively at RAN4#75.
11.4.1.11	630233	LTE_CA_B7_B22-Perf	REL-13	June 15	100	Ericsson	The band combination was implemented in in the approved "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and in R4-153758 for TS 36.141 at RAN4#75.
11.4.1.12	620123	LTE_CA_B8_B27-Core	REL-13	Dec. 15	30	KT	Need better insertion loss conitribution
11.4.1.12	620223	LTE_CA_B8_B27-Perf	REL-13	Dec. 15	30	KT	Need better insertion loss conitribution
11.4.1.13	650143	LTE_CA_B20_B31-Core	REL-13	June 15	100	Huawei	Agreed CRs: R4-153932,R4-153757
11.4.1.13	650243	LTE_CA_B20_B31-Perf	REL-13	June 15	100	Huawei	Agreed CRs: R4-153758, R4-153933, R4-153934, R4-153935, R4-153936
11.4.1.14	650140	LTE_CA_B20_B40-Core	REL-13	Sep. 15	70	Ericsson	MSD for low band has not been decided yet. This is one of the combinations with harmonic mixing problem. The plan is that, CRs will be submitted to RAN#69 provided that we can complete the work by RAN4#76.
11.4.1.14	650240	LTE_CA_B20_B40-Perf	REL-13	Sep. 15	70	Ericsson	CRs will be submitted to RAN#69
11.4.1.15	660181	LTE_CA_B25_B26-Core	REL-13	June 15	100	Sprint	TS 36.101 CR agreed in R4-153932; TS 36.104 CR agreed in R4-153757
11.4.1.15	660281	LTE_CA_B25_B26-Perf	REL-13	June 15	100	Sprint	TS 36.307 CRs agreed in R4-153933, R4-153934, R4-153935, R4-153936; TS 36.141 CR agreed in R4-153758
11.4.2.01	660183	LTE_CA_B1_B3_B3-Core	REL-13	Sep. 15	90	China Unicom	CRs for TS 36.101, TS 36.104, TS 36.133 need to be finalized
11.4.2.01	660283	LTE_CA_B1_B3_B3-Perf	REL-13	Sep. 15	90	China Unicom	Release Independence CRs need to be finalized
11.4.2.02	661100	LTE_CA_B1_B3_B7-Core	REL-13	Sep. 15	40	Huawei	Relaxation Values on REFSENS and Relevant CRs
11.4.2.02	661200	LTE_CA_B1_B3_B7-Perf	REL-13	Sep. 15	0	Huawei	Release Independence CRs
11.4.2.03	660194	LTE_CA_B1_B3_B28-Core	REL-13	June 15	100	Nokia Networks	TS 36.101 CR agreed in R4-153785. TS 36.104 CR agreed in R4-153790. CR to 36.133 not needed.
11.4.2.03	660294	LTE_CA_B1_B3_B28-Perf	REL-13	June 15	100	Nokia Networks	TS 36.307 CRs agreed in R4-153786, R4-153787, R4-153788, R4-153789. TS 36.141 CR agreed in R4-153791.
11.4.2.04	660190	LTE_CA_B1_B3_B40-Core	REL-13	Dec. 15	60	KT	Sub CA WI completetion is required (1+40)
11.4.2.04	660290	LTE_CA_B1_B3_B40-Perf	REL-13	Dec. 15	60	KT	Sub CA WI completetion is required (1+40)
11.4.2.05	670165	LTE_CA_B1_B3_B42-Core	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.

Samsung Exhibit 1025, Page 1850 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #68 agenda	UID	Acronym	REL	target after RAN #68	% complete	rapporteur	Open issues / Other notes
11.4.2.05	670265	LTE_CA_B1_B3_B42-Perf	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.
11.4.2.06	660199	LTE_CA_B1_B7_B28-Core	REL-13	June 15	100	Huawei	Agreed CRs: R4-153785, , R4-153790
11.4.2.06	660299	LTE_CA_B1_B7_B28-Perf	REL-13	June 15	100	Huawei	Agreed CRs: R4-153786, R4-153787, R4-153788, R4-153789, R4-153791
11.4.2.07	660187	LTE_CA_B1_B8_B28-Core	REL-13	Sep. 15	40	Softbank Mobile	Actual Relaxation Values and Relevant CRs
11.4.2.07	660287	LTE_CA_B1_B8_B28-Perf	REL-13	Sep. 15	40	Softbank Mobile	Release indpendent CRs
11.4.2.08	660191	LTE_CA_B1_B8_B40-Core	REL-13	Dec. 15	60	KT	Sub CA WI completetion is required (1+40)
11.4.2.08	660291	LTE_CA_B1_B8_B40-Perf	REL-13	Dec. 15	60	KT	Sub CA WI completetion is required (1+40)
11.4.2.09	660184	LTE_CA_B1_B19_B28-Core	REL-13	Sep. 15	90	NTT DOCOMO	For CA_19A-28A, there are no technical open issues. The corresponding CRs for TS 36.101 and TS 36.104 need to be agreed. △TIB, △RIB values and how to specify the MSD requirement were agreed in the TP (R4-153792), For CA_1A-19A-28A, how to specify the MSD requirement (especially, for fallback mode of CA_1A-28A) needs to be clarified and the corresponding CRs for TS 36.101 and TS 36.104 need to be agreed. △TIB, △RIB values were agreed without assumption of harmonic trap filter in the TP (R4-152833).
11.4.2.09	660284	LTE_CA_B1_B19_B28-Perf	REL-13	Sep. 15	0	NTT DOCOMO	CRs for TS 36.141 and TS 36.307 need to be agreed.
11.4.2.10	670166	LTE_CA_B1_B19_B42-Core	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.
11.4.2.10	670266	LTE_CA_B1_B19_B42-Perf	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.
11.4.2.11	670167	LTE_CA_B1_B21_B42-Core	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.
11.4.2.11	670267	LTE_CA_B1_B21_B42-Perf	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.
11.4.2.12	640122	LTE_CA_B2_B2_B12-Core	REL-13	June 15	100	U.S. Cellular	With the inclusion of this CA combination in the "Big CR" R4-153785, this CA combination has been introduced into the specifications.
11.4.2.12	640222	LTE_CA_B2_B2_B12-Perf	REL-13	June 15	100	U.S. Cellular	With the inclusion of this CA combination in the "Big CR" R4-153785, this CA combination has been introduced into the specifications.
11.4.2.13	670173	LTE_CA_B2_B4_B7-Core	REL-13	Dec. 15	0	Rogers Communications	
11.4.2.13	670273	LTE_CA_B2_B4_B7-Perf	REL-13	Dec. 15	0	Rogers Communications	
11.4.2.14	650153	LTE_CA_B2_B5_B29-Core	REL-13	June 15	100	Huawei	COMPLETE. Agreed CRs: R4-153785, R4-153786, R4-153787, R4-153788, R4-153789, R4-153790, R4-153791
11.4.2.14	650253	LTE_CA_B2_B5_B29-Perf	REL-13	June 15	100	Huawei	COMPLETE. Agreed CRs: R4-153785, R4-153786, R4-153787, R4-153788, R4-153789, R4-153790, R4-153791
11.4.2.15	670172	LTE_CA_B2_B7_B12-Core	REL-13	Dec. 15	0	Rogers Communications	
11.4.2.15	670272	LTE_CA_B2_B7_B12-Perf	REL-13	Dec. 15	0	Rogers Communications	

Samsung Exhibit 1025, Page 1851 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #68 agenda	UID	Acronym	REL	target after RAN #68	% complete	rapporteur	Open issues / Other notes
11.4.2.16	661101	LTE_CA_B3_B3_B5-Core	REL-13	June 15	100	Intel	The WI is completed with agreed 36.101 CR R4-153785 (big CR)
11.4.2.16	661201	LTE_CA_B3_B3_B5-Perf	REL-13	June 15	100	Intel	The WI is completed with agreed big CR R4-153786 (Rel-10) R4-153787 (Rel-11) R4-153788 (Rel-12) R4-153789 (Rel-13)
11.4.2.17	640125	LTE_CA_B3_B3_B8-Core	REL-13	June 15	100	CHTTL	TS 36.101 CR agreed in R4-153785. TS 36.104 CR agreed in R4-153790. CR to 36.133 not needed.
11.4.2.17	640225	LTE_CA_B3_B3_B8-Perf	REL-13	June 15	100	CHTTL	TS 36.307 CRs agreed in R4-153787, R4-153788, R4-153789. TS 36.141 CR agreed in R4-153791.
11.4.2.18	660188	LTE_CA_B3_B7_B7_BWset-Core	REL-13	June 15	100	Ericsson	The band combination was implemented in the approved "big CRs" R4-153932 and R4-153757 for TS 36.101 and TS 36.104, respectively at RAN4#75.
11.4.2.18	660288	LTE_CA_B3_B7_B7_BWset-Perf	REL-13	June 15	100	Ericsson	The band combination was implemented in in the approved "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and in R4-153758 for TS 36.141 at RAN4#75.
11.4.2.19	660193	LTE_CA_B3_B7_B8-Core	REL-13	June 15	100	Ericsson	The WI is completed: the band combination is included in CRs to 36.101 (R4-153785) and 36.104 (R4-153790).
11.4.2.19	660293	LTE_CA_B3_B7_B8-Perf	REL-13	June 15	100	Ericsson	The WI is completed: the band combination is included in CRs to 36.141 (R4-153791) and 36.307 (R4-153786).
11.4.2.20	661102	LTE_CA_B3_B7_B28-Core	REL-13	June 15	100	Ericsson	The band combination was implemented in the approved "big CRs" R4-153932 and R4-153757 for TS 36.101 and TS 36.104, respectively at RAN4#75.
11.4.2.20	661202	LTE_CA_B3_B7_B28-Perf	REL-13	June 15	100	Ericsson	The band combination was implemented in in the approved "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and in R4-153758 for TS 36.141 at RAN4#75.
11.4.2.21	620132	LTE_CA_B3_B8_B27-Core	REL-13	Dec. 15	25	KT	Sub CA WI completetion is required (8+27); note: % complete was 30% at RAN #67; rapporteur clarified after RAN #68 that 25% was a mistake (nevertheless this values is kept in the workplan after RAN #68)
11.4.2.21	620232	LTE_CA_B3_B8_B27-Perf	REL-13	Dec. 15	25	KT	Sub CA WI completetion is required (8+27); note: % complete was 30% at RAN #67; rapporteur clarified after RAN #68 that 25% was a mistake (nevertheless this values is kept in the workplan after RAN #68)
11.4.2.22	660195	LTE_CA_B3_B8_B28-Core	REL-13	Sep. 15	40	Softbank Mobile	Actual Relaxation Values and Relevant CRs
11.4.2.22	660295	LTE_CA_B3_B8_B28-Perf	REL-13	Sep. 15	40	Softbank Mobile	Release indpendent CRs
11.4.2.23	660192	LTE_CA_B3_B8_B40-Core	REL-13	Dec. 15	60	KT	sub CA WI completetion is required (3+40)
11.4.2.23	660292	LTE_CA_B3_B8_B40-Perf	REL-13	Dec. 15	60	KT	Sub CA WI completetion is required (3+40)
11.4.2.24	670168	LTE_CA_B3_B19_B42-Core	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.
11.4.2.24	670268	LTE_CA_B3_B19_B42-Perf	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.

Samsung Exhibit 1025, Page 1852 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #68 agenda	UID	Acronym	REL	target after RAN #68	% complete	rapporteur	Open issues / Other notes
11.4.2.25	660198	LTE_CA_B3_B40_B40-Core	REL-13	June 15	100	Huawei	Company CRs will be submitted in RAN#68 (RP-150673, RP-150674, RP-150675)
11.4.2.25	660298	LTE_CA_B3_B40_B40-Perf	REL-13	June 15	100	Huawei	
11.4.2.26	670170	LTE_CA_B4_B4_B7_BWset-Core	REL-13	Dec. 15	0	Rogers Communications	
11.4.2.26	670270	LTE_CA_B4_B4_B7_BWset-Perf	REL-13	Dec. 15	0	Rogers Communications	
11.4.2.27	670171	LTE_CA_B4_B7_B12_BWset-Core	REL-13	Dec. 15	0	Rogers Communications	
11.4.2.27	670271	LTE_CA_B4_B7_B12_BWset-Perf	REL-13	Dec. 15	0	Rogers Communications	
11.4.2.28	660189	LTE_CA_B7_B7_B28-Core	REL-13	June 15	100	Ericsson	The band combination was implemented in the approved "big CRs" R4-153932 and R4-153757 for TS 36.101 and TS 36.104, respectively at RAN4#75.
11.4.2.28	660289	LTE_CA_B7_B7_B28-Perf	REL-13	June 15	100	Ericsson	The band combination was implemented in in the approved "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and in R4-153758 for TS 36.141 at RAN4#75.
11.4.2.29	670174	LTE_CA_B7_B20_B38-Core	REL-13	Dec. 15	30	Nokia Networks	TPs to 2DL and 3DL TRs agreed. Agreement on UE requirements missing.
11.4.2.29	670274	LTE_CA_B7_B20_B38-Perf	REL-13	Dec. 15	30	Nokia Networks	TPs to 2DL and 3DL TRs agreed. Agreement on UE requirements missing.
11.4.2.30	660186	LTE_CA_B7_B40_B40-Core	REL-13	Sep. 15	75	ZTE	MSD analysis， CR for TS36.101 (REFSENS) CR for TS36.104 (No technical issues)
11.4.2.30	660286	LTE_CA_B7_B40_B40-Perf	REL-13	Sep. 15	75	ZTE	CR for TS36.307/TS36.141 (No technical issues)
11.4.2.31	650149	LTE_CA_B8_B41_B41-Core	REL-13	June 15	100	CMCC	36.101 (R4-153785) 36.307 (R4-153786…-3789) 36.104 and 36.141 (R4-153790, -3791)
11.4.2.31	650249	LTE_CA_B8_B41_B41-Perf	REL-13	June 15	100	CMCC	36.101 (R4-153785) 36.307 (R4-153786…-3789) 36.104 and 36.141 (R4-153790, -3791)
11.4.2.32	660196	LTE_CA_B8_B42_B42-Core	REL-13	Sep. 15	40	Softbank Mobile	Actual Relaxation Values and Relevant CRs
11.4.2.32	660296	LTE_CA_B8_B42_B42-Perf	REL-13	Sep. 15	40	Softbank Mobile	Release indpendent CRs
11.4.2.33	670169	LTE_CA_B19_B21_B42-Core	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.
11.4.2.33	670269	LTE_CA_B19_B21_B42-Perf	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.
11.4.2.34	660185	LTE_CA_B21_B42_B42-Core	REL-13	June 15	100	NTT DOCOMO	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.
11.4.2.34	660285	LTE_CA_B21_B42_B42-Perf	REL-13	June 15	100	NTT DOCOMO	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.
11.4.2.35	660197	LTE_CA_B28_B40_B40-Core	REL-13	Dec. 15	60	Huawei	MSD for CA_28A-40A/CA_28A-40C, revised WID (RP-150676) will be submittted to RAN#68 to extend the WI to Dec., 2015.
11.4.2.35	660297	LTE_CA_B28_B40_B40-Perf	REL-13	Dec. 15	0	Huawei	
11.4.2.36	650151	LTE_CA_B38_B40_B40-Core	REL-13	June 15	100	Samsung	UE CR 36.101 R4-153785 (big CR) BS CR 36.104 R4-153790 (big CR) BS CR 36.141 R4-153791 (big CR)

Samsung Exhibit 1025, Page 1853 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #68 agenda	UID	Acronym	REL	target after RAN #68	% complete	rapporteur	Open issues / Other notes
11.4.2.36	650251	LTE_CA_B38_B40_B40-Perf	REL-13	June 15	100	Samsung	Release independent CR Rel-10 R4-153786 (big CR) Release independent CR Rel-11 R4-153787 (big CR) Release independent CR Rel-12 R4-153788 (big CR) Release independent CR Rel-13 R4-153789 (big CR)
11.4.2.37	640132	LTE_CA_B41_B42_B42-Core	REL-13	June 15	100	Huawei	Agreed CR for TS 36.101: R4-153785
11.4.2.37	640232	LTE_CA_B41_B42_B42-Perf	REL-13	June 15	100	Huawei	Agreed CRs for TS 36.307: R4-153786, R4-153787, R4-153788, R4-153789
11.4.3.01	670178	LTE_CA_B1_B3_B5_B40-Core	REL-13	Sep. 15	30	SK Telecom	Relaxation values for 4DL are open. MSD analysis is open. 3DL fallback modes are open also.
11.4.3.01	670278	LTE_CA_B1_B3_B5_B40-Perf	REL-13	Sep. 15	0	SK Telecom	
11.4.3.02	670179	LTE_CA_B1_B3_B7_B8-Core	REL-13	Dec. 15	40	Nokia Networks	Relaxation values for 4DL are open. MSD analysis is open. 3DL fallback modes are completed and included in TR 36.853-13.
11.4.3.02	670279	LTE_CA_B1_B3_B7_B8-Perf	REL-13	Dec. 15	0	Nokia Networks	UE release independence is to be specified.
11.4.3.03	670177	LTE_CA_B2_B2_B4_B4-Core	REL-13	Dec. 15	95	Nokia Corporation	BS CR 36.104 R4-152732 BS CR 36.141 R4-152733 UE CR 36.101 R4-153921. RRM open
11.4.3.03	670277	LTE_CA_B2_B2_B4_B4-Perf	REL-13	Dec. 15	95	Nokia Corporation	Release independence REL-11 CR R4-153796 Release independence REL-12 CR R4-153797 Release independence REL-13 CR R4-153798. RRM open
11.4.3.04	670176	LTE_CA_B2_B2_B4_B12-Core	REL-13	Dec. 15	95	Nokia Corporation	BS CR 36.104 R4-152732 BS CR 36.141 R4-152733 UE CR 36.101 R4-153921. RRM open
11.4.3.04	670276	LTE_CA_B2_B2_B4_B12-Perf	REL-13	Dec. 15	95	Nokia Corporation	Release independence REL-11 CR R4-153796 Release independence REL-12 CR R4-153797 Release independence REL-13 CR R4-153798. RRM open
11.4.3.05	661104	LTE_CA_B2_B2_B5_B30-Core	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.05	661204	LTE_CA_B2_B2_B5_B30-Perf	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.06	661103	LTE_CA_B2_B2_B12_B30-Core	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.06	661203	LTE_CA_B2_B2_B12_B30-Perf	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.07	661105	LTE_CA_B2_B2_B29_B30-Core	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.07	661205	LTE_CA_B2_B2_B29_B30-Perf	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.08	670175	LTE_CA_B2_B4_B4_B12-Core	REL-13	Dec. 15	95	Nokia Corporation	BS CR 36.104 R4-152732 BS CR 36.141 R4-152733 UE CR 36.101 R4-153921. RRM open
11.4.3.08	670275	LTE_CA_B2_B4_B4_B12-Perf	REL-13	Dec. 15	95	Nokia Corporation	Release independence REL-11 CR R4-153796 Release independence REL-12 CR R4-153797 Release independence REL-13 CR R4-153798. RRM open
11.4.3.09	670180	LTE_CA_B2_B4_B5_B29-Core	REL-13	Dec. 15	50	Huawei	UE RF requriements for CA_2A-4A-5A-29A
11.4.3.09	670280	LTE_CA_B2_B4_B5_B29-Perf	REL-13	Dec. 15	0	Huawei	
11.4.3.10	661107	LTE_CA_B2_B4_B5_B30-Core	REL-13	Dec. 15	95	AT&T	Input missing

Samsung Exhibit 1025, Page 1854 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #68 agenda	UID	Acronym	REL	target after RAN #68	% complete	rapporteur	Open issues / Other notes
11.4.3.10	661207	LTE_CA_B2_B4_B5_B30-Perf	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.11	661106	LTE_CA_B2_B4_B12_B30-Core	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.11	661206	LTE_CA_B2_B4_B12_B30-Perf	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.12	661108	LTE_CA_B2_B4_B29_B30-Core	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.12	661208	LTE_CA_B2_B4_B29_B30-Perf	REL-13	Dec. 15	95	AT&T	Input missing
11.4.3.13	661109	LTE_CA_B25_B41_B41_B41-Core	REL-13	Sep. 15	90	Alcatel-Lucent	TS 36.101 CR agreed in R4-153921; TS 36.104 CR agreed in R4-152732; TS 36.133 CRs agreed in R4-152980, R4-153683. Some RRM requirements to be finalized.
11.4.3.13	661209	LTE_CA_B25_B41_B41_B41-Perf	REL-13	Dec. 15	75	Alcatel-Lucent	TS 36.307 CRs agreed in R4-153796, R4-153797, R4-153798; TS 36.141 CR agreed in R4-152733; RRM tests to be specified.
11.4.4.1	661110	LTE_CA_2UL_R13-A1-Core	REL-13	Dec. 15	60	Huawei	Harmonic and intermodulation study; Delta Tib and Rib values; CRs for RAN4 spec
11.4.4.1	661210	LTE_CA_2UL_R13-A1-Perf	REL-13	Dec. 15	60	Huawei	CRs for RAN4 spec and Release indpendent CRs
11.4.4.2	661111	LTE_CA_2UL_R13-A2-Core	REL-13	Dec. 15	50	Qualcomm	Core specifications for CA_1A-28A combination have already been endorsed. The work item is held open at 50% completion to allow for the addition of new 2UL A2 combinations in the Rel-13 timeframe.
11.4.4.2	661211	LTE_CA_2UL_R13-A2-Perf	REL-13	Dec. 15	50	Qualcomm	Release independent specifications for CA_1A-28A combination have already been endorsed. The work item is held open at 50% completion level to allow for the addition of new 2UL A2 combinations in the Rel-13 timeframe.
11.4.4.3	661112	LTE_CA_2UL_R13-A3-Core	REL-13	Dec. 15	50	Ericsson	CA_18A-28A (only combination in WID after RAN#67) completed and included in agreed CR to 36.101 (R4-153755). Completion level still set at 50% anticipating that additional band combinations will be proposed for Rel-13. Open issue: GNSS protection.
11.4.4.3	661212	LTE_CA_2UL_R13-A3-Perf	REL-13	Dec. 15	50	Ericsson	CA_18A-28A (only combination in WID after RAN#67) completed and included in agreed CR (R4-153266). Completion level still set at 50% anticipating that additional band combinations will be proposed for Rel-13.
11.4.4.4	670182	LTE_CA_2UL_R13-A4-Core	REL-13	Dec. 15	25	Nokia Corporation	CA_1A-26A does not need MSD specifications as no impact to operators spectrum blocks. MSD for CA_3A-5A and CA_4A-5A open.
11.4.4.4	670282	LTE_CA_2UL_R13-A4-Perf	REL-13	Dec. 15	25	Nokia Corporation	Release independence open.
11.4.4.5	670181	LTE_CA_2UL_FDD_TDD-Core	REL-13	Dec. 15	70	KDDI	CR approval
11.4.4.5	670281	LTE_CA_2UL_FDD_TDD-Perf	REL-13	Dec. 15	0	KDDI	CR approval
11.4.4.6	670183	LTE_CA_3DL_2UL-Core	REL-13	March 16 => Dec.15	25	Nokia Corporation	MSD values not agreed for combinations with IMD issues. Agreement for mandatory support of 2 UL combinations R4-153931. CR for cases without IMD issues endorsed for 36.101 R4-153781
11.4.4.6	670283	LTE_CA_3DL_2UL-Perf	REL-13	March 16	25	Nokia Corporation	UE release independence is to be specified.
11.4.5.1	670185	LTE_CA_C_B8-Core	REL-13	Sep. 15	60	CMCC	MPR Spurious emission UE to UE co-existence CR

Samsung Exhibit 1025, Page 1855 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN #68 agenda	UID	Acronym	REL	target after RAN #68	% complete	rapporteur	Open issues / Other notes
11.4.5.1	670285	LTE_CA_C_B8-Perf	REL-13	Sep. 15	0	CMCC	CR
11.4.6.1	650147	LTE_CA_C_B42_3DL-Core	REL-13	June 15	100	CATT	Technically endorsed CRs in R4-151183. it will be presented as a company CR for Approval in RAN#68. RP-150646, RP-150647, RP-150648, RP-150649
11.4.6.1	650247	LTE_CA_C_B42_3DL-Perf	REL-13	June 15	100	CATT	Technically endorsed CRs in R4-151184/85/86. They will be presented as company CRs for Approval in RAN#68. RP-150646, RP-150647, RP-150648, RP-150649
11.4.7.1	670184	LTE_CA_NC_B42_3DL-Core	REL-13	June 15	100	Huawei	Agreed CRs: R4-153748
11.4.7.1	670284	LTE_CA_NC_B42_3DL-Perf	REL-13	June 15	100	Huawei	Agreed CRs: R4-153317, R4-153318, R4-153319
11.4.8.1	670186	LTE_CA_C_B42_4DL-Core	REL-13	Dec. 15	50	CATT	UE receiver RF requirements supporting 4DL CC.
11.4.8.1	670286	LTE_CA_C_B42_4DL-Perf	REL-13	Dec. 15	50	CATT	No UE performance requirements specific to this band combination.
11.4.9.1	661113	LTE_CA_NC_B41_4DL-Core	REL-13	Dec. 15	50	Alcatel-Lucent	TS 36.133 CRs agreed in R4-152980, R4-153683; UE RF requirements to be specified.
11.4.9.1	661213	LTE_CA_NC_B41_4DL-Perf	REL-13	Dec. 15	25	Alcatel-Lucent	UE release independent requirements and RRM test to be specified.

11.4.1 Inter-band CA related WIs (2DL/1UL)

RP-150968 CRs to Inter-band 2DL CA related Wis RAN4 CRset REL-13 LTE_CA_B1_B40-Core, LTE_CA_B2_B28-Core, LTE_CA_B3_B5_BWset-Core, LTE_CA_B3_B31-Core, LTE_CA_B3_B38-Core, LTE_CA_B4_B28-Core, LTE_CA_B5_B7_BWset-Core, LTE_CA_B5_B40-Core, LTE_CA_B7_B22-Core, LTE_CA_B20_B31-Core, LTE_CA_B25_B26-Core, LTE_CA_B1_B40-Perf, LTE_CA_B2_B28-Perf, LTE_CA_B3_B31-Perf, LTE_CA_B3_B38-Perf, LTE_CA_B3_B40-Perf, LTE_CA_B4_B28-Perf, LTE_CA_B5_B40-Perf, LTE_CA_B7_B22-Perf, LTE_CA_B20_B31-Perf, LTE_CA_B25_B26-Perf, LTE_CA_B1_B40-Core, LTE_CA_B5_B40- Perf, LTE_CA_B3_B38- Perf, LTE_CA_B3_B31- Perf, LTE_CA_B39_B41_B41-Perf, LTE_CA_B39_B39_B41-Perf
note: Includes CRs to 36.101, 36.104, 36.133, 36.141 and 36.307 (from REL-10 onwards).
note: Packing error: CRs R4-152392 and R4-153833 for LTE_CA_B39_B41_B41-Perf (REL-12 WI completed in Dec.14) and LTE_CA_B39_B39_B41-Perf (REL-12 WI completed in Dec.14) should have been packed into RP-150958.
conclusion: approved

11.4.1.1 LTE Advanced inter-band CA of Band 1 and Band 40 [LTE_CA_B1_B40]

No contributions

11.4.1.2 LTE Advanced inter-band CA of Band 2 and Band 28 [LTE_CA_B2_B28]

11.4.1.02	650138	LTE_CA_B2_B28-Core	REL-13	June 15	100	Huawei	Implemented through agreed "big CRs" R4-153932 for TS 36.101 and R4-153757 for TS 36.104 in RAN4#75.
11.4.1.02	650238	LTE_CA_B2_B28-Perf	REL-13	June 15	100	Huawei	Implemented through agreed "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and R4-153758 for TS 36.141 in RAN4#75.

No contributions (see RP-150968).

Core part WI and Perf. part WI completed

11.4.1.3 Additional bandwidth combination set for LTE Advanced inter-band CA of Band 3 and Band 5 [**New WI:** LTE_CA_B3_B5_BWset]

11.4.1.03	670164	LTE_CA_B3_B5_BWset-Core	REL-13	June 15	100	Samsung	UE CR 36.101 R4-153932 (big CR)
11.4.1.03	670264	LTE_CA_B3_B5_BWset-Perf	REL-13	June 15	100	Samsung	Release independent CR Rel-10 R4-153933 (big CR) Release independent CR Rel-11 R4-153934 (big CR)

Samsung Exhibit 1025, Page 1856 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

							Release independent CR Rel-12 R4-153935 (big CR) Release independent CR Rel-13 R4-153936 (big CR)

No contributions (see RP-150968)

Core part WI and Perf. part WI completed

11.4.1.4 LTE Advanced inter-band CA of Band 3 and Band 31 [LTE_CA_B3_B31]

11.4.1.04	650144	LTE_CA_B3_B31-Core	REL-13	June 15	100	Huawei	Agreed CRs: R4-153932,R4-153757
11.4.1.04	650244	LTE_CA_B3_B31-Perf	REL-13	June 15	100	Huawei	Agreed CRs: R4-153758, R4-153933, R4-153934, R4-153935, R4-153936

(see RP-150968)

RP-150969 CRs to LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 31 RAN4 CR36.1332893 - F REL-13 LTE_CA_B3_B31-Core
conclusion: approved

Core part WI and Perf. part WI completed

11.4.1.5 LTE Advanced inter-band CA of Band 3 and Band 38 [LTE_CA_B3_B38]

11.4.1.05	650137	LTE_CA_B3_B38-Core	REL-13	June 15	100	Nokia Networks	TS 36.101 CR agreed in R4-153932. TS 36.104 CR agreed in R4-153757.
11.4.1.05	650237	LTE_CA_B3_B38-Perf	REL-13	June 15	100	Nokia Networks	TS 36.307 CRs agreed in R4-153935 and R4-153936. TS 36.141 CR agreed in R4-153758.

(see RP-150968)

RP-150717 Revised WID: LTE Advanced Carrier Aggregation of Band 3 and Band 38 Nokia Networks WID rev RAN4 s (2DL/1UL) REL-13 LTE_CA_B3_B38
last approved WID: RP-141129
conclusion: approved

RP-150970 CRs to LTE Advanced inter-band Carrier Aggregation of Band 3 and Band 38 RAN4 CR36.852-12 0002 - F REL-13 LTE_CA_B3_B38-Core
conclusion: approved

Core part WI and Perf. part WI completed

11.4.1.6 LTE Advanced inter-band CA of Band 3 and Band 40 [LTE_CA_B3_B40]

11.4.1.06	650142	LTE_CA_B3_B40-Core	REL-13	June 15	100	KT	Company CR will be submitted in RAN68 (RP-150668, RP-150669,RP-150670,RP-150671,RP-150672)
11.4.1.06	650242	LTE_CA_B3_B40-Perf	REL-13	June 15	100	KT	Company CR will be submitted in RAN68 (RP-150668, RP-150669,RP-150670,RP-150671,RP-150672)

(see RP-150968)

RP-150668 Introduction of CA_3A-40A to TS 36.101 Huawei, HiSilicon, KT CR36.101 3021 - B REL-13 LTE_CA_B3_B40-Core
company contribution; as CA_3A-40A changes were removed from the big RAN4 CR (R4-152710) due to a lack of consensus about CA_3A-40A RF requirements (esp. MSD = maximum sensitivity degradation) the corresponding CA_3A-40A changes are presented here to RAN
discussion: TeliaSonera: comment to company CR set RP-150668 to RP-150672: In RAN4 there was a lot of discussion (without consensus) on how this should be calculated. We do not object to the values, but would like to add the following text to the "Reason for change" in the CRs: "The MSD is calculated with 10 dB antenna port isolation. In test equipment no such coupling exist and therefore the REFSENS is not tested accordingly to the calculation."
Huawei: working on a way forward

Samsung Exhibit 1025, Page 1857 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

RP-150977 Comments on B3+B40 Carrier Aggregation Qualcomm Incorporated Disc REL-13 LTE_CA_B3_B40-Core
in reply to company CR to 36.101 in RP-150668
conclusion: noted

RP-150669 Introduction of CA_3A-40A to TS 36.104 Huawei, HiSilicon, KT CR36.104 0664 - B REL-13 LTE_CA_B3_B40-Core
company contribution; as CA_3A-40A changes were removed from the big RAN4 CR (R4-152711) due to a lack of consensus about CA_3A-40A RF requirements (esp. MSD = maximum sensitivity degradation) the corresponding CA_3A-40A changes are presented here to RAN
conclusion: approved

RP-150670 Introduction of CA_3A-40A to TS 36.141 Huawei, HiSilicon, KT CR36.141 0744 - B REL-13 LTE_CA_B3_B40-Perf
company contribution; as CA_3A-40A changes were removed from the big RAN4 CR (R4-152712) due to a lack of consensus about CA_3A-40A RF requirements (esp. MSD = maximum sensitivity degradation) the corresponding CA_3A-40A changes are presented here to RAN
conclusion: approved

RP-150671 Introduction of CA_3A-40A to TS 36.307 R12 Huawei, HiSilicon, KT CR36.307 0510 - B REL-12 LTE_CA_B3_B40-Core
company contribution; as CA_3A-40A changes were removed from the big RAN4 CR (R4-152713) due to a lack of consensus about CA_3A-40A RF requirements (esp. MSD = maximum sensitivity degradation) the corresponding CA_3A-40A changes are presented here to RAN;
discussion: MCC: acc. to the WID RP-141674 the Core part has no impact on 36.307 just the Perf. part
conclusion: revised in RP-151067

RP-151067 Introduction of CA_3A-40A to TS 36.307 R12 Huawei, HiSilicon, KT CR36.307 0510 1 B REL-12 LTE_CA_B3_B40-Perf
conclusion: approved

RP-150672 Introduction of CA_3A-40A to TS 36.307 R13 Huawei, HiSilicon, KT CR36.307 0511 - B REL-13 LTE_CA_B3_B40-Core
company contribution; as CA_3A-40A changes were removed from the big RAN4 CR (R4-153750) due to a lack of consensus about CA_3A-40A RF requirements (esp. MSD = maximum sensitivity degradation) the corresponding CA_3A-40A changes are presented here to RAN;
discussion: MCC: acc. to the WID RP-141674 the Core part has no impact on 36.307 just the Perf. part
conclusion: revised in RP-151068

RP-151068 Introduction of CA_3A-40A to TS 36.307 R13 Huawei, HiSilicon, KT CR36.307 0511 1 B REL-13 LTE_CA_B3_B40-Perf
conclusion: approved

RP-150832 Revised WID: LTE-Advanced inter-band Carrier Aggregation of Band 3 and Band 40 Samsung WID rev RAN4 s (2DL/1UL) REL-13 LTE_CA_B3_B40
last approved WID: RP-141674; removing Bandwidth combination set 1 in the objective of core part
conclusion: approved

RP-151072 Way forward on CA bands 3+40 and MSD calculation for CA Huawei, HiSilicon, Qualcomm, Samsung, Nokia Networks, Ericsson, Intel Disc REL-13 LTE_CA_B3_B40
Way forward:
- *The current MSD values in the brackets that are captured in the submitted CR for CA B3+B40 at RAN#68 (RP-150668 and RP-150673) are accepted and the CRs are approved to close the two CA WIs*
- *Further inputs for CA B3+B40 at RAN4#76 will be taken into account in finalizing the MSD values*
- *RAN4 should study the "antenna coupling" /"antenna port coupling" which is needed for the MSD/REFSENS calculation and aim to resolve the MSD technical discrepancies before end of Release 13*
- *All the completed CA combinations with MSD issues are not affected by this study*
- *When the study concludes, how to apply the study conclusions to the CA combinations that are still open will be discussed and decided in RAN4*

conclusion: noted

Samsung Exhibit 1025, Page 1858 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151030 Way forward on MSD calculation for CA TeliaSonera Disc REL-13 LTE_CA_B3_B40
conclusion: revised in RP-151077

RP-151077 Way forward on MSD calculation for CA and CA_3A-40A/ CA_3A-40C TeliaSonera Disc REL-13 LTE_CA_B3_B40

Proposed way forward:

- *RAN4 shall study the "antenna coupling" /"antenna port coupling" which is needed for the MSD/REFSENS calculation. RAN4 is expected to resolve the MSD technical discrepancies before end of Release 13.*
- *Based on operator requests, the values of the completed CA combinations with MSD issues shall be revisited for Release 13 specifications, to align with the corrected MSD assumption once it is agreed.*
- *The MSD calculation for ongoing CA combinations with MSD problems shall be based on the corrected MSD assumption in Rel-13.*
- *The current MSD values in the brackets that are captured in the submitted CR for CA B3+B40 at RAN#68 (RP-150668 and RP-150673) are accepted and the CRs are approved to close the two CA Wis. Further inputs for CA B3+B40 at RAN4#76 will be taken into account in finalizing the MSD values.*

discussion: TeliaSonera: bullets 2 and 3 are the main differences to RP-151072
Qualcomm: will be a huge amount of work, will affect mobiles already on the market
TeliaSonera: we do not need to revisit all combinations, does not believe that there are mobiles on the market but a lot to come
Vodafone: supports TeliaSonera; see it as a correction
KT: happy that this WI will close as Australien operator is interested in this WI; as chipset has already been developed it is not a good idea to go back
Nokia Networks: agrees that we do not want to change all values but if there is a real problem we could address this in RAN4
Samsung: we should approve CRs first
Vodafone: we should not approve the CRs
RAN chair: why should we keep this WI as a hostage for a general issue?
Vodafone: we agreed some time ago that we should not bring company CRs on RAN4 CA aspects directly to RAN
Huawei: CRs were discussed at last RAN4 meeting, only Qualcomm wanted to check and they are fine now, Vodafone did not object; CRs are needed for an urgent operator deployment
TeliaSonera: we need support from RAN to address previous CA combinations as trying this just in RAN4 will not be possible
RAN chair: try to come up with a compromise proposal

conclusion: revised in RP-151103

RP-151103 Way forward on MSD calculation for CA and CA_3A-40A/ CA_3A-40C TeliaSonera Disc REL-13 LTE_CA_B3_B40

Proposed way forward:

- *RAN4 shall study the "antenna coupling" /"antenna port coupling" which is needed for the MSD/REFSENS calculation. RAN4 is expected to resolve the MSD technical discrepancies before end of Release 13.*
- *Based on specific operator requests (on a per band-combination basis), the values of the completed CA combinations with MSD issues shall be revisited for Release ~~13~~ 14 specifications, to align with the corrected MSD assumption ~~once it is agreed~~.*
- *The general principle is that MSD calculation for ongoing CA combinations with MSD problems shall be based on the corrected MSD assumption in Rel-13.*
- *The current MSD values in the brackets that are captured in the submitted CR for CA B3+B40 at RAN#68 (RP-150668 and RP-150673) are accepted and the CRs are approved to close the two CA Wis. Further inputs for CA B3+B40 at RAN4#76 will be taken into account in finalizing the MSD values.*

discussion: Qualcomm: has a problem with 2nd bullet, be realistic:all operators will bring in requests
Vodafone: we changed it to REL-14 so current chipsets impact concerns are no longer valid
Nokia Networks: Tdoc is ok for us
Microsoft: also not happy with 2nd proposal

Thursday afternoon:
Qualcomm: we should approve the CRs
Telecom Italia: other vendors apart Qualcomm who have a problem with the proposal

Samsung Exhibit 1025, Page 1859 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

LG: we also have a problem with the second bullet
Intel: how large is large enough?
Samsung: we need to look at problems on case by case
Vodafone: which case?
Samsung: we need to understand how serious the problem is
Vodafone: with "cases by case" we end up with "no case" in RAN4
ALU: are we changing the working procedures are with this? or can RAN4 no longer discuss them?
TeliaSonera: if requirements are unncessarily relaxed, then the tightening should not be rejected without technical justification
RAN chair: "RAN4 will assess the possibility for this"?
Vodafone: this would be too weak, RAN4 will discuss forever
Huawei: if we add "individual CR need still just be agreed by RAN4" this could be acceptable
RAN chair: changing "revisited" in "discussed" or "reviewed"?

conclusion: revised in RP-151108 to use "shall be reconsidered" and using normal RAN4 approval process

RP-151108 Way forward on MSD calculation for CA and CA_3A-40A/ CA_3A-40C TeliaSonera, Vodafone, Orange, Telefonica, DT, TIM Disc REL-13 LTE_CA_B3_B40

Proposed way forward:

- *RAN4 shall study the "antenna coupling" /"antenna port coupling" which is needed for the MSD/REFSENS calculation. RAN4 is expected to resolve the MSD technical discrepancies before end of Release 13.*
- *Based on specific operator requests (on a per band-combination basis), the values of the completed CA combinations with MSD issues shall be reconsidered (based on normal RAN4 approval procedure) for Release 14 specifications, to align with the corrected MSD assumption.*
- *The general principle is that MSD calculation for ongoing CA combinations with MSD problems shall be based on the corrected MSD assumption in Rel-13.*
- *The current MSD values in the brackets that are captured in the submitted CR for CA B3+B40 at RAN#68 (RP-150668 and RP-150673) are accepted and the CRs are approved to close the two CA Wis. Further inputs for CA B3+B40 at RAN4#76 will be taken into account in finalizing the MSD 9values.*

conclusion: endorsed

Core part WI and Perf. part WI completed

11.4.1.7 LTE Advanced inter-band CA of Band 3 and Band 41 [LTE_CA_B3_B41]

No contributions

11.4.1.8 LTE Advanced inter-band CA of Band 4 and Band 28 [LTE_CA_B4_B28]

11.4.1.08	650139	LTE_CA_B4_B28-Core	REL-13	June 15	100	Huawei	Implemented through agreed "big CRs" R4-153932 for TS 36.101 and R4-153757 for TS 36.104 in RAN4#75.
11.4.1.08	650239	LTE_CA_B4_B28-Perf	REL-13	June 15	100	Huawei	Implemented through agreed "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and R4-153758 for TS 36.141 in RAN4#75.

(see RP-150968)

Core part WI and Perf. part WI completed

11.4.1.9 Additional bandwidth combination set for LTE Advanced inter-band CA of Band 5 and Band 7 [**New WI:** LTE_CA_B5_B7_BWset]

11.4.1.09	670163	LTE_CA_B5_B7_BWset-Core	REL-13	June 15	100	Nokia Networks	TS36.101 CR in R4-153932 is agreed in RAN4 (within big CRs.) All issues are closed and included in TR36.852-13 (approved TP R4-151282). WID revision (RP-150602) is proposed

Samsung Exhibit 1025, Page 1860 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

							in RAN#68 to change the affected spec, TR36.852-13, from the new spec to the exiting spec, which is a core part of the WI.
11.4.1.09	670263	LTE_CA_B5_B7_BWset-Perf	REL-13	June 15	100	Nokia Networks	TS36.307 Release independence CRs, R4-153933, R4-153934, R4-153935 and R4-153936 are agreed in RAN4 for Rel-10/11/12/13 (within big CRs).

(see RP-150968)

RP-150602 Revised WID: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 5 and Band 7 Nokia Networks WID rev RAN4 s (2DL/1UL) REL-13 LTE_CA_B5_B7_BWset
last approved WID: RP-150171; TR 36.852-13 is moved from new to affected spec, covered by Core part
conclusion: approved

Core part WI and Perf. part WI completed

11.4.1.10 LTE Advanced inter-band CA of Band 5 and Band 40 [LTE_CA_B5_B40]

11.4.1.10	650145	LTE_CA_B5_B40-Core	REL-13	June 15	100	SK Telecom	TS 36.101 CR agreed in R4-153932; TS 36.104 CR agreed in R4-153737
11.4.1.10	650245	LTE_CA_B5_B40-Perf	REL-13	June 15	100	SK Telecom	TS 36.307 CRs agreed in R4-153935, R4-153936; TS 36.141 CR agreed in R4-153758

(see RP-150968)

Core part WI and Perf. part WI completed

11.4.1.11 LTE Advanced inter-band CA of Band 7 and Band 22 [LTE_CA_B7_B22]

11.4.1.11	630133	LTE_CA_B7_B22-Core	REL-13	June 15	100	Ericsson	The band combination was implemented in the approved "big CRs" R4-153932 and R4-153757 for TS 36.101 and TS 36.104, respectively at RAN4#75.
11.4.1.11	630233	LTE_CA_B7_B22-Perf	REL-13	June 15	100	Ericsson	The band combination was implemented in in the approved "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and in R4-153758 for TS 36.141 at RAN4#75.

(see RP-150968)

RP-150971 CRs to LTE Advanced inter-band Carrier Aggregation of Band 7 and Band 22 RAN4 CR36.852-12 0001 - F REL-13 LTE_CA_B7_B22-Core
conclusion: approved

Core part WI and Perf. part WI completed

11.4.1.12 LTE Advanced inter-band CA of Band 8 and Band 27 [LTE_CA_B8_B27]

No contributions

11.4.1.13 LTE Advanced inter-band CA of Band 20 and Band 31 [LTE_CA_B20_B31]

11.4.1.13	650143	LTE_CA_B20_B31-Core	REL-13	June 15	100	Huawei	Agreed CRs: R4-153932,R4-153757
11.4.1.13	650243	LTE_CA_B20_B31-Perf	REL-13	June 15	100	Huawei	Agreed CRs: R4-153758, R4-153933, R4-153934, R4-153935, R4-153936

(see RP-150968)

Core part WI and Perf. part WI completed

Samsung Exhibit 1025, Page 1861 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.1.14 LTE Advanced inter-band CA of Band 20 and Band 40 [LTE_CA_B20_B40]

No contributions.

11.4.1.15 LTE Advanced inter-band CA of Band 25 and Band 26 [LTE_CA_B25_B26]

11.4.1.15	660181	LTE_CA_B25_B26-Core	REL-13	June 15	100	Sprint	TS 36.101 CR agreed in R4-153932; TS 36.104 CR agreed in R4-153757
11.4.1.15	660281	LTE_CA_B25_B26-Perf	REL-13	June 15	100	Sprint	TS 36.307 CRs agreed in R4-153933, R4-153934, R4-153935, R4-153936; TS 36.141 CR agreed in R4-153758

(see RP-150968)

Core part WI and Perf. part WI completed

11.4.2 3 Band Carrier Aggregation (3DL/1UL)

RP-150972 CRs to 3 Band Carrier Aggregation RAN4 CR set REL-13
LTE_CA_B1_B3_B28-Core, LTE_CA_B1_B3_B28-Perf,
LTE_CA_B1_B3_B40-Perf,
LTE_CA_B1_B3_B42-Core, LTE_CA_B1_B3_B42-Perf,
LTE_CA_B1_B7_B28-Core, LTE_CA_B1_B7_B28-Perf,
LTE_CA_B1_B8_B40-Perf,
LTE_CA_B1_B19_B42-Core, LTE_CA_B1_B19_B42-Perf,
LTE_CA_B1_B21_B42-Core, LTE_CA_B1_B21_B42-Perf,
LTE_CA_B1_B41_B41-Perf,
LTE_CA_B1_B42_B42-Perf,
LTE_CA_B2_B2_B12-Core, LTE_CA_B2_B2_B12-Perf,
LTE_CA_B2_B5_B29-Core, LTE_CA_B2_B5_B29-Perf,
LTE_CA_B3_B3_B5-Core, LTE_CA_B3_B3_B5-Perf,
LTE_CA_B3_B3_B8-Core, LTE_CA_B3_B3_B8-Perf,
LTE_CA_B3_B7_B7-Core, LTE_CA_B3_B7_B7-Perf,
LTE_CA_B3_B7_B8-Core, LTE_CA_B3_B7_B8-Perf,
LTE_CA_B3_B7_B28-Core, LTE_CA_B3_B7_B28-Perf,
LTE_CA_B3_B19_B42-Core, LTE_CA_B3_B19_B42-Perf,
LTE_CA_B3_B40_B40-Perf,
LTE_CA_B3_B42_B42-Perf,
LTE_CA_B7_B7_B28-Core, LTE_CA_B7_B7_B28-Perf,
LTE_CA_B7_B20_B38-Perf,
LTE_CA_B7_B40_B40-Perf,
LTE_CA_B8_B41_B41-Core, LTE_CA_B8_B41_B41-Perf,
LTE_CA_B8_B42_B42-Perf,
LTE_CA_B19_B21_B42-Core, LTE_CA_B19_B21_B42-Perf,
LTE_CA_B21_B42_B42-Core, LTE_CA_B21_B42_B42-Perf,
LTE_CA_B28_B40_B40-Perf,
LTE_CA_B38_B40_B40-Core, LTE_CA_B38_B40_B40-Perf,
LTE_CA_B41_B42_B42-Core, LTE_CA_B41_B42_B42-Perf,
LTE_CA_B25_B41_B41_B41-Perf
note: Includes CRs to 36.101, 36.104, 36.133, 36.141 and 36.307 (from REL-10 onwards).
note: LTE_CA_B25_B41_B41_B41-Perf part should not have been put in this CR pack.
conclusion: approved

11.4.2.1 LTE Advanced 3 band CA (3DL/1UL) of Band 1, Band 3 and Band 3 [LTE_CA_B1_B3_B3]

No contributions

11.4.2.2 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 3 and Band 7 [LTE_CA_B1_B3_B7]

No contributions

11.4.2.3 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 3 and Band 28 [LTE_CA_B1_B3_B28]

11.4.2.03	660194	LTE_CA_B1_B3_B28-Core	REL-13	June 15	100	Nokia Networks	TS 36.101 CR agreed in R4-153785. TS 36.104 CR agreed in R4-153790. CR to 36.133 not needed.

Samsung Exhibit 1025, Page 1862 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.2.03	660294	LTE_CA_B1_B3_B28-Perf	REL-13	June 15	100	Nokia Networks	TS 36.307 CRs agreed in R4-153786, R4-153787, R4-153788, R4-153789. TS 36.141 CR agreed in R4-153791.

(see RP-150972)

RP-150719 Revised Work Item: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 3 and Band 28 Nokia Networks WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B1_B3_B28
last approved WID: RP-142038
conclusion: approved

Core part WI and Perf. part WI completed

11.4.2.4 LTE Advanced 3 band CA (3DL/1UL) of Band 1, Band 3 and Band 40 [LTE_CA_B1_B3_B40]

(see RP-150972)

11.4.2.5 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 3 and Band 42

[New WI: LTE_CA_B1_B3_B42]

11.4.2.05	670165	LTE_CA_B1_B3_B42-Core	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.
11.4.2.05	670265	LTE_CA_B1_B3_B42-Perf	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.

(see RP-150972)

RP-150641 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 3 and Band 42 NTT DOCOMO, INC. WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B1_B3_B42
last approved WID: RP-150121
conclusion: approved

Core part WI and Perf. part WI completed

11.4.2.6 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 7 and Band 28 [LTE_CA_B1_B7_B28]

11.4.2.06	660199	LTE_CA_B1_B7_B28-Core	REL-13	June 15	100	Huawei	Agreed CRs: R4-153785, R4-153790
11.4.2.06	660299	LTE_CA_B1_B7_B28-Perf	REL-13	June 15	100	Huawei	Agreed CRs: R4-153786, R4-153787, R4-153788, R4-153789, R4-153791

(see RP-150972)

Core part WI and Perf. part WI completed

11.4.2.7 LTE Advanced 3 band CA (3DL/1UL) of Band 1, Band 8 and Band 28 [LTE_CA_B1_B8_B28]

No contributions

11.4.2.8 LTE Advanced 3 band CA (3DL/1UL) of Band 1, Band 8 and Band 40 [LTE_CA_B1_B8_B40]

(see RP-150972)

11.4.2.9 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 19 and Band 28 [LTE_CA_B1_B19_B28]

RP-150639 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 19 and Band 28 NTT DOCOMO, INC. WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B1_B19_B28
last approved WID: RP-141791
conclusion: approved

11.4.2.10 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 19 and Band 42

[New WI: LTE_CA_B1_B19_B42]

Samsung Exhibit 1025, Page 1863 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.2.10	670166	LTE_CA_B1_B19_B42-Core	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.
11.4.2.10	670266	LTE_CA_B1_B19_B42-Perf	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.

(see RP-150972)

RP-150642 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 19 and Band 42
NTT DOCOMO, INC. WID revRAN4 s (3DL/1UL) REL-13 LTE_CA_B1_B19_B42
last approved WID: RP-150122
conclusion: approved

Core part WI and Perf. part WI completed

11.4.2.11 LTE Advanced 3 Band CA (3DL/1UL) of Band 1, Band 21 and Band 42
[**New WI:** LTE_CA_B1_B21_B42]

11.4.2.11	670167	LTE_CA_B1_B21_B42-Core	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.
11.4.2.11	670267	LTE_CA_B1_B21_B42-Perf	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.

(see RP-150972)

RP-150643 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 21 and Band 42
NTT DOCOMO, INC. WID revRAN4 s (3DL/1UL) REL-13 LTE_CA_B1_B21_B42
last approved WID: RP-150123
conclusion: approved

Core part WI and Perf. part WI completed

11.4.2.12 LTE Advanced 3 Band CA (3DL/1UL) of Band 2, Band 2 and Band 12 [LTE_CA_B2_B2_B12]

11.4.2.12	640122	LTE_CA_B2_B2_B12-Core	REL-13	June 15	100	U.S. Cellular	With the inclusion of this CA combination in the "Big CR" R4-153785, this CA combination has been introduced into the specifications.
11.4.2.12	640222	LTE_CA_B2_B2_B12-Perf	REL-13	June 15	100	U.S. Cellular	With the inclusion of this CA combination in the "Big CR" R4-153785, this CA combination has been introduced into the specifications.

(see RP-150972)

Core part WI and Perf. part WI completed

11.4.2.13 LTE Advanced 3 Band CA (3DL/1UL) of Band 2, Band 4 and Band 7
[**New WI:** LTE_CA_B2_B4_B7]

No contributions

11.4.2.14 LTE Advanced 3 Band CA (3DL/1UL) of Band 2, Band 5, and Band 29
[LTE_CA_B2_B5_B29]

11.4.2.14	650153	LTE_CA_B2_B5_B29-Core	REL-13	June 15	100	Huawei	COMPLETE. Agreed CRs: R4-153785, R4-153786, R4-153787, R4-153788, R4-153789, R4-153790, R4-153791
11.4.2.14	650253	LTE_CA_B2_B5_B29-Perf	REL-13	June 15	100	Huawei	COMPLETE. Agreed CRs: R4-153785, R4-153786, R4-153787, R4-153788, R4-153789, R4-153790, R4-153791

(see RP-150972)

Samsung Exhibit 1025, Page 1864 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Core part WI and Perf. part WI completed

11.4.2.15 LTE Advanced 3 Band CA (3DL/1UL) of Band 2, Band 7 and Band 12
[**New WI:** LTE_CA_B2_B7_B12]

No contributions

11.4.2.16 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 3 and Band 5 [LTE_CA_B3_B3_B5]

11.4.2.16	661101	LTE_CA_B3_B3_B5-Core	REL-13	June 15	100	Intel	The WI is completed with agreed 36.101 CR R4-153785 (big CR)
11.4.2.16	661201	LTE_CA_B3_B3_B5-Perf	REL-13	June 15	100	Intel	The WI is completed with agreed big CR R4-153786 (Rel-10) R4-153787 (Rel-11) R4-153788 (Rel-12) R4-153789 (Rel-13)

(see RP-150972)

Core part WI and Perf. part WI completed

11.4.2.17 LTE Advanced 3 Band CA (3DL/1UL) for Band 3, Band 3 and Band 8 [LTE_CA_B3_B3_B8]

11.4.2.17	640125	LTE_CA_B3_B3_B8-Core	REL-13	June 15	100	CHTTL	TS 36.101 CR agreed in R4-153785. TS 36.104 CR agreed in R4-153790. CR to 36.133 not needed.
11.4.2.17	640225	LTE_CA_B3_B3_B8-Perf	REL-13	June 15	100	CHTTL	TS 36.307 CRs agreed in R4-153787, R4-153788, R4-153789. TS 36.141 CR agreed in R4-153791.

(see RP-150972)

RP-150874 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 3 and Band 8
CHTTL WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B3_B3_B8
last approved WID: RP-141832
conclusion: approved

Core part WI and Perf. part WI completed

11.4.2.18 Additional bandwidth combination set for LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 7 and Band 7 [LTE_CA_B3_B7_B7_BWset]

11.4.2.18	660188	LTE_CA_B3_B7_B7_BWset-Core	REL-13	June 15	100	Ericsson	The band combination was implemented in the approved "big CRs" R4-153932 and R4-153757 for TS 36.101 and TS 36.104, respectively at RAN4#75.
11.4.2.18	660288	LTE_CA_B3_B7_B7_BWset-Perf	REL-13	June 15	100	Ericsson	The band combination was implemented in in the approved "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and in R4-153758 for TS 36.141 at RAN4#75.

CRs really in RP-150968?
2 errors occured:
1. Status reports are wrong (referring to RP-150968 instead of RP-150972) and should say:

LTE_CA_B3_B7_B7_BWset-Core: The band combination was implemented in the approved "big CRs" R4-153785 and R4-153790 for TS 36.101 and TS 36.104, respectively at RAN4#75.

LTE_CA_B3_B7_B7_BWset-Perf: The band combination was implemented in in the approved "big CRs" R4-153786, R4-153787, R4-153788, R4-153789 for TS 36.307 and in R4-153791 for TS 36.141 at RAN4#75.

2. Another mistake: CRs use REL-12 WI code LTE_CA_B3_B7_B7 instead of REL-13 WI code LTE_CA_B3_B7_B7_BWset.

Samsung Exhibit 1025, Page 1865 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

(see RP-150972)

Core part WI and Perf. part WI completed

11.4.2.19 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 7 and Band 8 [LTE_CA_B3_B7_B8]

11.4.2.19	660193	LTE_CA_B3_B7_B8-Core	REL-13	June 15	100	Ericsson	The WI is completed: the band combination is included in CRs to 36.101 (R4-153785) and 36.104 (R4-153790).
11.4.2.19	660293	LTE_CA_B3_B7_B8-Perf	REL-13	June 15	100	Ericsson	The WI is completed: the band combination is included in CRs to 36.141 (R4-153791) and 36.307 (R4-153786).

(see RP-150972)

Core part WI and Perf. part WI completed

11.4.2.20 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 7 and Band 28 [LTE_CA_B3_B7_B28]

11.4.2.20	661102	LTE_CA_B3_B7_B28-Core	REL-13	June 15	100	Ericsson	The band combination was implemented in the approved "big CRs" R4-153932 and R4-153757 for TS 36.101 and TS 36.104, respectively at RAN4#75.
11.4.2.20	661202	LTE_CA_B3_B7_B28-Perf	REL-13	June 15	100	Ericsson	The band combination was implemented in in the approved "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and in R4-153758 for TS 36.141 at RAN4#75.

CRs really in RP-150968?

error occured:
Status reports are wrong (referring to RP-150968 instead of RP-150972) and should say:

LTE_CA_B3_B7_B28-Core: The band combination was implemented in the approved "big CRs" R4-153785 and R4-153790 for TS 36.101 and TS 36.104, respectively at RAN4#75.

LTE_CA_B3_B7_B28-Perf: The band combination was implemented in in the approved "big CRs" R4-153786, R4-153787, R4-153788, R4-153789 for TS 36.307 and in R4-153791 for TS 36.141 at RAN4#75.

See RP-150972

Core part WI and Perf. part WI completed

11.4.2.21 LTE Advanced 3 Band CA (3DL/1UL) for Band 3, Band 8 and Band 27 [LTE_CA_B3_B8_B27]

No contributions

11.4.2.22 LTE Advanced 3 band CA (3DL/1UL) of Band 3, Band 8 and Band 28 [LTE_CA_B3_B8_B28]

No contributions

11.4.2.23 LTE Advanced 3 band CA (3DL/1UL) of Band 3, Band 8 and Band 40 [LTE_CA_B3_B8_B40]

No contributions

11.4.2.24 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 19 and Band 42

[**New WI:** LTE_CA_B3_B19_B42]

11.4.2.24	670168	LTE_CA_B3_B19_B42-Core	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.

Samsung Exhibit 1025, Page 1866 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.2.24	670268	LTE_CA_B3_B19_B42-Perf	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.

RP-150644 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 19 and Band 42
NTT DOCOMO, INC. WID revRAN4 s (3DL/1UL) REL-13 LTE_CA_B3_B19_B42
last approved WID: RP-150124
conclusion: approved

(see RP-150972)

Core part WI and Perf. part WI completed

11.4.2.25 LTE Advanced 3 Band CA (3DL/1UL) of Band 3, Band 40 and Band 40
[LTE_CA_B3_B40_B40-Core]

11.4.2.25	660198	LTE_CA_B3_B40_B40-Core	REL-13	June 15	100	Huawei	Company CRs will be submitted in RAN#68 (RP-150673, RP-150674, RP-150675)
11.4.2.25	660298	LTE_CA_B3_B40_B40-Perf	REL-13	June 15	100	Huawei	

latest approved WID: RP-142207
affected specs (Core part): 36.101, 36.104?
affected specs (Perf. part): 36.307, 36.141?, 36.133?

(see RP-150972)

RP-150673 Introduction of CA_3A-40C to TS 36.101 Huawei, HiSilicon CR36.101 3022 - B REL-13 LTE_CA_B3_B40_B40-Core
company contribution; as there was no consensus about CA_3A-40A changes, the CA_3A-40C changes were not provided to RAN4 #75 and they are presented here now to RAN
discussion: TeliaSonera: comment to company CR set RP-150673 to RP-150675: In RAN4 there was a lot of discussion (without consensus) on how this should be calculated. We do not object to the values, but would like to add the following text to the "Reason for change" in the CRs: "The MSD is calculated with 10 dB antenna port isolation. In test equipment no such coupling exist and therefore the REFSENS is not tested accordingly to the calculation."
conclusion: approved

RP-150674 Introduction of CA_3A-40C to TS 36.307 R12 Huawei, HiSilicon CR36.307 0512 - B REL-12 LTE_CA_B3_B40_B40-Core
company contribution; as there was no consensus about CA_3A-40A changes, the CA_3A-40C changes were not provided to RAN4 #75 and they are presented here now to RAN;
discussion: MCC: acc. to the WID RP-142207 the Core part has no impact on 36.307 just the Perf. part
conclusion: revised in RP-151069

RP-151069 Introduction of CA_3A-40C to TS 36.307 R12 Huawei, HiSilicon CR36.307 0512 1 B REL-12 LTE_CA_B3_B40_B40-Perf
conclusion: approved

RP-150675 Introduction of CA_3A-40C to TS 36.307 R13 Huawei, HiSilicon CR36.307 0513 - B REL-13 LTE_CA_B3_B40_B40-Core
company contribution; as there was no consensus about CA_3A-40A changes, the CA_3A-40C changes were not provided to RAN4 #75 and they are presented here now to RAN;
discussion: MCC: acc. to the WID RP-142207 the Core part has no impact on 36.307 just the Perf. part
conclusion: revised in RP-151070

RP-151070 Introduction of CA_3A-40C to TS 36.307 R13 Huawei, HiSilicon CR36.307 0513 1 B REL-13 LTE_CA_B3_B40_B40-Perf
conclusion: approved

RP-151071 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 40 and Band 40
Huawei WID revRAN4 s (3DL/1UL) REL-13 LTE_CA_B3_B40_B40
last approved WID: RP-152207; not affected spec removed, TR number updated
conclusion: approved

Samsung Exhibit 1025, Page 1867 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Core part WI and Perf. part WI completed

11.4.2.26 Additional bandwidth combination set for LTE Advanced 3 Band CA (3DL/1UL) of Band 4, Band 4 and Band 7 [**New WI:** LTE_CA_B4_B4_B7_BWset]

No contributions

11.4.2.27 Additional bandwidth combination set for LTE Advanced 3 Band CA (3DL/1UL) of Band 4, Band 7 and Band 12 [**New WI:** LTE_CA_B4_B7_B12_BWset]

No contributions

11.4.2.28 LTE Advanced 3 Band CA (3DL/1UL) of Band 7, Band 7 and Band 28 [LTE_CA_B7_B7_B28]

11.4.2.28	660189	LTE_CA_B7_B7_B28-Core	REL-13	June 15	100	Ericsson	The band combination was implemented in the approved "big CRs" R4-153932 and R4-153757 for TS 36.101 and TS 36.104, respectively at RAN4#75.
11.4.2.28	660289	LTE_CA_B7_B7_B28-Perf	REL-13	June 15	100	Ericsson	The band combination was implemented in in the approved "big CRs" R4-153933, R4-153934, R4-153935, R4-153936 for TS 36.307 and in R4-153758 for TS 36.141 at RAN4#75.

CRs really in RP-150968?

error occured:
Status reports are wrong (referring to RP-150968 instead of RP-150972) and should say:

LTE_CA_B7_B7_B28-Core: The band combination was implemented in the approved "big CRs" R4-153785 and R4-153790 for TS 36.101 and TS 36.104, respectively at RAN4#75.

LTE_CA_B7_B7_B28-Perf: The band combination was implemented in in the approved "big CRs" R4-153786, R4-153787, R4-153788, R4-153789 for TS 36.307 and in R4-153791 for TS 36.141 at RAN4#75.

See RP-150972

Core part WI and Perf. part WI completed

11.4.2.29 LTE Advanced 3 Band CA (3DL/1UL) of Band 7, Band 20 and Band 38 [**New WI:** LTE_CA_B7_B20_B38]

No contributions

11.4.2.30 LTE Advanced 3 Band CA (3DL/1UL) of Band 7, Band 40 and Band 40 [LTE_CA_B7_B40_B40]

(see RP-150972)

RP-150614 Revised Work Item Description: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 7, Band 40 and Band 40 ZTE WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B7_B40_B40
last approved WID: RP-141802
conclusion: approved

RP-150613 Exception request for WI LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 7, Band 40 and Band 40ZTE ExReq REL-13 LTE_CA_B7_B40_B40
conclusion: withdrawn (exception request sheets are only used at the freeze of the REL)

11.4.2.31 LTE Advanced 3 Band CA (3DL/1UL) of Band 8, Band 41 and Band 41 [LTE_CA_B8_B41_B41]

11.4.2.31	650149	LTE_CA_B8_B41_B41-Core	REL-13	June 15	100	CMCC	36.101 (R4-153785) 36.307 (R4-153786…-3789) 36.104 and 36.141 (R4-153790, -3791)

Samsung Exhibit 1025, Page 1868 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.2.31	650249	LTE_CA_B8_B41_B41-Perf	REL-13	June 15	100	CMCC	36.101 (R4-153785) 36.307 (R4-153786…-3789) 36.104 and 36.141 (R4-153790, -3791)

(see RP-150972)

Core part WI and Perf. part WI completed

11.4.2.32 LTE Advanced 3 Band CA (3DL/1UL) of Band 8, Band 42 and Band 42
[LTE_CA_B8_B42_B42]

See RP-150972

11.4.2.33 LTE Advanced 3 Band CA (3DL/1UL) of Band 19, Band 21 and Band 42
[**New WI:** LTE_CA_B19_B21_B42]

11.4.2.33	670169	LTE_CA_B19_B21_B42-Core	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.
11.4.2.33	670269	LTE_CA_B19_B21_B42-Perf	REL-13	June 15	100	NTT DOCOMO, INC.	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.

(see RP-150972)

RP-150645 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 19, Band 21 and Band 42 NTT DOCOMO, INC. WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B19_B21_B42
last approved WID: RP-150125
conclusion: approved

Core part WI and Perf. part WI completed

11.4.2.34 LTE Advanced 3 Band CA (3DL/1UL) of Band 21, Band 42 and Band 42
[LTE_CA_B21_B42_B42]

11.4.2.34	660185	LTE_CA_B21_B42_B42-Core	REL-13	June 15	100	NTT DOCOMO	No open issues. CRs for TS36.101 (R4-153785) and TS36.104(R4-153790) were agreed in RAN4#75.
11.4.2.34	660285	LTE_CA_B21_B42_B42-Perf	REL-13	June 15	100	NTT DOCOMO	No open issues. CRs for TS36.307 (R4-153788(Rel-12), R4-153789(Rel-13)) /TS36.141 (R4-153791) were agreed in RAN4#75.

(see RP-150972)

RP-150640 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 21, Band 42 and Band 42 NTT DOCOMO, INC. WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B21_B42_B42
last approved WID: RP-141792
conclusion: approved

Core part WI and Perf. part WI completed

11.4.2.35 LTE Advanced 3 Band CA (3DL/1UL) of Band 28, Band 40 and Band 40
[LTE_CA_B28_B40_B40]

(see RP-150972)

RP-150676 Revised WID: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 28, Band 40 and Band 40 Huawei WID rev RAN4 s (3DL/1UL) REL-13 LTE_CA_B28_B40_B40
last approved WID: RP-150233; extending target Dec.15 and adding channel BW for B28 and B40
conclusion: approved

11.4.2.36 LTE Advanced 3 Band CA (3DL/1UL) of Band 38, Band 40 and Band 40
[LTE_CA_B38_B40_B40]

Samsung Exhibit 1025, Page 1869 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.2.36	650151	LTE_CA_B38_B40_B40-Core	REL-13	June 15	100	Samsung	UE CR 36.101 R4-153785 (big CR) BS CR 36.104 R4-153790 (big CR) BS CR 36.141 R4-153791 (big CR)
11.4.2.36	650251	LTE_CA_B38_B40_B40-Perf	REL-13	June 15	100	Samsung	Release independent CR Rel-10 R4-153786 (big CR) Release independent CR Rel-11 R4-153787 (big CR) Release independent CR Rel-12 R4-153788 (big CR) Release independent CR Rel-13 R4-153789 (big CR)

(see RP-150972)

Core part WI and Perf. part WI completed

11.4.2.37 LTE Advanced 3 Band CA (3DL/1UL) of Band 41, Band 42 and Band 42
[LTE_CA_B41_B42_B42]

11.4.2.37	640132	LTE_CA_B41_B42_B42-Core	REL-13	June 15	100	Huawei	Agreed CR for TS 36.101: R4-153785
11.4.2.37	640232	LTE_CA_B41_B42_B42-Perf	REL-13	June 15	100	Huawei	Agreed CRs for TS 36.307: R4-153786, R4-153787, R4-153788, R4-153789

(see RP-150972)

RP-150973 CRs to LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 41, Band 42 and Band 42
RAN4 CR36.853-12 0005 - F REL-13 LTE_CA_B41_B42_B42-Core
conclusion: approved

Core part WI and Perf. part WI completed

11.4.3 4 Band Carrier Aggregation (4DL/1UL)

RP-150974 CRs to 4 Band Carrier Aggregation (4DL/1UL) RAN4 CRset REL-13
LTE_CA_B2_B2_B4_B4-Core, LTE_CA_B2_B2_B4_B4-Perf,
LTE_CA_B2_B2_B4_B12-Core, LTE_CA_B2_B2_B4_B12-Perf,
LTE_CA_B2_B2_B5_B30-Core, LTE_CA_B2_B2_B5_B30-Perf,
LTE_CA_B2_B2_B12_B30-Core, LTE_CA_B2_B2_B12_B30-Perf,
LTE_CA_B2_B2_B29_B30-Core, LTE_CA_B2_B2_B29_B30-Perf,
LTE_CA_B2_B4_B4_B12-Core, LTE_CA_B2_B4_B4_B12-Perf,
LTE_CA_B2_B4_B5_B29-Core,
LTE_CA_B2_B4_B5_B30-Core, LTE_CA_B2_B4_B5_B30-Perf,
LTE_CA_B2_B4_B12_B30-Core, LTE_CA_B2_B4_B12_B30-Perf,
LTE_CA_B2_B4_B29_B30-Core, LTE_CA_B2_B4_B29_B30-Perf,
LTE_CA_B25_B41_B41_B41-Core, LTE_CA_B25_B41_B41_B41-Perf
note: Includes CRs to 36.101, 36.104, 36.133, 36.141 and 36.307 (from REL-11 onwards).
conclusion: approved
Just to check: CR set agreed in RAN4 but no 4DL WI completed?
RAN4 chair: still to work on some RRM requirements that's why WIs are not yet completed

11.4.3.1 LTE Advanced 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 5 and Band 40
[**New WI:** LTE_CA_B1_B3_B5_B40-Core]

RP-150617 Revised WID: LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 1, Band 3, Band 5 and Band 40 SK Telecom WID revRAN4 s (4DL/1UL) REL-13 LTE_CA_B1_B3_B5_B40
last approved WID: RP-150434; removing 5MHz bandwidth combination in Band 40
conclusion: approved

11.4.3.2 LTE Advanced 4 Band CA (4DL/1UL) of Band 1, Band 3, Band 7 and Band 8
[**New WI:** LTE_CA_B1_B3_B7_B8]

No contributions

11.4.3.3 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 4
[**New WI:** LTE_CA_B2_B2_B4_B4]

Samsung Exhibit 1025, Page 1870 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

See RP-150974

RP-150658 Revised WID: LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 2, Band 2, Band 4 and Band 4 Nokia Networks WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B2_B4_B4
last approved WID: RP-150075; change of completion date and rapporteur; note: rapporteur so far is Nokia Corporation
conclusion: approved

11.4.3.4 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 4 and Band 12
[**New WI:** LTE_CA_B2_B2_B4_B12]

See RP-150974

RP-150659 Revised WID: LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 2, Band 2, Band 4 and Band 12 Nokia Networks WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B2_B4_B12
last approved WID: RP-150074; change of completion date and rapporteur; note: rapporteur so far is Nokia Corporation
conclusion: approved

11.4.3.5 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 5 and Band 30
[LTE_CA_B2_B2_B5_B30]

See RP-150974

11.4.3.6 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 12 and Band 30
[LTE_CA_B2_B2_B12_B30]

See RP-150974

11.4.3.7 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 2, Band 29 and Band 30
[LTE_CA_B2_B2_B29_B30]

See RP-150974

11.4.3.8 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 4 and Band 12
[**New WI:** LTE_CA_B2_B4_B4_B12]

See RP-150974

RP-150660 Revised WID: LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 2, Band 4, Band 4 and Band 12 Nokia Networks WID rev RAN4 s (4DL/1UL) REL-13 LTE_CA_B2_B4_B4_B12
last approved WID: RP-150073; change of completion date and rapporteur; note: rapporteur so far is Nokia Corporation
conclusion: approved

11.4.3.9 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 5 and Band 29
[**New WI:** LTE_CA_B2_B4_B5_B29]

See RP-150974

11.4.3.10 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 5 and Band 30
[LTE_CA_B2_B4_B5_B30]

See RP-150974

11.4.3.11 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 12 and Band 30
[LTE_CA_B2_B4_B12_B30]

See RP-150974

11.4.3.12 LTE Advanced 4 Band CA (4DL/1UL) of Band 2, Band 4, Band 29 and Band 30
[LTE_CA_B2_B4_B29_B30]

See RP-150974

11.4.3.13 LTE Advanced 4 Band CA (4DL/1UL) of Band 25, Band 41, Band 41 and Band 41
[LTE_CA_B25_B41_B41_B41]

See RP-150972 and RP-150974

Samsung Exhibit 1025, Page 1871 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.4 Inter-band CA related WIs (2UL)

11.4.4.1 LTE Advanced dual uplink inter-band Carrier Aggregation Class A1 in REL-13
[LTE_CA_2UL_R13-A1]

RP-150678 Revised WID: LTE Advanced dual uplink inter-band Carrier Aggregation Class A1 in REL-13
Huawei WID revRAN4 s (2UL) REL-13 LTE_CA_2UL_R13-A1
last approved WID: RP-150411; add new CA band combination B2+B5
conclusion: approved

11.4.4.2 LTE Advanced dual uplink inter-band Carrier Aggregation Class A2 in REL-13
[LTE_CA_2UL_R13-A2]

No contributions

11.4.4.3 LTE Advanced dual uplink inter-band Carrier Aggregation Class A3 in REL-13
[LTE_CA_2UL_R13-A3]

No contributions

11.4.4.4 LTE Advanced dual uplink inter-band Carrier Aggregation Class A4 in REL-13
[**New WI:** LTE_CA_2UL_R13-A4]

RP-150616 Revised WI proposal: LTE Advanced dual uplink inter-band Carrier Aggregation Class A4 in REL-13
Nokia Networks WID revRAN4 s (2UL) REL-13 LTE_CA_2UL_R13-A4
last approved WID: RP-150410; addition of CA_3A-5A
conclusion: approved

11.4.4.5 LTE Advanced dual uplink inter-band Carrier Aggregation FDD-TDD
[**New WI:** LTE_CA_2UL_FDD_TDD]

No contributions

11.4.4.6 LTE Advanced 3DL/2UL inter-band Carrier Aggregation
[**New WI:** LTE_CA_3DL_2UL]

11.4.4.6	670183	LTE_CA_3DL_2UL-Core	REL-13	March 16 => Dec.15	25	Nokia Corporation	MSD values not agreed for combinations with IMD issues. Agreement for mandatory support of 2 UL combinations R4-153931. CR for cases without IMD issues endorsed for 36.101 R4-153781
11.4.4.6	670283	LTE_CA_3DL_2UL-Perf	REL-13	March 16	25	Nokia Corporation	UE release independence is to be specified.

Note: This WI is actually a REL-14 WI. Is this intended?
RAN4 chair: no REL-13 is intended, target date is wrong

No contributions

11.4.5 Intra-band CA related WIs (contiguous 2DL)

11.4.5.1 LTE Advanced intra-band contiguous Carrier Aggregation in Band 8 [**New WI:** LTE_CA_C_B8]

RP-150809 Revised WID Proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 8 CMCC
WID revRAN4 s (C) REL-13 LTE_CA_C_B8
last approved WID: RP-150437
conclusion: approved

11.4.6 Intra-band CA related WIs (contiguous 3DL)

11.4.6.1 LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 3DL
[LTE_CA_C_B42_3DL]

Samsung Exhibit 1025, Page 1872 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

11.4.6.1	650147	LTE_CA_C_B42_3DL-Core	REL-13	June 15	100	CATT	Technically endorsed CRs in R4-151183. it will be presented as a company CR for Approval in RAN#68. RP-150646, RP-150647, RP-150648, RP-150649
11.4.6.1	650247	LTE_CA_C_B42_3DL-Perf	REL-13	June 15	100	CATT	Technically endorsed CRs in R4-151184/85/86. They will be presented as company CRs for Approval in RAN#68. RP-150646, RP-150647, RP-150648, RP-150649

last approved WID: RP-150319:
affected specs Core part: 36.101, 36.104?, 36.133?
affected specs Perf. part: 36.141?, 36.307

RP-150646 Introduction of intra-band CA_42D to TS 36.101 CATT CR36.101 2785 2 B REL-13 LTE_CA_C_B42_3DL-Core
company contribution; CR was technically endorsed by RAN4#74 in R4-151183 (in order to not yet introduce REL-13 specs) but forgotten to be resubmitted to RAN4 #75; as WI is planned to be completed at RAN #68 it is submitted as company CR
conclusion: approved

RP-150647 Introduction of CA_42D to TS 36.307(Rel-10) CATT CR36.307 0473 2 B REL-10 LTE_CA_C_B42_3DL-Core
company contribution; CR was technically endorsed by RAN4#74 in R4-151184 (in order to not yet introduce REL-13 specs) but forgotten to be resubmitted to RAN4 #75; as WI is planned to be completed at RAN #68 it is submitted as company CR
conclusion: revised in RP-151024

RP-151024 Introduction of CA_42D to TS 36.307(Rel-10) CATT CR36.3070473 3 B REL-10 LTE_CA_C_B42_3DL-Perf
conclusion: approved

RP-150648 Introduction of CA_42D to TS 36.307(Rel-11) CATT CR36.307 0472 2 B REL-11 LTE_CA_C_B42_3DL-Core
company contribution; CR was technically endorsed by RAN4#74 in R4-151185 (in order to not yet introduce REL-13 specs) but forgotten to be resubmitted to RAN4 #75; as WI is planned to be completed at RAN #68 it is submitted as company CR
conclusion: revised in RP-151025

RP-151025 Introduction of CA_42D to TS 36.307(Rel-11) CATT CR36.3070472 3 B REL-11 LTE_CA_C_B42_3DL-Perf
conclusion: approved

RP-150649 Introduction of CA_42D to TS 36.307(Rel-12) CATT CR36.307 0471 2 B REL-12 LTE_CA_C_B42_3DL-Core
company contribution; CR was technically endorsed by RAN4#74 in R4-151186 (in order to not yet introduce REL-13 specs) but forgotten to be resubmitted to RAN4 #75; as WI is planned to be completed at RAN #68 it is submitted as company CR
conclusion: revised in RP-151026

RP-151026 Introduction of CA_42D to TS 36.307(Rel-12) CATT CR36.3070471 3 B REL-12 LTE_CA_C_B42_3DL-Perf
conclusion: approved

RP-151006 Introduction of CA_42D to TS 36.307 CATT CR36.307 0514 - B REL-13 LTE_CA_C_B42_3DL-Perf
company contribution; CR was not provided to RAN4
conclusion: approved

RP-151027 Revised WID: LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 3DL CATT WID rev RAN4 REL-13 LTE_CA_C_B42_3DL
last approved WID: RP-150319; not impacted specs removed/
conclusion: approved

Samsung Exhibit 1025, Page 1873 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150650 TR 36.833-5-42 v2.0.0: LTE Advanced Carrier Aggregation in Band 42 for 3DL CATT TR 36.833-5-42 RAN4 REL-13 LTE_CA_C_B42_3DL-Core
RAN4 TR 36.833-5-42 is provided for one-step approval
conclusion: approved as v13.0.0

Core part WI and Perf. part WI completed

11.4.7 Intra-band CA related WIs (non-contiguous 3DL)

11.4.7.1 LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 42 for 3DL
[**New WI:** LTE_CA_NC_B42_3DL]

11.4.7.1	670184	LTE_CA_NC_B42_3DL-Core	REL-13	June 15	100	Huawei	Agreed CRs: R4-153748
11.4.7.1	670284	LTE_CA_NC_B42_3DL-Perf	REL-13	June 15	100	Huawei	Agreed CRs: R4-153317, R4-153318, R4-153319

RP-150975 CRs to LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 42 for 3DL RAN4 CR set REL-13 LTE_CA_NC_B42_3DL
conclusion: approved

RP-150723 TR 36.833-6-42 V1.0.0 for LTE-Advanced intra-band non-contiguous Carrier Aggregation (CA) in Band 42 for 3 downlinks (3DL), for approval Huawei, Etisalat TR 36.833-6-42 RAN4 REL-13 LTE_CA_NC_B42_3DL-Core
RAN4 TR 36.883-6-42 is provided for 1-step approval
conclusion: approved as v13.0.0

Core part WI and Perf. part WI completed

11.4.8 Intra-band CA related WIs (contiguous 4DL)

11.4.8.1 LTE Advanced intra-band contiguous Carrier Aggregation in Band 42 for 4DL
[**New WI:** LTE_CA_C_B42_4DL]

No contributions

11.4.9 Intra-band CA related WIs (non-contiguous 4DL)

11.4.9.1 LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 41 for 4 DL
[LTE_CA_NC_B41_4DL]

No contributions

11.5 Open LTE only related WIs (spectrum and not CA related)

11.5.1 2GHz FDD LTE Band for Region 1 (1980-2010MHz and 2170-2200MHz Bands)
[LTE_1980_2170_REG1]

RP-150705 Status Report for WI 2GHz FDD LTE Band for Region 1 (1980-2010MHz and 2170-2200MHz Bands); rapporteur: Dish Network RAN4 Report REL-13 LTE_1980_2170_REG1
discussion: MCC: target date change
conclusion: noted, approved: Core: 70%, Dec.15; Perf.: 0%, Dec.15

11.5.2 AWS-Extension Band for LTE [**New WI:** LTE_AWS_EXT]

RP-150796 Status report for WI AWS-Extension Band for LTE; rapporteur: Ericsson RAN4 Report REL-13 LTE_AWS_EXT
conclusion: noted, approved: Core: 20%, Dec.15; Perf.: 0%, Dec.15

RP-150876 Proposal for AWS-Extension Option Verizon Disc REL-13 LTE_AWS_EXT
Tdoc was presented in RAN4#75 in R4-153049
proposal: A 70/70MHz (1710-1780 MHz and 2110-2180 MHz) option is proposed in to the existing Work Item as an interim solution toward the 70/90 (1710-1780 MHz and 2110-2200 MHz) option in order to ensure prompt implementations of the AWS-Extension band.
discussion: RAN chair: is RP-150800 reflecting this proposal?
Ericsson: no, this is a separate revision

Samsung Exhibit 1025, Page 1874 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Dish Networks: no new data is provided to revisit previous decision and we have concerns with the proposal
Verizon: new data from filter vendors
Dish Networks: was this data provided to WGs and discussed there; is this for duplexer or multiplexers?
Huawei: without additional study we need to keep the original band plan
Dish Network: we had a WI in March here, any further discussion will delay the completion
Verizon: study was done during of US quiet period
Dish Network: original AWS extension study item was started in June 2014 and AWS extension WI was approved in March, 2015 after the US quiet period
RAN chair: at the moment it seems we cannot proceed so have further discussion please
conclusion: noted, offline discussion;
no conclusion after offline session

RP-150800 Revised WID for AWS-Extension Band for LTE Ericsson WID rev RAN4 s REL-13 LTE_AWS_EXT
last approved WID: RP-150428; to include missing TSs
conclusion: approved

11.6 Small Technical Enhancements and Improvements for Rel-13 [TEI13]

RAN3:
RP-150946 eMBMS alternative IP Multicast distribution address RAN3 CR set REL-13 TEI13
conclusion: approved

Samsung Exhibit 1025, Page 1875 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

12 Study Items

12.1 Closed study items

RAN1:

RP-150938 CR to 36.873 introducing a convention for 2D antenna element numbering RAN1 CR36.8730004 - F REL-12 FS_LTE_3D_channel
FS_LTE_3D_channel was a REL-12 SI
conclusion: approved

RAN5:

RP-150914 RAN5 agreed non TTCN CR(s) under WI Study on MIMO OTA antenna test function for LTE (FS_LTE_MIMO_OTA_ATF) RAN5 CRset F REL-13 FS_LTE_MIMO_OTA_ATF
FS_LTE_MIMO_OTA_ATF was a REL-13 SI
conclusion: approved

12.2 Open UTRA related SIs

12.2.1 REL-13 Study on Downlink Enhancements for UMTS [FS_UTRA_EDL]

RP-150681 Status report for SI: Downlink enhancements for UMTS, rapporteur: Huawei RAN2 Report REL-13 FS_UTRA_EDL
conclusion: noted, approved: 100%, June 15; SI is completed

RP-150682 TR 25.706 v2.0.0 on Downlink enhancements for UMTS, for approval Huawei TR25.706RAN2 REL-13 FS_UTRA_EDL
RAN2 TR 25.706 is provided for approval
conclusion: approved as v13.0.0

12.2.2 REL-13 Study on small data transmission enhancement for UMTS [FS_UTRA_SDATA]

RP-150843 Status report for SI Small Data Transmission Enhancements for UMTS; rapporteur: Ericsson RAN1 Report REL-13 FS_UTRA_SDATA
conclusion: noted, approved: 100%, June 15; SI is completed

RP-150844 TR 25.705 v2.0.0 on Study on Small Data Transmission Enhancements for UMTS, for approval Ericsson TR25.705RAN1 REL-13 FS_UTRA_SDATA
RAN1 TR 25.705 is submitted for approval
conclusion: approved as v13.0.0

12.2.3 REL-13 Study on Network-Assisted Interference Cancellation and Suppression for UMTS [FS_UTRA_NAICS]

RP-150679 Status report for SI: Study on Network-Assisted Interference Cancellation and Suppression for UMTS, rapporteur: HuaweiRAN1 Report REL-13 FS_UTRA_NAICS
conclusion: noted, approved: 65%, Sep.15

RP-150680 TR 25.766 v1.0.0 on Network-Assisted Interference Cancellation and Suppression for UMTS, for information Huawei TR25.766RAN1 REL-13 FS_UTRA_NAICS
RAN1 TR 25.766 is provided for information
conclusion: noted

12.2.4 REL-13 Study on RAN sharing enhancements for UMTS [FS_RSE_UTRA_GUSH]

RP-150684 Status report for SI: Study on RAN sharing enhancements for UMTS, rapporteur: Huawei RAN3 Report REL-13 FS_RSE_UTRA_GUSH
conclusion: noted, approved: 100%, June 15; SI is completed

Samsung Exhibit 1025, Page 1876 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150685 TR 25.756 v1.0.0 on RAN sharing enhancements for UMTS, for approval Huawei TR 25.756 RAN REL-13 FS_RSE_UTRA_GUSH
RAN3 TR 25.756 is provided for 1-step approval
conclusion: approved as v13.0.0

RP-150686 Revised SID: Study on RAN sharing enhancements for UMTS Huawei SID rev RAN3 REL-13 FS_RSE_UTRA_GUSH
last approved SID: RP-142284; TR number fixed
conclusion: approved

12.3 Open UTRA & LTE related SIs

12.3.1 REL-13 Study on Multi-RAT Joint coordination [FS_MultiRAT_JC]

RP-150807 Status Report for SI: Study on Multi-RAT Joint Coordination RAN3 Report REL-13 FS_MultiRAT_JC
conclusion: noted, approved: 100%, June 15; SI is completed

RP-150808 TR 37.870 v2.0.0 on Study on Multi-RAT Joint Coordination, for approval CMCC TR 37.870 RAN REL-13 FS_MultiRAT_JC
RAN3 TR 37.870 is provided for approval
conclusion: approved as v13.0.0

12.3.2 REL-13 Study on Indoor Positioning Enhancements for UTRA and LTE [FS_UTRA_LTE_iPos_enh]

RP-150595 Status report for SI on Indoor Positioning Enhancements for UTRA and LTE; rapporteur: NextNav RAN1 Report REL-13 FS_UTRA_LTE_iPos_enh
discussion: Huawei: TR36.857 needs to be revised to include proper references to the previous and related study in TR36.855 that already investigated and drew conclusions on enhanced PRS and enhanced RSTD measurements, including evaluations relevant to the SI on indoor positioning enhancements.
NextNav: can be considered in the future
RAN1 chair: either by email discussion or in next RAN1 meeting?
Huawei: prefers email discussion
Ericsson: could have also do this at next RAN1 meeting, had already some discussions
conclusion: noted, approved: 75%, Sep.15, RAN1 is asked to include proper references to the previous and related study in TR36.855 at next RAN1 meeting

12.4 Open LTE only related SIs

12.4.1 REL-13 Study on LTE FDD in the bands 1980-2010 MHz and 2170-2200 MHz [FS_LTE_1980_2170_Korea]

RP-150767 Status Report of SI on Study on LTE FDD in the bands 1980-2010 MHz and 2170-2200 MHz; rapporteur: KT RAN4 Report REL-13 FS_LTE_1980_2170_Korea
conclusion: withdrawn, see RP-150768 instead

RP-150768 Status Report for SI Study on LTE FDD in the bands 1980-2010 MHz and 2170-2200 MHz; rapporteur: KT RAN4 Report REL-13 FS_LTE_1980_2170_Korea
proposes to extend completion date to RAN#69
discussion: MCC: target date change
conclusion: noted, approved:90%, Sep.15

12.4.2 REL-13 Study on Elevation Beamforming/Full-Dimension (FD) MIMO for LTE [FS_LTE_EBF_FDMIMO]

RP-150734 Status report for SI: Study on Elevation Beamforming/Full-Dimension (FD) MIMO for LTE; rapporteur: Nokia Networks RAN1 Report REL-13 FS_LTE_EBF_FDMIMO
conclusion: noted, approved: 100%, June 15; SI is completed

Samsung Exhibit 1025, Page 1877 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150735 TR 36.897 v 1.0.1 on Study on Elevation Beamforming/Full-Dimension (FD) MIMO for LTE, for approval Samsung TR 36.897 RAN1 REL-13 FS_LTE_EBF_FDMIMO
RAN1 TR 36.897 is provided for 1-step-approval
conclusion: approved as v13.0.0

RP-150783 Status report for SI Study on Elevation Beamforming/Full-Dimension (FD) MIMO for LTE Samsung Report REL-13 FS_LTE_EBF_FDMIMO
see RP-150734 instead (SI rapporteur: Nokia Networks)
conclusion: withdrawn

RP-150930 Revised SID: Study on Elevation Beamforming/Full-Dimension (FD) MIMO for LTE Samsung SID rev RAN1 REL-13 FS_LTE_EBF_FDMIMO
last approved SID: RP-141831; SI rapporteur: Nokia Networks, revised to clarify that TR 36.897 rapporteur is from Samsung
conclusion: approved

12.4.3 REL-13 Study on Licensed-Assisted Access using LTE [FS_LTE_LAA]

LSs:

RP-150543 LS regarding clarification of LBT Categories and LAA/802.11 Coexistence (IEEE802_LMSC_LS_150318; to: RAN, RAN1; cc: IEEE 802.19 Coexistence WG; contact: Chairman IEEE 802 LMSC) IEEE 802 LMSC
LSin REL-13 FS_LTE_LAA
LMSC = Local and Metropolitan Area Network Standards Committee; LBT = Listen Before Talk; RAN action requested; see RAN1 answer in RP-150551;
LS presented by RAN chair
conclusion: noted, see RAN1 answers in RP-150551 and RP-150553,
Qualcomm planned to draft an LS answer in RP-150773 but finally RP-150773 was withdrawn and no LS answer from RAN to RP-150543

RP-150551 Response LS to IEEE802_LMSC_LS_150318 = RP-150543 on Clarification of LBT Categories (R1-152182; to: IEEE802 LMSC; cc: RAN; contact: Qualcomm) RAN1
LSin REL-13 FS_LTE_LAA
LMSC = Local and Metropolitan Area Network Standards Committee; LBT = Listen Before Talk; no RAN action requested
conclusion: noted, no LS answer from RAN to RAN1

RP-150553 Response LS to IEEE802_LMSC_LS_150318 = RP-150543 on LAA-802.11 Coexistence (R1-152183; to: IEEE802 LMSC, RAN; cc: -; contact: Qualcomm) RAN1
LSin REL-13 FS_LTE_LAA
no RAN action requested
discussion: RAN chair: capabilities and workshop are still to be discussed
conclusion: noted, no LS answer from RAN to RAN1

RP-150566 LS as follow-up regarding LAA (IEEE802_LMSC_LS_150518; to: RAN, RAN1; cc: IEEE 802, IEEE 802.19 Coexistence WG; contact: Chairman IEEE 802 LMSC) IEEE 802 LMSC
LSin REL-13 FS_LTE_LAA
LAA = License Assisted Access; RAN action requested;
LS presented by RAN chair
suggesting one day workshop hosted by IEEE 802 on Thursday 16 July, 2015
conclusion: noted, finally no LS answer but see LSout RP-151095

RP-150570 Response LS to IEEE802_LMSC_LS_150518 = RP-150566 related to LAA-802.11 Coexistence (R1-153659; to: IEEE 802 LAN/MAN Standards Committee; cc: RAN; contact: Qualcomm) RAN1
LSin REL-13 FS_LTE_LAA
no RAN action requested;
conclusion: noted, no LS answer to RAN1

RP-150588 On LAA capabilities & scope RAN chairman (Qualcomm) Disc REL-13 FS_LTE_LAA

Samsung Exhibit 1025, Page 1878 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

What will happen when 3GPP defines the new 5 GHz band(s). Will it be possible to have 3GPP release-13 compliant products that operates in this band but do not support the LAA features? Answer: No

discussion: RAN chair: suggests to send an LS to IEEE on these aspects
Deutsche Telekom: multiple LBT schemes?
RAN chair: no LBT is not the only thing, there are also others
RAN chair: what is coming out of the follow-up WI of the SI will be mandated
Deutsche Telekom: there may be harder regional coexistence requirements
RAN chair: LBT will be mandatory, not with FGI bit/capability bit; 3GPP solution will have to work with LBT
Telefonica: there is a group around using the term LTE-U which confuses peoples (would be better if LTE-U forum would use a different name)
Panasonic: we should add some clarification into the LS
Panasonic: FGI bit/capability applies to UE side. 3GPP is usually not mandating eNB behaviour. But here we do it. Therefore, we should add a clarification that mandatory applies to both eNB and UE into the LS.
RAN chair: a 3GPP REL-13 compliant product operating in unlicensed band has to use the LAA feature (not to implement and switch it off); this applies to UE and eNode B
RAN chair: we do not need an LS
Orange: would prefer to have an LS

conclusion: revised in RP-151031, RAN chairman will draft an LS to IEEE in RP-151032

RP-151031 On LAA capabilities & scope RAN chairman (Qualcomm) Disc REL-13 FS_LTE_LAA
conclusion: revised in RP-151096

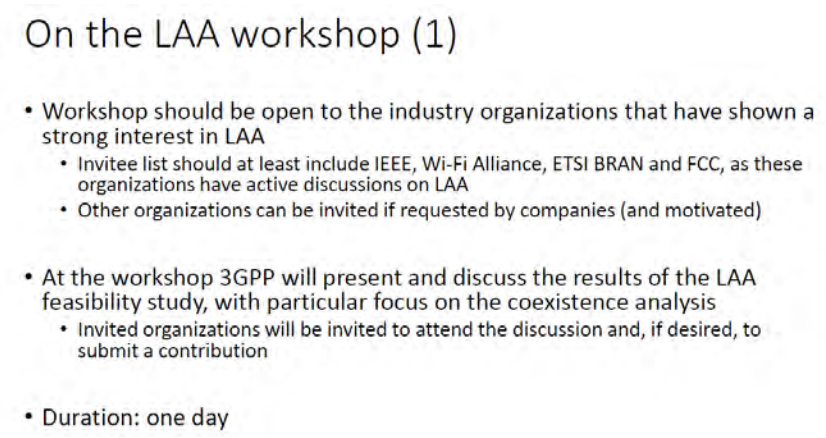
RP-151096 On LAA capabilities & scope RAN chairman (Qualcomm) Disc REL-13 FS_LTE_LAA
conclusion: agreed

RP-151032 Draft LS on LAA capabilities and scope (to: IEEE, WFA; cc: -; contact: RAN chairman (Qualcomm) RAN chairman (Qualcomm) LSout REL-13 FS_LTE_LAA
conclusion: revised in RP-151097

RP-151097 LS on LAA capabilities and scope (to: IEEE 802 LMSC, Wi-Fi Alliance; cc: -; contact: RAN chairman (Qualcomm)) RAN LSout REL-13 FS_LTE_LAA
revision of RP-151032; has RP-151096 as attachment
conclusion: at first RP-151097 was approved in the meeting but as it has a wrong meeting header it was revised in RP-151115

RP-151115 LS on LAA capabilities and scope (to: IEEE 802 LMSC, Wi-Fi Alliance; cc: -; contact: RAN chairman (Qualcomm)) RAN LSout REL-13 FS_LTE_LAA
revision of RP-151097 which had the wrong meeting header; has RP-151096 as attachment
conclusion: approved

discussion about an LAA workshop:
RAN chair: made a proposal for a workshop in June via email after RAN #67 but this was not accepted, proposed July time frame from IEEE is not possible but would like to invite for a workshop now:



Samsung Exhibit 1025, Page 1879 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

On the LAA workshop (2)

- Available schedule options (given the constraints in the following slide)

Week of Aug 17, ETSI	Early in the week or mid-week. Some impact to some RAN1 delegate schedule
Aug. 31 (Mon), China	It will be tight for few IEEE delegates that attend the IEEE SA meeting in Tokyo from Tuesday and are interested in the workshop, but it is doable. (Assumes that the relevant Asian organizations are also invited)
Sep. 10 (Thur), ETSI	Some impact to the travel schedule of both RAN and IEEE delegates that will have meetings the week after

On the LAA workshop (3)

- 3GPP schedule constraints
  - Meeting to be announced at least 21 days before
  - Should avoid summer break (especially given the short notice)
  - Should minimize impact to RAN WG meetings in August
  - Should minimize impact to RAN / 5G workshop in September
- Other schedule constraints
  - Sep 13-18, IEEE Wireless Interim, Bangkok
  - Sep 1-3, IEEE-SA Standards Board meeting, Tokyo
  - Sep 7, National holiday in US (Labor Day)
  - Sep 21-13, National holiday in JP (Silvery Week)

RAN5 chair: would like to invite WBA as well
GSMA: GSMA would like to be invited as well
Deutsche Telekom: supports to have the workshop but wondering why FCC is explicitly mentioned, there are discussions with other regulators as well, would like to see also German regulator invited
OFCOM: would like to be invited as well
Ericsson: European regulators are all in ETSI BRAN so inviting ETSI BRAN would invite all of them
Deutsche Telekom: if this is the case, that's fine for us; we could also invite CEPT as they also have discussions
Broadcom: 2 days workshop would allow more discussion among organizations
Sprint: to explain why FCC is invited, FCC has explicitly asked some questions to the industry and some companies replied already; will inputs to workshop be on company based?
RAN chair: would be too many inputs, a 3GPP document (SI output) and each organization can have an own input
Qualcomm: fully supports to have the workshop, the question is whether the workshop will modify 3GPP specs and our understanding is no
Ericsson: has the same understanding, this is not a technical WG meeting
ALU: agrees
RAN chair: yes, workshop will not take normative decisions
Orange: objective of the workshop has to be clarified that this is an informative exchange with questions and answers

RAN chair: different options for the workshop (we will come back later in the week to decide):
- week before WG in Aug. (at ETSI): week of 17.08.15
- Monday after WG meeting in China: Mon 31.08.15
- Thu before TSG #69 at ETSI: Thu 10.09.15

RP-151094 Draft LS on LAA on workshop (to: IEEE; cc: -; contact: RAN chairman (Qualcomm) RAN chairman (Qualcomm) LSout
discussion: Orange: prefers Sep. option
RAN chair: we will go for workshop on Sep.10, 2015 at ETSI?
Sprint: does not see an answer to decline the July invitation

Samsung Exhibit 1025, Page 1880 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN chair: as this is going others as well we do not answer this here, we could have another one but IEEE was already orally informed
CableLabs: LS does not say that there is no spec impact
RAN chair: is sufficiently clear from "The goal of the workshop is to exchange views and information on LAA."
Microsoft, KDDI, NEC: prefers Aug. 31, 2015
RAN chair: will mean invitation to Asian regulators as well
ALU, Blackberry, Ruckus, CableLabs: also prefer Sep. 10,2015
Blackberry: rebooking flights for Aug. will involve additional costs
Deutsche Telekom: having it in Phoenix on Sat before RAN is not possible?
RAN chair: no, because IEEE has a meeting in Bangkok starting on Sunday
Sprint: suggests show of hands between 31.08.15 and 10.09.15
CableLabs: why not on Sep.10, 2015 in the US?
RAN chair: because we can host it at ETSI i.e. have already a host

show of hands:
Aug.31, 2015 in China, host: Huawei: 22
Sep.10, 2015 in Europe, host: ETSI: 15
=> Mon Aug.31, in China
Blackberry: any problems to have it on Sat Aug,29, in China?
Cable Labs: we prefer Monday
Panasonic: prefers Saturday (more time before submission deadline Sep. 2 of 5G workshop)
Samsung: companies would have additional costs (when going for Monday)
ALU: prefers Sat as getting home 2 days earlier
Huawei: will regulators work on Sat?
Ericsson: they would have to travel on week-ends anyway (if Monday is selected)
conclusion: workshop will be on Sat. 29.08.2015 hosted by Huawei, CCSA will be added to the final LS which will be in RP-151095 and is approved (unseen);
will be provided when invitation is available and links can be included in RP-151095

RP-151095 LS on 3GPP RAN Workshop on License-Assisted Access (LAA) (to: IEEE 802 LMSC, Wi-Fi Alliance, ETSI BRAN, FCC, Wireless Broadband Alliance, GSMA, OFCOM, CCSA; cc: -; contact: Qualcomm) RAN LSout REL-13 FS_LTE_LAA
revision of RP-151094; links to invitation and registration to be added before LS is made available
conclusion: approved (LS Tdoc was provided on 24.06.15 via the RAN reflector)

RP-150773 Draft reply LS to IEEE802_LMSC_LS_150318 = RP-150543 on LAA-802.11 coexistence (to: IEEE 802 LMSC; cc: RAN1; contact: Qualcomm) Qualcomm LSout REL-13 FS_LTE_LAA
conclusion: withdrawn (Tdoc number was misused)

RP-150545 Reply LS to RP-150505 on Licensed-Assisted Access (BRAN(15)000015r2; to: RAN, RAN1; cc: -; contact: Cisco) ETSI TC BRAN LSin REL-13 FS_LTE_LAA
RAN action requested
conclusion: noted, no LS answer
but Huawei drafted a new LS to ETSI BRAN in RP-150706

RP-150706 Draft LS to ETSI BRAN on LAA Huawei, Ericsson LSout REL-13 LTE_LAA
LS to send the approved LAA TR and WID to ETSI BRAN; note: LAA TR and new WID are submitted to RAN #68 for approval
discussion: Dish Networks: will public enquiry comments be taken into account?
Huawei: yes
Telecom Italia: will TR be sufficient to address coexistence topic in ETSI BRAN?
Huawei: is a collection of our technical analysis in 3GPP and should be a sufficient basis
RAN chair: he means whether it will address the UL discussion already
conclusion: revised in RP-151033

RP-151033 Draft LS to ETSI BRAN on LAA Huawei, Ericsson LSout REL-13 LTE_LAA
will include approve LAA SI TR and new WID
conclusion: revised in RP-151098

RP-151098 LS on Licensed-Assisted Access (to: ETSI BRAN; cc: -; contact: Huawei) RAN LSout REL-13 LTE_LAA
revision of RP-151033; has RP-150879 (TR 36.889) and RP-151045 (LAA WID) as attachments

Samsung Exhibit 1025, Page 1881 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

Status:

RP-150624 Status report for SI Study on Licensed-Assisted Access using LTE; rapporteur: Ericsson RAN1 Report REL-13 FS_LTE_LAA
discussion: Telefonica: We are not clear that the uplink part is in sufficient detail in the TR to proceed to a work item including the uplink part and believe that a discussion in RAN plenary is merited on this point.
conclusion: noted, approved: 100%, June 15; SI completed

Other inputs:

RP-150879 TR 36.889 v1.0.1 on Feasibility Study on Licensed-Assisted Access to Unlicensed Spectrum; for approval Ericsson TR36.889RAN1 REL-13 FS_LTE_LAA
RAN1 TR is provided for 1-step approval
conclusion: approved as v13.0.0

12.4.4 REL-13 Study on possible additional configuration for LTE TDD [FS_LTE_TDD_add_config]

Note: This is a SI (latest SID: RP-142248) under RAN leadership. The last agreed TR 36.825 before RAN #68 was in v0.1.1 in RP-150519.
Rapporteur of this SI: Hiromasa Umeda (NTT DOCOMO), email:umedahi@nttdocomo.com ;
rapporteur of TR 36.825: Zukang Shen (CATT), email: shenzukang@catt.cn

treated on Monday of RAN #68:

RP-150805 Status report for SI: Study on possible additional configuration for LTE TDD NTT DOCOMO Report REL-13 FS_LTE_TDD_add_config
SI under RAN leadership
conclusion: noted, approved: 35%, Sep.15

RP-150652 Revised SID: Study on possible additional configuration for LTE TDD CATT, CATR, NTT DoCoMo SID revRAN REL-13 FS_LTE_TDD_add_config
last approved SID: RP-142248
conclusion: approved

RP-150653 Email discussion summary on simulation assumptions for FS_LTE_TDD_add_config: Co-existence and performance set 2 CATT Report REL-13 FS_LTE_TDD_add_config
Email discussion summary on simulation assumptions for co-existence and performance set 2
conclusion: revised into a TP for the TR 36.825

RP-150985 TP to TR 36.825 v0.1.1 on simulation assumptions for FS_LTE_TDD_add_config: Co-existence and performance set 2 CATT TP 36.825 REL-13 FS_LTE_TDD_add_config
Email discussion summary RP-150653 is transferred into this TP to be captured in TR 36.825
conclusion: approved

during RAN #68:

The SI FS_LTE_TDD_add_config is led by RAN and due to a large number of inputs to this topic, it was handled during RAN #68 in several ad hoc sessions chaired by Balazs Bertenyi (Nokia Networks) who provided the report RP-1540983. For convenience the report of RP-150983 is copied into Annex H.

treated on Thursday of RAN #68:

RP-150983 Report of ad hoc on REL-13 Study on possible additional configuration for LTE TDD Nokia Networks (ad hoc convener) Report REL-13 FS_LTE_TDD_add_config
for RAN approval
conclusion: approved
Note: For convenience a copy of RP-150983 is provided in Annex H together with all documents treated in this ad hoc.

RP-150984 TR 36.825 v0.2.0 for Feasibility study on possible additional configuration for LTE TDD CATT TR 36.825 REL-13 FS_LTE_TDD_add_config
summarizing the results of RAN #68 with revision marks compared to v0.1.1 in RP-150519
conclusion: agreed

Samsung Exhibit 1025, Page 1882 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

12.4.5 REL-13 Study on Support of single-cell point-to-multipoint transmission in LTE [FS_LTE_SC_PTM]

RP-150695 Status report for SI: Study on Support of single-cell point-to-multipoint transmission in LTE, rapporteur: Huawei RAN2 Report REL-13 FS_LTE_SC_PTM
conclusion: noted, approved: 100%, June 15; SI is completed

RP-150697 TR 36.890 v1.0.0 on Support of single-cell point-to-multipoint transmission in LTE, for approval Huawei TR 36.890 RAN2 REL-13 FS_LTE_SC_PTM
RAN2 TR 36.890 is provided for 1-step approval
conclusion: approved as v13.0.0

12.4.6 REL-13 Study on Extension of Dual Connectivity in E-UTRAN [FS_LTE_dualC_ext]

RP-150849 Status report for SI Study on Extension of Dual Connectivity in E- UTRAN; rapporteur: Samsung RAN3 Report REL-13 FS_LTE_dualC_ext
conclusion: noted, approved: 100%, June 15; SI is completed

RP-150852 TR 36.875 v2.0.0 on Extension of Dual Connectivity in E-UTRAN Samsung TR 36.875 RAN3 REL-13 FS_LTE_dualC_ext
conclusion: Tdoc is withdrawn as it does not include what was requested; see RP-150939 instead

RP-150939 TR 36.875 v2.0.0 on Extension of Dual Connectivity in E-UTRAN Samsung TR 36.875 RAN3 REL-13 FS_LTE_dualC_ext
RAN3 TR 36.875 is provided for approval
conclusion: approved as v13.0.0

12.4.7 REL-13 Study on further enhancements of small cell higher layer aspects for LTE [FS_LTE_SC_enh2_hilayer]

RP-150683 Status report for SI: Study on further enhancements of small cell higher layer aspects for LTE, rapporteur: Huawei RAN3 Report REL-13 FS_LTE_SC_enh2_hilayer
conclusion: noted, approved: 30%, Sep.15

12.4.8 REL-13 Study on performance enhancements for high speed scenario in LTE [FS_LTE_high_speed]

RP-150793 Status Report for SI: Study on performance enhancements for high speed scenario in LTE, rapporteur: NTT DOCOMO, INC. RAN4 Report REL-13 FS_LTE_high_speed
conclusion: noted, approved: 40%, Sep.15

12.4.9 REL-13 Study on regulatory aspects for flexible duplex for E-UTRAN [**New SI:** FS_LTE_flex_duplex_reg]

Note: This is a SI (latest SID: RP-150470) under RAN leadership. TR 36.882 is allocated for this SI but no approved version existed before RAN #68.
Rapporteur of this SI and the TR: Yunjung Yi (LG Electronics), email: yunjung.yi@lge.com.

LSs:

RP-150561 Response LS to RP-150509 on 3GPP RAN requesting information on the current regulations regarding regional/band-specific regulatory possibilities/constraints of utilizing UL spectrum for transmission from the network to UEs
(ECC-PT1(15)066_A06; to: RAN; cc: ETSI TC ERM; ETSI TC MSG TFES; contact: Agence nationale des fréquences) CEPT ECC PT1
LSin REL-13 FS_LTE_flex_duplex_reg
RP-150509 was sent from RAN #67; ECC = Electronic Communications Committee; no explicit RAN action requested
discussion: Telecom Italia: not allowed to use the FDD uplink as downlink nor the other way around
conclusion: noted, no LS answer

RP-150575 Reply LS to RP-150509 on 3GPP RAN Study on regulatory aspects for flexible duplex for E-UTRAN (FCC_150605; to: RAN; cc: -; contact: FCC Chief Engineer) FCC
LSin REL-13 FS_LTE_flex_duplex_reg
no explicit RAN action requested
discussion: RAN chair: in some bands it is allowed, in some bands it is not

Samsung Exhibit 1025, Page 1883 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: noted, no LS answer

RP-150576 Reply LS to RP-150509 on 3GPP RAN Study on regulatory aspects for flexible duplex for E-UTRAN (ARIB_150612; to: RAN; cc: -; contact: Fujitsu) ARIB
LSin REL-13 FS_LTE_flex_duplex_reg
no explicit RAN action requested;
discussion: Fujitsu: using UL spectrum as DL is not allowed
conclusion: noted, no LS answer

Other inputs:

RP-150775 Discussion on Korean regulation for flexible duplex operation LG Electronics Disc REL-13 FS_LTE_flex_duplex_reg
"it can be interpreted that Korean regulations allows relay stations, a kind of the network device deployed by the operator, to transmit in LTE FDD UL spectrum as far as it satisfies the corresponding conditions that are basically applied to the transmission from mobile stations in LTE FDD UL spectrum in terms of aspects such as TX power, frequency tolerance, modulation, etc."
conclusion: noted

RP-150700 Regulation environment analysis for flexible duplex Huawei, HiSilicon Disc REL-13 FS_LTE_flex_duplex_reg
Proposal: to capture the following text in the technical report TR36.882
"Current regulations for uplink spectrum are based on studies that assume mobility with a large number of transmitters on the ground. These studies drew conclusions on in-band as well as adjacent channel coexistence. Current regulations therefore are based on studies that don't allow concluding on the feasibility of fixed above-ground base station transmissions in spectrum where other base stations receive."
discussion: RAN chair: harmonized text proposal to include all regulator replies into the TR would be useful
conclusion: noted

Email discussion report:

RP-150774 E-mail discussion summary on study on regulatory aspects for flexible duplex for E-UTRAN LG Electronics Report REL-13 FS_LTE_flex_duplex_reg
discussion: RAN chair: plan it to have an email discussion to capture regulatory aspects in the TR, we could then close the TR; we can then consider future SI/WI proposals for WGs as any other SI/WI proposal (as at least in one country it is possible)
Ericsson: we summarize the regulatory answers only?
RAN chair: yes
RAN: we could also stop the SI and just minute that in some countries it is possible
ALU: we do need to be careful of not interpreting regulator's output when putting it in the TR
LG: would still capture the results in the TR
Huawei: supports to copy the LSs and our TP in the TR, Korean input was not an input from the regulator
CMCC: as TR is the output of the SI it should be captured
LG: expects an LS answer from Korean regulator, wants to prepare the TR
Ericsson: but then we do not include the Korean Tdoc just the regulators inputs
LG: since we set the deadline to Sep. we need to wait until then
RAN chair: we cut and paste regulatory answers into the TR
Orange: for the moment in one country it is allowed
Fujitsu: ARIB input is endorsed by Japanese regulator
conclusion: noted; we cut and paste regulatory answers into the TR (also those that come until Sep.15), as conclusion it will be added that at least in one country and in some bands flexible duplex operation is possible

RP-150880 Report or email discussion about Study on regulatory aspects for flexible duplex for E-UTRAN LG Electronics Report REL-13 FS_LTE_flex_duplex_reg
conclusion: withdrawn, see RP-150774 instead

Status:

RP-150770 Status report for SI: study on regulatory aspects for flexible duplex for E-UTRAN LG Electronics Report REL-13 FS_LTE_flex_duplex_reg

Samsung Exhibit 1025, Page 1884 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

SI under RAN leadership
conclusion: noted, approved: 5%, Sep.15

TR:

RP-150772 Draft TR skeleton 36.882 v0.0.1 for study on regulatory aspects for flexible duplex for E-UTRAN LG Electronics TR 36.882 RAN REL-13 FS_LTE_flex_duplex_reg
RAN TR is provided for agreement; note: This is a RAN led SI
conclusion: postponed as structure will change

12.4.10 REL-13 Study on Latency reduction techniques for LTE [New SI: FS_LTE_LATRED]

RP-150780 Status report for SI Study on Latency reduction techniques for LTE; rapporteur: Ericsson RAN2 Report REL-13 FS_LTE_LATRED
conclusion: noted, approved: 10%, June 16

12.4.11 REL-13 Study on further Enhancements of Minimization of Drive Tests for E-UTRAN [New SI: FS_LTE_eMDT2]

RP-150806 Status Report for SI: Further Enhancements of Minimization of Drive Tests for E-UTRAN RAN2 Report REL-13 FS_LTE_eMDT2
conclusion: noted, approved: 70%, Sep.15

12.4.12 REL-13 Study on Downlink Multiuser Superposition Transmission for LTE [New SI: FS_LTE_MUST]

RP-150857 Status Report for SI: Study on Downlink Multiuser Superposition Transmission; rapporteur: Mediatek RAN1 Report REL-13 FS_LTE_MUST
conclusion: noted, approved: 30%, Dec.15

RP-150747 Clarification of the MUST study item scope Intel Corporation Disc REL-13 FS_LTE_MUST
proposal to capture that both PDSCH and PMCH physical channels should be considered for MUST evaluations
conclusion: noted

RP-150979 Multi-rate superposition transmission of PMCH ZTE Disc REL-13 FS_LTE_MUST
Superposition transmission for PMCH was discussed, with the elaboration of similarity and difference between PDSCH superposition. Preliminary simulation results were presented which showed performance benefit of MUST for PMCH, according to the metric being proposed
conclusion: noted

RP-150860 Motivation on the Study of PMCH using MUST Mediatek Disc motiv REL-13 FS_LTE_MUST
related to RP-150858
discussion: Nokia Networks: every single UE is supporting this feature then? Trying to understand in how far eMBMS service has to be planned
Ericsson: is one way of MIMO for MBMS but would not be backward compatible; underlay low power has no SFN gain
NTT DOCOMO: network can chose whether to use it
Ericsson: ok, but what is the use case?
Qualcomm: agrees the use case is not clear and sees also a technical problem (so far same precoding assumption ...)
AT&T: thinks we need to study this topic
Mediatek: for UE decoding both layers it requires a new capability
Ericsson: sees the time budget impacts
conclusion: noted, offline discussion (rapporteur: NTT DOCOMO)

RP-151079 Way Forward on PMCH for MUST NTT DOCOMO Disc REL-13 FS_LTE_MUST
discussion: Huawei: we would like to remove "/conclusion"
NTT DOCOMO: ok
AT&T: supports this
Mediatek: 1 week email discussion in RAN1 planned
conclusion: revised in RP-151099 (to remove "/conclusion"

Samsung Exhibit 1025, Page 1885 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151099 Way Forward on PMCH for MUST NTT DOCOMO, AT&T, Huawei, HiSilicon, Intel, MediaTek, ZTE Disc REL-13 FS_LTE_MUST
proposal:
- *According to the conclusion at RAN1#81 meeting, start an email discussion on evaluation assumptions of superposition of PMCH and PMCH.*
- *Each company is free to submit tdocs with evaluation results on the superposition of PMCH and PMCH, but RAN1 does not discuss these tdocs before drawing observations for TR on the results on the superposition of PDSCH and PDSCH.*
- *Modify the existing 2nd objective in the revised SID as follows:*
  "Investigate the potential gain of the identified transmission schemes in the 1st objective for the superposition of PMCH and PMCH within an MBSFN area (not necessarily within one cell) as a second priority to the superposition of PDSCH and PDSCH if time permits.

conclusion: way forward endorsed

RP-150858 Revised SID: Study on Downlink Multiuser Superposition Transmission for LTE Mediatek SID rev RAN1 REL-13 FS_LTE_MUST
last approved SID: RP-150496
conclusion: revised in RP-151020

RP-151020 Revised SID: Study on Downlink Multiuser Superposition Transmission for LTE Mediatek SID rev RAN1 REL-13 FS_LTE_MUST
conclusion: revised in RP-151100 (to adapt acc. to RP-151099)

RP-151100 Revised SID: Study on Downlink Multiuser Superposition Transmission for LTE Mediatek SID rev RAN1 REL-13 FS_LTE_MUST
conclusion: approved

12.4.13 REL-13 Study on Measurement gap enhancement for LTE [**New SI:** FS_LTE_meas_gap]

RP-150754 Status report for SI Study on Measurement gap enhancement, rapporteur: Intel Corporation RAN4 Report REL-13 FS_LTE_meas_gap
conclusion: noted, approved: 15%, Dec.15

Samsung Exhibit 1025, Page 1886 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

13 New Work Items/Study Items

Time budgets:
RAN #67 endorsed as outcome of the meeting: RP-150518.

RP-150982 Status of time budgets for RAN1/2/3/4 REL-12 & beyond WIs/SIs after RAN #68 RAN1/RAN2/RAN3/RAN4 chairmen Report REL-12 -
note: The status after RAN #67 was endorsed in RP-150518
conclusion: endorsed

13.1 New core functions

RP-151039 Way Forward on Rel-13 LTE items for RAN #68 Qualcomm, Ericsson, Vodafone, Nokia Networks, Huawei, DT, SouthernLINC, T-Mobile US, UK Home Office, HiSilicon, Sony, US Dept Commerce, CMCC, CATR, Interdigital, NEC Disc REL-13 -
LAA WI,
FD MIMO WI,
LTE V2X SI,
SCPTM WI
discussion: Qualcomm: proposal is still a bit unstable
Huawei: 3 SIs that have WIs now and should be prioritized
RAN1 chair: supports this proposal
NextNav: will have a SI that completes in Sep. for positioning that will have a WI with regulatory impact
Orange: some RAN2 impacts are no longer considered, this should be corrected
LG: impact of Wifi aggregation to be clarified by RAN2 chair
NTT DOCOMO: we need to clarify how far negative we go in RAN4
RAN4 chair: -3TU/-4TU in next quarter if the 3 WIs are taken
Sprint: are we adding another day to the RAN4 meeting in August
RAN1 chair: next year Q1/2016 V2X needs more discussion
Mediatek: better to consider potentially free time budget in Q4 for existing REL-13 WI to complete
conclusion: revised in RP-151080

RP-151041 Way Forward on Rel-13 LTE items for RAN #68 Intel, ITL, KDDI, SoftBank Mobile, SK Telecom, TeliaSonera, ZTE Disc REL-13 -
LAA WI (RAN1-led)
FD-MIMO WI (RAN1-led)
LTE V2X SI (RAN1-led)
Control Channel IM (RAN4-led)
discussion: RAN4 chair: 1TU in 1 RAN4 meeting enough to complete the WI for CH IM WI
Qualcomm: if single meeting , single WG it could be done under TEI
Intel: still work needed in 2016 but not shown
conclusion: revised in RP-151075

RAN chair: we should restrict the focus of further discussion on the 5 WIs/SIs of RP-151039/RP-151041
NEC: RAN3 only WIs are handled separately?
RAN chair: correct
CATT: any guidance on how far we can go negative?
RAN chair: no guidance, we have to avoid negative if possible, be reasonable
Samsung: is latency enhancements getting 1 TU?
RAN chair: there was no objection to this so far
Samsung: this is a REL-14 SI
Ericsson: existing WIs/SIs should be prioritized
Samsung: we do not need to discuss this now, can be decided in Sep.
Ericsson: does not like this approach
Qualcomm, TeliaSonera: support Ericsson
Samsung: we had temporary allocation for latency reduction last time so it is fair to decide in Sep.;

Samsung Exhibit 1025, Page 1887 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

finally Samsung withdrew their concern regarding Q4 latency enhancement time budget change
RAN chair: thanks, then we can go for the Q4 latency enhancement time budget change

RP-151075 Way Forward on Rel-13 LTE items for RAN #68 Intel Disc REL-13 -
revision of RP-151041
conclusion: noted

RP-151080 Way Forward on Rel-13 LTE items for RAN #68 Qualcomm, Ericsson, Vodafone, Nokia Networks, Huawei, DT, SouthernLINC, T-Mobile US, UK Home Office, HiSilicon, Sony, US Dept Commerce, CMCC, CATR, Interdigital, NECDisc REL-13 -
discussion: Orange: any allocations for RAN2 for V2X
conclusion: noted

13.1.1 WIs/SIs led by RAN1

LTE:

License-Assisted Access (LAA) for LTE:

RP-150704 Motivation for new work item proposal on Licensed-Assisted Access to Unlicensed Spectrum Huawei, Ericsson Disc motiv REL-13 -
motivation for RP-150625
discussion: Broadcom: last slide of motivation: "best effort" and what is work is not complete is unclear?
Mediatek: could we reconsider UL at the next plenary?
RAN chair: will be discussed at a later stage
Samsung: page 10 last sentence: how many possibilities for UL? 2?
Ericsson: is coming from the TR, scheduled and unscheduled system
Samsung: it does not say that UL scheme is difficult from DL
Ericsson: quicker channel access scheme for UL than for DL could be considered
Orange: SI focussed on coesistence with carrier on 3MHz, are we also considering multi-carrier over unlicensed spectrum?
Ericsson: does not think it would give different results
CableLabs: no conclusions taken on muticarrier in Fukuoka and will come back on it
RAN1 chair: we had some discussions about multi-carrier when defining simulation assumptions
CableLabs: agrees but multi-carrier was not simulated
conclusion: noted

RP-150625 New Work Item on Licensed-Assisted Access using LTE Ericsson, HuaweiWID (new) RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; follow-up WI for REL-13 SI FS_LTE_LAA (see AI 12.4.3); duplicated WI proposal in RP-150733;
conclusion: revised in RP-150981

RP-150981 New Work Item on Licensed-Assisted Access using LTE Ericsson, HuaweiWID new RAN1 REL-13 -
revision of RP-150625; new WI for LTE only; leading WG: RAN1; follow-up WI for REL-13 SI FS_LTE_LAA (see AI 12.4.3); duplicated WI proposal in RP-150733;
conclusion: revised in RP-151045

RP-151045 New Work Item on Licensed-Assisted Access using LTE Ericsson, HuaweiWID new RAN1 REL-13 -
revision of RP-150981; new WI for LTE only; leading WG: RAN1; follow-up WI for REL-13 SI FS_LTE_LAA (see AI 12.4.3); WI code to be used: LTE_LAA
conclusion: approved

RP-150733 New Work Item on Licensed-Assisted Access to Unlicensed Spectrum CableLabs WID new RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; follow-up WI for REL-13 SI FS_LTE_LAA (see AI 12.4.3); duplicated WI proposal in RP-150625; no motivation paper;
discussion: MCC: rapporteur missing
Ericsson: not clear what is different compared to the RP-150625
CableLabs: mandatory for UE to indicate permanent resource conflict
CableLabs: voice & video different from high density scenarios

Samsung Exhibit 1025, Page 1888 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN1 chair: agrees that coexistence is import, RAN1 SI had too many variations of scenarios so we should reduce the work load here in the WI
Orange: discussion in RAN2 which services would be mapped onto unlicensed spectrum did not conclude; both WIDs RP-150625 and RP-150733 seem to be very much RAN1 focussed, where would such an aspect be handled?
RAN2 chair: mapping on data radio bearers was concluded but not which MAC control elements to map to the bearer
RAN2 vice-chair (LG): open issue was left to stage 3 phase of WI
AT&T: mandatory signalling on licensed or unlicensed?

conclusion: not agreed, different WI proposal approved (see RP-151045)

RP-150592 Considerations on LTE-LAA WID scope and objectives Telecom Italia, Telefonica, Orange Disc REL-13 -

Proposal for definition of scope and objectives in case a new WI is proposed for approval after the conclusion of the Study on License Assisted Access

conclusion: revised in RP-151002

RP-151002 Considerations on LTE-LAA WID scope and objectives Telecom Italia, Telefonica, Orange Disc REL-13 -

proposal:

- *In order to allow timely standardization of LAA, Rel-13 LAA WI should work exclusively on the DL*
  - *UL could be standardized in future releases as a new WI on LAA Enhancement*
  - *LAA Enhancement including UL would benefit from further coexistence analyses*
- *In LAA operation, a carrier in an unlicensed band cannot be configured as a PCell/PSCell*
- *In LAA, UE behavior is specified assuming no transmission of the control signaling (e.g. current broadcast system information) on any unlicensed carrier*

discussion: Telecom Italia: worried about RAN1 impact on RAN2 and other WGs and we should focus on DL
Qualcomm: "was done for CA" is unclear
Telecom Italia: RAN focussed on 2DL/1UL first
RAN chair: signalling work was done with up to 5DL and 5DL, RAN4 perf. work focussed then on 2DL/1UL
Samsung: supports to focus on DL only
Huawei: agrees that RAN4 workload would increase if we do not limit
Vodafone: need to make sure that LBT will not limit us at the end
Telecom Italia: a lot of 3GPP members are also in ETSI BRAN, BRAN has deadline in Dec. and it is the question what we can complete in Dec.
Deutsche Telekom: focus on DL is ok but supports Vodafone that also UL needs to be supported in REL-13
Orange: we do not need to put UL in the LAA WI to be able to comment on ETSI BRAN aspects;
RAN chair: CIoT will not compete about time budgets with other WIs
ALU: agrees that we need to work on UL as well to address ETSI BRAN aspects
Telefonica: we could do the signalling also in REL-13 and the RAN4 RF/perf. work later
Vodafone: ETSI BRAN requires that we clarify how we continue with the UL, we cannot leave this open
RAN chair: we have to acknowledge that ETSI BRAN and our LAA WI discussion are coupled
RAN chair: WI without normative work on UL but addressing ETSI BRAN could be a middle ground that could be further discussed
Ericsson: would be unfortunate that when we do UL in REL-14 to have to redo the DL so we need to keep both in mind
RAN chair: agrees that basic forward capabilities should be considered as well
RAN chair: also further in-device coexistence aspects as mentioned by CableLabs could be considered

conclusion: noted

Vehicular to Vehicular (V2V) for LTE:

RP-150657 Motivation of Feasibility Study on LTE-based V2X Services CATT Disc motiv REL-13 -

motivation for RP-150778

discussion: Huawei: 2nd conclusion: so something could be done on top to D2D? By changing D2D we could fulfill SA1 requirements?

conclusion: noted

Samsung Exhibit 1025, Page 1889 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150777 Motivation for new SI: Feasibility Study on LTE-based V2X Services LG Electronics Disc motiv REL-13 -
motivation for RP-150778
discussion: NTT DOCOMO: can we reuse existing model for evaluation? what input from SA1 is required?
LG: proper channel model is needed (vehicles only on the road)
Mediatek: LS to SA was on V2V and now we consider V2X?; V2V is so far on unlicensed spectrum
Huawei: what changes were made to D2D to come to the numbers in the slide set?
Qualcomm: 5.9GHz for V2V is the target whether it is licensed or not is another question
conclusion: noted

RP-150778 New SI proposal: Feasibility Study on LTE-based V2X Services LG Electronics, CATT SID new RAN1 REL-14 -
new SI for LTE only; leading WG: RAN1; WI code to be used: LTE_V2X; this SI proposal was postponed at RAN #67 in RP-150499
conclusion: revised in RP-151029

RP-151029 New SI proposal: Feasibility Study on LTE-based V2X Services LG Electronics, CATT SID new RAN1 REL-14 -
new SI for LTE only; leading WG: RAN1; WI code to be used: LTE_V2X; this SI proposal was postponed at RAN #67 in RP-150499
discussion: Orange: better to mention V2I(infra-structure)/V2N(network) to match SA1 TR at all places where you have V2I at the moment and this will also require RAN2 budget
Samsung: objective 2./3. seem to imply 2 solutions
Orange: intention is to study different solutions
Huawei: that's a SI proposal
Samsung: we should rather work on a WI
Ericsson: in coverage to D2D is a 2nd solution as well, V2V over infrastructure exists today; V2V does not need to go directly from vehicle to vehicle so this is in line with SA1 terminology
RAN2 chair: we have no RAN2 time budget left
Telecom Italia: in RAN4 we go -3/-4TUs and in RAN2 we are strict so how are the procedures?
Mediatek: as different spectrum could be considered so coexistence to be considered
LG: dedicated spectrum to V2X so nocoexistence need to be considered
conclusion: revised in RP-151093

RP-151093 New SI proposal: Feasibility Study on LTE-based V2X Services LG Electronics, CATT SID new RAN1 REL-14 -
revision of RP-151029; new SI for LTE only; leading WG: RAN1; WI code to be used: LTE_V2X; this SI proposal was postponed at RAN #67 in RP-150499;
discussion: RAN2 chair: with this WI we go into minus and no time will be available in RAN2 next quarter
Verizon: what about indoor positioning?
RAN chair: as it has some regulatory relation it will not be limited by time budget constraints
RAN2 chair: this is a strange approach: are we at first loading up to the maximum and then add mandatory things on top?
NextNav: it is not yet clear how many TUs indoor positioning will take, we can see in Sep.
LG: note at the end of objective section needs to be updated: It is up to SA WG(s) how to name the interface for direct vehicle-to-vehicle communication
conclusion: revised in RP-141109

RP-151109 New SI proposal: Feasibility Study on LTE-based V2X Services LG Electronics, CATT SID new RAN1 REL-14 -
revision of RP-151093; new SI for LTE only; leading WG: RAN1; WI code to be used: LTE_V2X; this SI proposal was postponed at RAN #67 in RP-150499; target already in REL-14 (RAN #72)
conclusion: approved
RAN1 chair: will revisit time budget allocation next year

RP-150779 Time plan for the new SI proposal on LTE-based V2X LG Electronics, CATT Disc REL-13 -
conclusion: not treated (for information only)

Samsung Exhibit 1025, Page 1890 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150626 Motivation for LTE-based V2V Work Item Qualcomm Disc motiv REL-13 -
motivation for RP-150703 ?
conclusion: noted

RP-150703 New work item proposal: LTE-based V2V Huawei WID new RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_V2V;
discussion: MCC: rapporteur missing
Meditek: coexistence with existing system considered?
Panasonic: No description on synchronisation improvement in the WID. Related to the target frequency and velocity in V2X, synchronization is quite an important area. No description is a bit strange.
LG: coverage scenario was first objective ; sees a problem between REL-13 and REL-14 is synchronisation aspect is different
ALU: a lot of evaluation to be done so a SI to begin with seems to be more appropriate
Broadcom: other things also to be done before having a WI
Sasmung: we may come to contraditions with REL-14 SA1 requirements if we start a REL-13 WI in RAN
Vodafone: we need to do some work for it in REL-13 as the industry is not waiting for us
Orange: not clear how continue with this, e.g. spectrum aspects (higher or lower bands targeted), so SI would be the best way
Blackberry: supports Orange, premature to start a WI in RAN and SI in SA1 needs also more work
Nokia Networks: SA1 work is on V2X, this WI is just on V2V
Ericsson: we were also supporting a WI, 2 sides on the one hand addressing moving ITS requirements and on the other hand we have to be careful with a WI, so maybe a shorter SI is better
General Motors: DSLC and LTE are both important and we also need to address V2V and V2X
Deutsche Telekom: we need to have a clear sign that 3GPP is addressing this market with LTE so a short SI with a clear REL-14 WI may be a compromise
Samsung: scope of proposed WI is very wide
RAN chair: a 6 months SI may be a possible option
Qualcomm: we could use the objectives of RP-150703 to formulate a SI
Vodafone: would prefer to go faster
Mediatek: V2V is so far not targeting operator scenario
Orange: does not see that there is just an urgency on V2V, all scenarios have to be covered
ALU: using WI opjectives to formulate a SI may be useful
Nokia Networks: as WI is on V2V but we heard that we have to go beyond ...
RAN chair: we can draft a SID without limiting it to a certain base
conclusion: revised in RP-151005

RP-151005 New work item proposal: LTE-based V2V Huawei, Qualcomm, CATR WID new RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_V2V;
conclusion: rejected

RP-151082 Project management of V2X in TSG RAN Vodafone Disc REL-13 -
related to new SI proposal
discussion: AT&T: when PC5 aspects are done you want to start a WI even of Uu aspect is ongoing?
Vodafone: yes
RAN1 chair: REL-13 finalization will get priority
conclusion: noted

Elevation Beamforming/Full-Dimension (FD) MIMO for LTE:

RP-150785 Motivation for WI Proposal: Elevation Beamforming/Full-Dimension (FD) MIMO for LTE Samsung Disc motiv REL-13 -
motivation for RP-150784
conclusion: noted

RP-150784 New WID Proposal: Elevation Beamforming/Full-Dimension (FD) MIMO for LTESamsung WID new RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; follow-up WI of REL-13 SI FS_LTE_EBF_FDMIMO (see AI 12.4.2); duplicated WI proposal in RP-150736

Samsung Exhibit 1025, Page 1891 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: revised in RP-151028

RP-151028 New WID Proposal: Elevation Beamforming/Full-Dimension (FD) MIMO for LTE Samsung WID new RAN1 REL-13 -
conclusion: revised in RP-151085

RP-151085 New WID Proposal: Elevation Beamforming/Full-Dimension (FD) MIMO for LTESamsung WID new RAN1 REL-13 -
revision of RP-151028; new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_EBF_FDMIMO; follow-up WI of REL-13 SI FS_LTE_EBF_FDMIMO (see AI 12.4.2);
conclusion: approved

RP-151003 Elevation Beamforming/Full-Dimension (FD) MIMO for LTE and AAS work in RAN4 Ericsson Disc REL-13 -
Further information on the details on Elevation Beamforming/Full-Dimension (FD) MIMO for LTE and AAS work; related to new WI proposal RP-150784
conclusion: not treated

RP-150736 New WI proposal: Elevation Beamforming/Full-Dimension (FD) MIMO for LTE Nokia Networks WID new RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; follow-up WI of SI REL-13 FS_LTE_EBF_FDMIMO (see AI 12.4.2); duplicated WI proposal in RP-150784, no motivation paper
conclusion: withdrawn

RP-150739 Consideration on R13 enhancement for TDD EB/FD-MIMO ZTE Disc REL-13 -
propose to specify enhancements related to SRS and non-codebook based CSI reporting in Rel-13 EB/FD-MIMO work item
discussion: Huawei: 4TX antenna switching work is rather small
conclusion: noted

RP-150810 Discussion on Streamlining R13/R14 MIMO Enhancements CMCC Disc REL-13 -
conclusion: withdrawn

LTE bandwidth flexibility enhancements:

RP-150702 Motivation for new work item on LTE bandwidth flexibility enhancements Huawei, China Unicom, HiSilicon Disc motiv REL-13 -
motivation for RP-150701
discussion: Ericsson: not clear whether UE supports or not
conclusion: noted

RP-150701 New work item proposal: LTE bandwidth flexibility enhancements Huawei, China Unicom, HiSilicon WID new RAN1 REL-13 -
new WI for LTE only; leading WG: RAN1; WI code to be used: LTE_flex_BW; this WI proposal was postponed at RAN #67 in RP-150513
conclusion: postponed

Ultra dense network:

RP-150612 Initial analysis on ultra dense network ZTE Disc REL-14 -
discussion: Qualcomm: increasing number of nodes but not number of UEs?
conclusion: noted

LTE massive connectivity:

RP-150743 Discussion on LTE-based massive connectivity techniques ZTE Disc REL-13 -
discussion: Qualcomm: why is there LTE in the title?
conclusion: noted

UTRA & LTE:

Interference coordination semi-static spectrum refarming (SSR):

RP-150750 Motivation for New SI Interference coordination for SSR between UMTS and LTE China Unicom Disc motiv REL-13 -
SSR = semi-static spectrum refarming
conclusion: noted

Samsung Exhibit 1025, Page 1892 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150749 New SID Proposal: Study on interference coordination for semi-static spectrum refarming between UMTS and LTE China Unicom SID new RAN1 REL-13 -
new SI for UTRA & LTE; leading WG: RAN1; WI code to be used: FS_UTRA_LTE_ICSSR; this SI proposal was postponed in RP-150503;
discussion: MCC: target dates missing
conclusion: postponed

UTRA:

Small Data enhancements:

RP-150847 Motivation for New WI: Small Data Coverage Enhancements for UMTS Ericsson Disc motiv REL-13 -
motivation for RP-150848
conclusion: noted

RP-150848 New WI proposal: Small Data Coverage Enhancements for UMTS Ericsson WID new RAN1 REL-13 -
new WI for UTRA only; leading WG: RAN1; follow-up WI of SI FS_UTRA_SDATA (AI 12.2.2); WI code to be used: UTRA_SDATA_COV; see related WI proposal in RP-150853 (but for RAN2); no perf. part
discussion: Huawei: Why is one point of the SI now put under coverage enhancements?
Ericsson: We are free to rename this.
Huawei: SI done no downselection so far.
Nokia Networks: continueing the SI may be another option to come up with a better focussed WI
conclusion: revised in RP-151091

RP-151091 New WI proposal: RAN1 small data transmission enhancements for UMTS Ericsson WID new RAN1 REL-13 -
revision of RP-150848; new WI for UTRA only; leading WG: RAN1; follow-up WI of SI FS_UTRA_SDATA (AI 12.2.2); WI code to be used: UTRA_SDATA_RAN1; no perf. part
discussion: RAN chair: only 3 companies
conclusion: postponed

DL enhancements:

RP-150787 Motivation for new work item proposal: Downlink TPC Enhancements for UMTS Huawei, HiSilicon Disc motiv REL-13 -
motivation for RP-150786
conclusion: noted

RP-150786 New work item proposal: Downlink TPC Enhancements for UMTS Huawei, HiSilicon WID new RAN1 REL-13 -
new WI for UTRA only; leading WG: RAN1; follow-up WI of REL-13 SI FS_UTRA_EDL (AI 12.2.1); duplicated WI proposal in RP-150718 (but for RAN2);
discussion: MCC: only 2 supporting companies
conclusion: revised in RP-151044

RP-151044 New work item proposal: Downlink TPC Enhancements for UMTS Huawei, HiSilicon WID new RAN1 REL-13 -
revision of RP-150786; new WI for UTRA only; leading WG: RAN1; follow-up WI of REL-13 SI FS_UTRA_EDL (AI 12.2.1); WI code to be used: UTRA_EDL_TPC;
discussion: RAN4 chair: has also RAN4 impact, how much do we overspend?
RAN chair: is not nicew that UMTS has suddenly no space
conclusion: approved

DL 256 QAM for UMTS:

RP-150789 Motivation for new work item proposal: DL 256 QAM for UMTS Huawei, HiSilicon Disc motiv REL-13 -
motivation for RP-150788
discussion: Huawei: some scenarios where the UE could benefit from a higher modulation
Nokia Networks: gains with UMTS smaller than with LTE
ALU: graph to motivate this seems WI not be realistic and impact on RAN4 is bigger so we need to be careful before considering such a WI
Orange: could you clarify in which scenario you expect a gain
Huawei: small cells with a good signal

Samsung Exhibit 1025, Page 1893 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: noted

RP-150788 New work item proposal: DL 256 QAM for UMTS Huawei, HiSilicon WID new RAN1 REL-13 -
new WI for UTRA only; leading WG: RAN1; WI code to be used: UTRA_DL_256QAM;
discussion: MCC: only 3 supporting companies
conclusion: withdrawn

5G related proposals:
considered for information only at RAN #68

Channel model for above 6 GHz:

RP-150782 Motivation for study on channel model for frequency spectrum above 6 GHz Samsung Disc motiv REL-13 -
motivation for RP-150781
discussion: Telecom Italia: planned to have parallel RAN1 session or in the main group? It is difficult to rebook rooms for the host as 2 new groups seems to come up
Samsung: parallel session in RAN1 planned (not clear how long: half a day or a day)
AT&T: from which group could you reuse results?
Samsung: e.g. COST or channel measuring and modelling campaign
ALU: completing this in 6 months seems to be VERRRY optimistic
RAN chair: depends maybe also how much you can reuse from others
ZTE: 3D channel model can be used for backhaul as well
Samsung: we are not excluding backhaul from the SI but this is for further discussion
conclusion: noted

RP-150781 New SID Proposal: Study on channel model for frequency spectrum above 6 GHz Samsung SID new RAN1 REL-13 -
new SI for "5G"; leading WG: RAN1; this SI proposal was not treated at RAN #67 in RP-150219;
discussion: MCC: Core part shall not be ticked, rapporteur missing
conclusion: postponed

Scenarios and Requirements for Next Generation Access Technologies:

RP-150814 Consideration on Scenarios and Requirements for Next Generation Access Technologies Study CMCC Disc motiv REL-14 -
motivation for RP-150813
conclusion: noted

RP-150813 New SID Proposal: Study on Scenarios and Requirements for Next Generation Access Technologies CMCC SID new RAN1 REL-14 -
new SI for "5G"; leading WG: RAN1; MCC: RAN doing CN or Service aspects? no rapporteur and no supporting companies
discussion: MCC: RAN doing CN or Service aspects? no rapporteur and no supporting companieg
conclusion: postponed

13.1.2 WIs/SIs led by RAN2

LTE:

Single cell PTM:

RP-150722 Motivation for new work item proposal on Support of single-cell point-to-multipoint transmission in LTE Huawei, HiSilicon Disc motiv REL-13 -
motivation paper for RP-150721
conclusion: noted

RP-150721 New work item proposal: Support of single-cell point-to-multipoint transmission in LTE Huawei, HiSilicon WID new RAN2 REL-13 -
new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_SC_PTM; follow-up WI of REL-13 SI FS_LTE_SC_PTM (AI 12.4.5);
discussion: MCC: will this WI have a Perf. part or not?
Huawei: will start a Perf. WI and if not need it we stop it

Samsung Exhibit 1025, Page 1894 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN2 vice-chair: more RAN2 time units would be needed for this, rather remove UL feedback
Ericsson: we could reduce the scope by restricting SC_PTM to group scheduling part
ALU: how idle mobiles are counted is not clear, would not recommend to start a WI
Ericsson: slide MTC software update as use case?
Huawei: normal REL-13 MTC not low cost MTC
Orange, US Dep. of C., Telecom Italia: support to have this WI
Vodafone: do we really need a solution for counting in idle mode?
conclusion: revised in RP-151076

RP-151076 New work item proposal: Support of single-cell point-to-multipoint transmission in LTE Huawei, HiSilicon WID new RAN2 REL-13 -
discussion: CATT: available TUs are not considered?
RAN chair: yes, we will approve all 5 WIs of way forwards (RP-151075 and RP-151080)
ALU: service continuity part would be a too large scope for RAN2 for 1TU
Qualcomm: it shows the discussion is not yet stable
Ericsson: supports ALU view
conclusion: revised in RP-151083

RP-151083 New work item proposal: Support of single-cell point-to-multipoint transmission in LTE Huawei, HiSilicon WID new RAN2 REL-13 -
conclusion: revised in RP-151110

RP-151110 New work item proposal: Support of single-cell point-to-multipoint transmission in LTE Huawei, HiSilicon WID new RAN2 REL-13 -
revision of RP-151083; new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_SC_PTM; follow-up WI of REL-13 SI FS_LTE_SC_PTM (AI 12.4.5); Core and Perf part included;
conclusion: approved

Signalling Reduction for Idle-Active Transitions:

RP-150873 Motivation for new WI: Signalling Reduction for Idle-Active Transitions in LTE Ericsson Disc motiv REL-13 -
motivation for RP-150872
discussion: ALU: WI should be more generic in terms of solutions
Ericsson: we would like to limit the scope of the WI
Huawei: doubts that this was studied before in REL-12, SI more realistic
Mediatek: we need a study to find out which solutions are the most efficient ones
LG: as scope very limited, it may be handled even as TEI
conclusion: noted

RP-150872 New WID proposal: Signalling Reduction for Idle-Active Transitions in LTE Ericsson, Intel WID new RAN2 REL-13 -
new WI for LTE only; leading WG: RAN2; WI code to be used: LTE_SigRed_Trans; no Perf. part; this WI proposal was postponed at RAN #67 in RP-150426
conclusion: postponed

UTRA:

DL enhancements:

RP-150720 Motivation for new work item proposal on Downlink enhancements for UMTS Huawei, HiSilicon Disc motiv REL-13 -
motivation paper for RP-150718
conclusion: noted

RP-150718 New work item proposal: Downlink enhancements for UMTS Huawei, HiSilicon WID new RAN2 REL-13 -
new WI for UTRA only; leading WG: RAN2; no Perf. part; follow-up of Rel-13 SI FS_UTRA_EDL (AI 12.2.1); duplicated WI proposal in RP-150786 (but for RAN1);
discussion: MCC: only 2 supporting companies
conclusion: revised in RP-151043

RP-151043 New work item proposal: L2/L3 Downlink enhancements for UMTS Huawei, HiSilicon WID new RAN2 REL-13 -
revision of RP-150718; new WI for UTRA only; leading WG: RAN2; no Perf. part; follow-up of Rel-13 SI FS_UTRA_EDL (AI 12.2.1); WI code to be used: UTRA_EDL_L23;

Samsung Exhibit 1025, Page 1895 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

discussion: RAN2 vice-chair (Interdigital): point 5. and 6. were discussed several times in the SI without conclusion so what is intended here?
Huawei: not just 5min but also not a new evaluation, ~0.5 TU
conclusion: approved; RAN2 will spend limited time on objectives 5. and 6.

Small data enhancements:

RP-150851 Motivation for New WI: Small Data Power Saving Enhancements for UMTS Ericsson Disc motiv REL-13 -
motivation for RP-150853
discussion: ALU: some commonalities with ongoing LTE work, for LTE we ask SA2 whether gains are not balanced with drawbacks on Core network side; we cannot have 40sec in WID without consulting Core network people
Vodafone: we should consult SA2 before starting a WI from RAN side and hoping that SA2 can follow; we need to make sure it works at the end-to-end
conclusion: noted

RP-150853 New WI proposal: Small Data Power Saving Enhancements for UMTS Ericsson WID new RAN2 REL-13 -
new WI for UTRA only; leading WG: RAN2; WI code to be used: UTRA_SDATA_POWSAV; no Perf. part; follow-up WI of SI FS_UTRA_SDATA (AI 12.2.2); see related WI proposal in RP-150848 (but for RAN1); MCC: only 2 supporting companies
conclusion: revised in RP-151092

RP-151092 New WI proposal: Power saving enhancements for UMTS Ericsson WID new RAN2 REL-13 -
revision of RP-150853; new WI for UTRA only; leading WG: RAN2; WI code to be used: UTRA_SDATA_POWSAV; no Perf. part; follow-up WI of SI FS_UTRA_SDATA (AI 12.2.2)
conclusion: approved (note: approved Core part target date is in REL-14; rapporteur indicated that at RAN #69 this will be corrected to keep it in REL-13).

13.1.3 WIs/SIs led by RAN3

LTE:

Network Assisted Synchronisation for LTE:

RP-150716 Motivation for new work item proposal on Network Assisted Synchronization for LTE FDD Huawei, HiSilicon Disc motiv REL-13 -
motivation paper for RP-150715
conclusion: noted

RP-150715 New work item proposal on Network Assisted Synchronization for LTE FDD Huawei, HiSilicon WID new RAN3 REL-13 -
new WI for LTE only; leading WG: RAN3; WI code to be used: LTE_FDD_NW_SYNC;
discussion: MCC: wrong WID template used (no Perf. part?), Core Network area?, impacts not ticked under 9., no target dates
Nokia Networks: would be better to have this as a SI
ALU: difference to LTE small cell enhancements physical layer where this proposal was concluded negatively?
Huawei: if you check TR 25.872 there was no conclusion that this does not work well
Orange: supports to have a SI first, focussed more on selection of data, this needs to be extended
Deutsche Telekom: supports also to have a SI first
RAN1 vice-chair (ALU): techniques were studied in REL-12
RAN chair: seems the proposal has not much support at the moment, may be considered later as a SI
conclusion: revised in RP-151078 (now becoming a SI)

RP-151078 New SI proposal: Study on Network Assistance for Network Synchronization in LTE Huawei, HiSilicon SID new RAN3 REL-13 -
revision of RP-150715 (but now a SI); new SI for LTE only; leading WG: RAN3; WI code to be used: FS_LTE_NW_SYNC;
discussion: ALU: why are we coming back with a new SI if the old SI concluded that we do nothing?
Huawei: statitstical approach considered here so different from what was studied in REL-12
AT&T: some clarification to explain difference compared to RIBS SI would be useful

Samsung Exhibit 1025, Page 1896 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: revised in RP-151084

RP-151084 New SI proposal: Study on Network Assistance for Network Synchronization in LTE Huawei, HiSilicon SID new RAN3 REL-13 -
conclusion: approved

Light eNB for Dual Connectivity:

RP-150762 Motivation for New WID Proposal: Light eNB (LeNB) for Dual Connectivity in E-UTRAN KT Disc motiv REL-13 -
motivation for RP-150763
conclusion: noted

RP-150763 New WID: Light eNB (LeNB) for Dual Connectivity in E-UTRAN KT WID new RAN3 REL-13 -
new WI for LTE only; leading WG: RAN3; WI code to be used: LTE_dualC_LeNB; no Perf. part
discussion: NTT DOCOMO: RAN2 may need to be involved as well
KT: there is ongoing SI on mobility anchor and we focus on a specific aspect of this
LG: we should remove RAN2 from objective section
conclusion: withdrawn (will come back later)

Extension of Dual Connectivity:

RP-150855 Motivation for new WI proposal Extension of Dual Connectivity in E-UTRAN Samsung, ZTE, China Telecom Disc motiv REL-13 -
conclusion: noted

RP-150854 New Work Item Proposal: Extension of Dual Connectivity in E-UTRAN Samsung, ZTE, China Telecom WID new RAN3 REL-13 -
new WI for LTE only; leading WG: RAN3; WI code to be used: LTE_dualC_ext; no Perf. part; follow-up WI of REL-13 SI FS_LTE_dualC_ext; MCC: Core Network area?
discussion: Intel: can we approve whatever for RAN3?
RAN3 chair: estimated that with the new WI/SI proposals available this week there would be some minus in capacity but it is possible
conclusion: revised in RP-151008

RP-151008 New Work Item Proposal: Extension of Dual Connectivity in E-UTRAN Samsung, ZTE, China Telecom WID new RAN3 REL-13 -
conclusion: approved

LTE & UTRA:

Dedicated Core Networks (DECOR):

See also LSin RP-150569 under AI 6.2

RP-150829 Motivation for new WI proposal: Dedicated Core Networks NTT DOCOMO, INC. Disc motiv REL-13 -
conclusion: noted

RP-150826 New WI proposal: Dedicated Core Networks NTT DOCOMO, INC.; Ericsson WID new RAN3 REL-13 -
new WI for UTRA & LTE; leading WG: RAN3; WI code to be used: DECOR-UTRA_LTE; no Perf. part; rapporteur: Ericsson; note: DECOR is a REL-13 SA2 WI
discussion: RAN chair: only impact on RAN3?
NTT DOCOMO: correct
Orange, Deutsche Telekom: also support the WI
RAN chair: it seems we could approve this WI
NTT DOCOMO: need to revise time budget
RAN chair: ok, then we can come back to it
conclusion: revised in RP-151007

RP-151007 New WI proposal: Dedicated Core Networks NTT DOCOMO, INC.; Ericsson WID new RAN3 REL-13 -
revision of RP-150826; new WI for UTRA & LTE; leading WG: RAN3; WI code to be used: DECOR-UTRA_LTE; no Perf. part; rapporteur: Ericsson; note: DECOR is a REL-13 SA2 WI
conclusion: revised in RP-151048

RP-151048 New WI proposal: Dedicated Core Networks NTT DOCOMO, INC.; Ericsson WID new RAN3 REL-13 -

Samsung Exhibit 1025, Page 1897 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

revision of RP-151007; new WI for UTRA & LTE; leading WG: RAN3; WI code to be used: DECOR-UTRA_LTE; no Perf. part; rapporteur: Ericsson; note: DECOR is a REL-13 SA2 WI;
conclusion: approved

UMTS & LTE joint operation:

RP-150819 Discussion on the way forward for UMTS & LTE joint operation China Unicom Disc REL-13 -
conclusion: noted

RP-150821 Motivation for New SI: HSPA and LTE Joint Operation China Unicom Disc motiv REL-13 -
motivation for RP-150820
conclusion: noted

RP-150820 New SI Proposal: HSPA and LTE Joint Operation China Unicom SID new RAN3 REL-13 -
new SI for UTRA & LTE; leading WG: RAN3; WI code to be used: FS_UTRA_LTE_JOP; this SI proposal was postponed at RAN #67 in RP-150471
discussion: RAN1 chair: will this involve UTRA and LTE?
China Unicom: probably not in SI
LG: RAN2 time budget should be corrected
RAN chair: this SI will have impact on RAN2 and RAN3 so it will compete with other WIs/SIs
conclusion: postponed

UTRA:

RAN sharing enhancements:

RP-150708 Motivation for new work item proposal on RAN sharing enhancements for UMTS Huawei, HiSilicon Disc motiv REL-13 -
motivation for RP-150707
discussion: RAN chair: understands that this is a RAN3 only WI proposal
conclusion: noted

RP-150707 New work item proposal: RAN sharing enhancements for UMTS Huawei, HiSilicon WID new RAN3 REL-13 -
new WI for UTRA only; leading WG: RAN3; WI code to be used: RSE_UTRA_GUSH; follow-up WI for Rel-13 SI FS_RSE_UTRA_GUSH (AI 12.2.4); note: There is an ongoing REL-13 WI for LTE: RSE-RAN_LTE;
discussion: MCC: wrong WID template used (no Perf. part?), impacts not ticked under 9., no target dates
Huawei: also Orange supporting now
Ericsson: would need to discuss the wording as WI seems to not be completely covered by SI results
conclusion: revised in RP-151009

RP-151009 New work item proposal: RAN sharing enhancements for UMTS Huawei, HiSilicon WID new RAN3 REL-13 -
discussion: Nokia Networks: remove "possibly" and other change proposed
conclusion: revised in RP-151086

RP-151086 New work item proposal: RAN sharing enhancements for UMTS Huawei, HiSilicon WID new RAN3 REL-13 -
conclusion: approved (but still wrong WID template, to be corrected at RAN #69)

13.1.4 WIs/SIs led by RAN4

LTE positioning enhancement:

RP-150713 Motivation for new work item proposal: Positioning enhancements for E-UTRA Huawei, HiSilicon Disc motiv REL-13 -
motivation paper for RP-150712
conclusion: noted

RP-150712 New work item proposal: Positioning enhancements for E-UTRA Huawei, HiSilicon WID new RAN4 REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LCSenh_LTE; follow-up WI for Rel-13 SI FS_LCSenh_LTE

Samsung Exhibit 1025, Page 1898 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

discussion: Huawei: now also Qualcomm is supporting.
conclusion: postponed

Advanced receiver performance:

RP-150748 Motivation for new WI: Interference mitigation for downlink control channels of LTE Intel Corporation, ZTE Disc motiv REL-13 -
motivation paper for RP-150751
conclusion: noted

RP-150751 New WI proposal: Interference mitigation for downlink control channels of LTE Intel Corporation, ZTE WID new RAN4 REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_IM_DLCCH; only Perf. part no Core part; this WI proposal was postponed at RAN#67 in RP-150494
discussion: MCC: title sounds rather like a RAN1 WI but we talk about advanced receiver performance so should title be updated?
Qualcomm: we may need system level simulations which will need more time than the TUs requested
conclusion: revised in RP-151073

RP-151073 New WI proposal: Interference mitigation for downlink control channels of LTE Intel Corporation, ZTE WID new RAN4 REL-13 -
discussion: Nokia Networks: how much minus in budget do we go?
RAN chair: this is no problem
Huawei, Qualcomm: we had a number of comments that were not taken into account in this WID
RAN chair: please discuss offline
conclusion: revised in RP-151089

RP-151089 New WI proposal: Interference mitigation for downlink control channels of LTE Intel Corporation, ZTE WID new RAN4 REL-13 -
conclusion: revised in RP-151107

RP-151107 New WI proposal: Interference mitigation for downlink control channels of LTE Intel Corporation, ZTE WID new RAN4 REL-13 -
revision of RP-151089; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_IM_DLCCH; only Perf. part, no Core part; this WI proposal was postponed at RAN#67 in RP-150494;
discussion: Qualcomm: a lot of our comments are not covered, 3.5 TUs for this work is not enough; we had a SI for receiver enhancements before; here everything is packed into one without knowing what we subscribe to
conclusion: approved
Qualcomm: we have concerns that the WI can not be completed in time

13.2 Spectrum related WIs/SIs

inter-band 2DL/1UL:

RP-150599 New WID: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 2 and Band 12 Nokia Networks WID new RAN4 s (2DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; note: LTE_CA_B2_B12 was completed as REL-12 WI;
conclusion: withdrawn as misused by another Tdoc; see RP-150585 instead

RP-150585 New WID: Additional bandwidth combination set for LTE Advanced inter-band Carrier Aggregation of Band 2 and Band 12 Nokia Networks WID new RAN4 s (2DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B12_BWset; LTE_CA_B2_B12 was completed as REL-12 WI
conclusion: approved

RP-150601 New WID: Additional bandwidth combination set 2 for LTE Advanced inter-band Carrier Aggregation of Band 4 and Band 12Nokia Networks WID (new) RAN4 s (2DL/1UL) REL-13 -
conclusion: revised in RP-150947

RP-150947 New WID: Additional bandwidth combination set 2 for LTE Advanced inter-band Carrier Aggregation of Band 4 and Band 12Nokia Networks WID new RAN4 s (2DL/1UL) REL-13 -
revision of RP-150601; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B4_B12_BWset2; LTE_CA_B4_B12 was completed in REL-11 and LTE_CA_B4_B12_BWset was completed in REL-12;

Samsung Exhibit 1025, Page 1899 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

RP-150859 New WI proposal: LTE Advanced 2 Band Carrier Aggregation (2DL/1UL) of Band 20 and Band 28 TeliaSonera WID new RAN4 s (2DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B20_B28; note: target date already in REL-14
discussion: Microsoft: concerned since just 3 MHz gap between 2 bands, suggests to discuss this in RAN4
Qualcomm: same concerns
TeliaSonera: was already discussed at last RAN4
Intel: also sees this proposal critical
Telecom Italia: thinks these issues should be discussed in the WI
RAN chair: can discuss further offline
conclusion: revised in RP-151049 (but now a SI)

RP-151049 New SI proposal: Study on LTE Advanced 2 Band Carrier Aggregation (2DL/1UL) of Band 20 and Band 28 TeliaSonera SID new RAN4 s (2DL/1UL) REL-14 -
revision of RP-150859 (but now a SI); new SI for LTE only; leading WG: RAN4; WI code to be used: FS_LTE_CA_B20_B28; note: target date already in REL-14;
discussion: Qualcomm: change "define" to use "study"
conclusion: revised in RP-151101

RP-151101 New SI proposal: Study on LTE Advanced inter-band Carrier Aggregation of Band 20 and Band 28 TeliaSonera SID new RAN4 s (2DL/1UL) REL-14 -
revision of RP-151049; new SI for LTE only; leading WG: RAN4; WI code to be used: FS_LTE_CA_B20_B28;
conclusion: approved

inter-band 3DL/1UL:

RP-150609 New Work Item Proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 8 and Band 11SoftBank Mobile WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B8_B11
conclusion: approved

RP-150622 New WI : LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 28, Band 41 and Band 41 KDDI WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B28_B41_B41; MCC: impacts under 9. not ticked
discussion: RAN chair: please tick boxes under 9.
NTT DOCOMO: both FDD and TDD PCell support?
conclusion: revised in RP-151010

RP-151010 New WI : LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 28, Band 41 and Band 41 KDDI WID new RAN4 s (3DL/1UL) REL-13 -
conclusion: revised in RP-151111

RP-151111 New WI : LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 28, Band 41 and Band 41 KDDI WID new RAN4 s (3DL/1UL) REL-13 -
revision of RP-151010; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B28_B41_B41;
conclusion: approved

RP-150623 New WI : LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 28, Band 42 and Band 42 KDDI WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B28_B42_B42; MCC: impacts under 9. not ticked
discussion: Qualcomm: same TDD/FDD PCell support applies as for RP-150622
conclusion: revised in RP-151011

RP-151011 New WI : LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 28, Band 42 and Band 42 KDDI WID new RAN4 s (3DL/1UL) REL-13 -
conclusion: revised in RP-151112

RP-151112 New WI : LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 28, Band 42 and Band 42 KDDI WID new RAN4 s (3DL/1UL) REL-13 -
conclusion: approved

Samsung Exhibit 1025, Page 1900 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150724 New work item proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) for Band 7, Band 42 and Band 42Huawei WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B7_B42_B42; MCC: only 3 supporting companies
discussion: RAN chair: TDD PCell mandatory support requested?
Orange: yes,
RAN chair: then we need to discuss this as well and supporting companies to be corrected
conclusion: revised in RP-151012

RP-151012 New work item proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) for Band 7, Band 42 and Band 42 Huawei WID new RAN4 s (3DL/1UL) REL-13 -
conclusion: approved

RP-150725 New work item proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) for Band 20, Band 42 and Band 42Huawei WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B20_B42_B42; MCC: only 3 supporting companies
discussion: RAN chair: also PCell discussion and supporting companies to be corrected
conclusion: revised in RP-151013

RP-151013 New work item proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) for Band 20, Band 42 and Band 42Huawei WID new RAN4 s (3DL/1UL) REL-13 -
conclusion: approved

RP-150850 New WI proposal:LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) for Band 3, Band 7 and Band 38 Vodafone WID new RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B7_B38; MCC: no rapporteur, only 1 supporting company
discussion: RAN chair: rapporteur to be added, supporting companies missing and PCell to be discussed
conclusion: revised in RP-151014

RP-151014 New WI proposal:LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) for Band 3, Band 7 and Band 38 Vodafone WID new RAN4 s (3DL/1UL) REL-13 -
conclusion: approved

RP-150863 New WI proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 20 and Band 32 Vodafone, Ericsson WID (new) RAN4 s (3DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B20_B32; rapporteur: Ericsson; note: only 2 supporting companies;
conclusion: revised in RP-150864

RP-150864 New WI proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/1UL) of Band 3, Band 20 and Band 32 Vodafone, Ericsson WID new RAN4 s (3DL/1UL) REL-13 -
revision of RP-150863; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B20_B32; rapporteur: Ericsson;
conclusion: approved

inter-band 4DL/1UL:

RP-150619 New WI proposal: LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 4, Band 4, Band 5 and Band 30 AT&T WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B4_B4_B5_B30; reference to completed fallback LTE_CA_B4_B5_B30 missing
conclusion: revised in RP-151015

RP-151015 New WI proposal: LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 4, Band 4, Band 5 and Band 30 AT&T WID new RAN4 s (4DL/1UL) REL-13 -
conclusion: approved

RP-150620 New WI proposal: LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 4, Band 4, Band 12 and Band 30 AT&T WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B4_B4_B12_B30
discussion: Telecom Italia: TR for info at RAN #68?
conclusion: revised in RP-151016 (TR to be revised)

RP-151016 New WI proposal: LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 4, Band 4, Band 12 and Band 30 AT&T WID new RAN4 s (4DL/1UL) REL-13 -
conclusion: approved

Samsung Exhibit 1025, Page 1901 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150621 New WI proposal: LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 4, Band 4, Band 29 and Band 30 AT&T WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B4_B4_B29_B30
conclusion: revised in RP-151017

RP-151017 New WI proposal: LTE Advanced 4 Band Carrier Aggregation (4DL) of Band 4, Band 4, Band 29 and Band 30 AT&T WID new RAN4 s (4DL/1UL) REL-13 -
conclusion: approved

RP-150627 New WI Proposal:LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 41, Band 41, Band 42 and Band 42 ZTE WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B41_B41_B42_B42
conclusion: approved
Note: It turned out after RAN #68, that the WID has no acceptable target dates (referring to RAN #67 in March 2015). It was clarified by the rapporteur after RAN #68 that the target dates should be Core part: RAN #70, Dec. 2015; Perf. part: RAN #70, Dec. 2015. No objections to this were raised via the RAN email reflector.

RP-150628 New WI Proposal: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 2, Band 4, Band 7 and Band 12 Rogers CommunicationsWID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B7_B12;
AT&T presented on behalf of Rogers
conclusion: approved

RP-150632 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 19 and Band 42 NTT DOCOMO, INC. WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B19_B42
discussion: NTT DOCOMO: no TDD PCell mandatory support requested here
conclusion: approved

RP-150633 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 3, Band 42 and Band 42 NTT DOCOMO, INC. WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B3_B42_B42
discussion: NTT DOCOMO: expecting conflict between operators to be solved in RAN4
conclusion: approved

RP-150634 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 19, Band 42 and Band 42 NTT DOCOMO, INC. WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used:LTE_CA_B1_B19_B42_B42
conclusion: approved

RP-150635 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 3, Band 19, Band 42 and Band 42 NTT DOCOMO, INC. WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B3_B19_B42_B42
conclusion: approved

RP-150636 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 19, Band 21 and Band 42 NTT DOCOMO, INC. WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B19_B21_B42
conclusion: approved

RP-150637 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 1, Band 21, Band 42 and Band 42 NTT DOCOMO, INC. WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B1_B21_B42_B42
conclusion: approved

RP-150638 New WID: LTE Advanced 4 Band Carrier Aggregation (4DL/1UL) of Band 19, Band 21, Band 42 and Band 42 NTT DOCOMO, INC. WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B19_B21_B42_B42
conclusion: approved

Samsung Exhibit 1025, Page 1902 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150728 New WI proposal: LTE Advanced 4-Band Carrier Aggregation of Band 2, Band 4, Band 5 and Band 12 U.S. Cellular WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B4_B5_B12; reference to completed fallback LTE_CA_B2_B5_B12 and B2_B4_B12 missing
conclusion: approved

RP-150729 New WI proposal: LTE Advanced 4-Band Carrier Aggregation of Band 2, Band 2, Band 5 and Band 12 U.S. Cellular WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B2_B5_B12
discussion: RAN4 chair: B2_B2_B12 is not mentioned and will be completed at RAN #68
conclusion: revised in RP-151018

RP-151018 New WI proposal: LTE Advanced 4-Band Carrier Aggregation of Band 2, Band 2, Band 5 and Band 12 U.S. Cellular WID new RAN4 s (4DL/1UL) REL-13 -
conclusion: approved

RP-150730 New WI proposal: LTE Advanced 4-Band Carrier Aggregation of Band 2, Band 5, Band 12 and Band 12 U.S. Cellular WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B5_B12_B12
discussion: RAN4 chair: 2A_12B table should be removed
conclusion: revised in RP-151019

RP-151019 New WI proposal: LTE Advanced 4-Band Carrier Aggregation of Band 2, Band 5, Band 12 and Band 12 U.S. Cellular WID new RAN4 s (4DL/1UL) REL-13 -
conclusion: approved

RP-150731 New WI proposal: LTE Advanced 4-Band Carrier Aggregation of Band 2, Band 2, Band 4 and Band 5 U.S. Cellular WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B2_B4_B5
conclusion: approved

RP-150732 New WI proposal: LTE Advanced 4-Band Carrier Aggregation of Band 2, Band 2, Band 12 and Band 12 U.S. Cellular WID new RAN4 s (4DL/1UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_B2_B2_B12_B12
conclusion: approved

intra-band contiguous (2DL):

RP-150755 New WI proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 5 Intel Corporation, Verizon WID new RAN4 s (C) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_C_B5; MCC: WI title to be aligned with usual format, not affected TR 36.8xx but new part for TR 36.833-x-5 needed
conclusion: revised in RP-151035

RP-151035 New WI proposal: LTE Advanced intra-band contiguous Carrier Aggregation in Band 5 Intel Corporation, Verizon WID new RAN4 s (C) REL-13 -
conclusion: approved

intra-band non-contiguous (2DL):

RP-150600 New WID: Additional bandwidth combination set for LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 4 Nokia Networks WID new RAN4 s (NC) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_NC_B4_BWset; LTE_CA_NC_B4 was completed in REL-12; MCC: no TR 36.833-2-4 impact?
conclusion: revised in RP-151034

RP-151034 New WID: Additional bandwidth combination set for LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 4 Nokia Networks WID new RAN4 s (NC) REL-13 -
conclusion: approved

RP-150756 New WI proposal: LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 5 Intel Corporation, Verizon WID new RAN4 s (NC) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_NC_B5; MCC: WI title to be aligned with usual format, no affected TR 36.8xx but new TR 36.833-x-5 needed
conclusion: revised in RP-151036

RP-151036 New WI proposal: LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 5 Intel Corporation, Verizon WID new RAN4 s (NC) REL-13 -

Samsung Exhibit 1025, Page 1903 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: approved

intra-band non-contiguous (4DL):

RP-150878 New WI Proposal: LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 42 for 4DL Etisalat WID new RAN4 s (NC 4DL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_NC_B42_4DL; MCC: why is table in the WID talking about Band 41?; no new TR 36.833-x-42 needed?
conclusion: revised in RP-151102

RP-151102 New WI Proposal: LTE Advanced intra-band non-contiguous Carrier Aggregation in Band 42 for 4DL Etisalat WID new RAN4 s (NC 4DL) REL-13 -
discussion: Huawei: rapporteur is Huawei
conclusion: approved

inter-band (3DL/2UL):

RP-150817 New WID: LTE Advanced 3DL/2UL mixed intra- and inter-band Carrier Aggregation Nokia Networks WID new RAN4 s(3DL/2UL) REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_CA_3DL_2UL_inter_intra; covers combinations of contiguous intra-band CA and inter-band CA or combinations of non-contiguous intra-band CA and inter-band CA for LTE; pure intra-band CA combinations are also covered by this WI; note: There is already a REL-13 WI LTE_CA_3DL_2UL which covers only pure inter-band cases and uses TR 36.879-13;
conclusion: approved

inter-band (3DL/3UL):

RP-150801 New WI proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/3UL) of Band 39, Band 39 and Band 41 CATT, CMCC WID new RAN4 s (3DL/3UL) REL-13 -
new WI for LTE only; leading WG: RAN4; note: new class of CA WIs, not discussed in RAN4, unclear how this WI will be handled (e.g. same as 3DL/2UL?; TR per band combination? fallback modes?); TR for Core or Perf. part?
discussion: RAN4 chair: is the first proposal for 3UL and suggests to take same approach like 3DL/2DL to have a basket WI
conclusion: postponed, suggested to bring basket proposal to RAN4 first

RP-150802 New WI proposal: LTE Advanced 3 Band Carrier Aggregation (3DL/3UL) of Band 39, Band 41 and Band 41 CATT, CMCC WID new RAN4 s (3DL/3UL) REL-13 -
new WI for LTE only; leading WG: RAN4; note: new class of CA WIs, not discussed in RAN4, unclear how this WI will be handled (e.g. same as 3DL/2UL?; TR per band combination? fall back modes?); TR for Core or Perf. part?
conclusion: postponed, suggested to bring basket proposal to RAN4 first

New LTE TDD Band 1447-1467MHz in China:

RP-150711 Motivation for new work item proposal: Introduction of 1447-1467MHz Band for TD-LTE in Huawei Disc motiv REL-13 -
motivation paper for RP-150710
discussion: Qualcomm: is not a commercial band, should we just reserve a band number?
Huawei: would like to standardize this in 3GPP
conclusion: noted

RP-150710 New work item proposal: Introduction of 1447-1467MHz Band for TD-LTE in China Huawei WID new RAN4 s REL-13 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_TDD_1447MHz_China; MCC: new TR for Core or Perf. part?, Core part target RAN #68 makes no sense;discussion:
discussion: NEC: completion date for Core June 2015?
MCC: unclear whether TR is for Core or Perf. part
conclusion: revised in RP-151037

RP-151037 New work item proposal: Introduction of 1447-1467MHz Band for TD-LTE in China Huawei WID new RAN4 s REL-13 -
conclusion: approved

New LTE FDD Band 698-728MHz (UL), 753-783MHz (DL)) in Arab region:

Samsung Exhibit 1025, Page 1904 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-150563 LS on Standardization of New E-UTRA Band and OOBE Limits Requirement (ASMG_3_1303_150514; to: RAN; cc: RAN4; contact: Etisalat) ASMG LSin REL-13 -
ASMG = Arab Spectrum Management Group; related to 694-790 MHz band for ITU Region 1; RAN action requested
discussion: Orange: any spectrum mask and coexistance analysis from ASMG?
Etisalat: can be considered in the WI
Orange: can we wait for CEPT discussion?
French Ministry: no need to wait for CEPT decision
RAN chair: if CEPT input comes in time it will be considered but we will not wait with the approval of the WI
conclusion: noted, no LS answer

RP-150618 New Work Item: 700MHz (698-728MHz (UL), 753-783MHz (DL)) E-UTRA Band for Arab region Etisalat WID (new) RAN4 s REL-13 -
related to LSin RP-150563 from ASMG;
conclusion: revised in RP-150949 (since RP-150618 seems to be empty)
RP-150949 New Work Item: 700MHz (698-728MHz (UL), 753-783MHz (DL)) E-UTRA Band for Arab region Etisalat WID new RAN4 s REL-13 -
new WI for LTE only; leading WG: RAN4; related to LSin RP-150563 from ASMG; [ ] for supporting companies is not allowed
conclusion: revised in RP-151042
RP-151042 New Work Item: 700MHz E-UTRA FDD Band for Arab Region Etisalat WID new RAN4 s REL-14 -
revision of RP-150949; new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_FDD_700_ARAB; related to LSin RP-150563 from ASMG; REL-independent from REL-9
conclusion: approved

New UTRA & LTE FDD DL Band 738-758 MHz combined with CA:

RP-150856 LTE Carrier Aggregation 2DL/1UL with Band 20 and Band xy (new band European 700SDL) TeliaSonera Disc REL-13 -
conclusion: noted

RP-150861 New WI proposal: LTE Advanced 2 Band Carrier Aggregation (2DL/1UL) of Band 20 and Band xy (new band European 700SDL) TeliaSonera WID new RAN4 s (2DL/1UL) REL-13 -
new WI for UTRA and LTE?; leading WG: RAN4;
discussion: MCC: band not yet introduced?, CA in UTRA?, target date already in REL-14, actual frequency range for new band unclear (738-758 MHz?)
Qualcomm: needs some of offline discussion, not clear whether aggregation can be done with band 20 because of filter impacts
TeliaSonera: WI is for LTE only
Etisalat: do we need to coexistence with our new 700MHz band?
Orange: as this 700MHz band is for ARAB region only
conclusion: approved
Note: At RAN #69, WI title will be corrected to "European 700 Supplemental Downlink band (738-758 MHz) in E-UTRA and LTE Carrier Aggregation (2DL/1UL) with Band 20" with WI code "LTE_CA_700EU_B20" and
new TR 36.8xx "European 700 Supplemental Downlink band (738-758 MHz) in E-UTRA"
(note: approved Core part target date is in REL-14; rapporteur indicated that at RAN #69 this will be corrected to keep it in REL-13)

High power LTE UE Band 41:

RP-150577 LS on new power class for 3GPP Band 41 (GTI_150615; to: RAN; cc: -; contact: GTI Secretariat) GTI LSin REL-13 -
GTI = Global TD-LTE Initiative; RAN action requested; related to new WI proposal RP-150591;
conclusion: noted, no LS answer

RP-150591 Proposed WID - New Band 41 UE power class supporting +26 dBm for LTE Sprint, CMCC, WID new RAN4 s REL-14 -
new WI for LTE only; leading WG: RAN4; WI code to be used: LTE_B41_HPUE; the introduction of a new generation of PA's makes it feasible to add a new +26 dBm UE power class for band 41; MCC:

Samsung Exhibit 1025, Page 1905 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

title of WID not matching title of WI, REL-independent from which REL onwards?, WI limited to 2DL CA (see 10.), target date in REL-15? target date not matching time budget, TR impacted by Core or Perf. part?, motivation paper included in WID file against convention;
discussion: Microsoft: we FDD band 7 in the same range
Sprint: we only talk about band 41 only here
Blackberry: is not so staright forward as it can have some implementation impacts
Vodafone: wants to see impacts on other bands to be studied and documented
NEC: completion date does not match
Samsung: test tolerances also discussed in the WI?
conclusion: revised in RP-151038

RP-151038 Proposed WID - New Band 41 UE power class supporting +26 dBm for LTE Sprint, CMCC, WID new RAN4 s REL-14 -
discussion: Sprint: 2 phases: 7/38 impacts, CA with higher power class; impact on Wifi updated
Microsoft: we should have a SI first
Orange: also supporting to have SI first
Vodafone: has the same view as Orange/Microsoft
CMCC: study should be considered
China Unicom: we should not approve a WI but consider a SI first
Deutsche Telekom: supports to have a SI instead of a WI
conclusion: revised in RP-151104 to make it a SI

RP-151104 Study on High Power LTE UE for Band 41 Sprint SID new RAN4 s REL-14 -
revision of RP-151038 (but now a SI); new SI for LTE only; leading WG: RAN4; WI code to be used: FS_LTE_B41_HPUE; target in REL-14 (RAN #74)
conclusion: approved

13.3 UE conformance testing WIs/SIs led by RAN5

RP-150714 New work item proposal: UE Conformance Test Aspects - E-UTRA Small cell enhancements - Physical layer aspects Huawei, HiSilicon WID new RAN5 REL-12 -
new WI for LTE only; leading WG: RAN5; WI code to be used: LTE_SC_enh_L1-UEConTest; tested Core part: LTE_SC_enh_L1-Core
conclusion: approved

RP-150812 New WID Proposal: UE Conformance Test Aspects - Core Requirements for Uplink 64QAM for E-UTRA CMCC WID new RAN5 REL-13 -
new WI for LTE only; leading WG: RAN5; WI code to be used: LTE_UL64QAM-UEConTest; tested Core part: LTE_UL64QAM-Core which is not yet completed
conclusion: approved

RP-150840 New WI proposal: UE Conformance Test Aspects - Dual connectivity for LTE Ericsson WID new RAN5 REL-12 -
new WI for LTE only; leading WG: RAN5; WI code to be used: LTE_SC_enh_dualC-UEConTest; tested Core part: LTE_SC_enh_dualC-Core
conclusion: approved

Samsung Exhibit 1025, Page 1906 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

14 UE capabilities/FGIs

Mandatory/optional LTE Rel-12 UE features:

RP-150815 Way forward on leftover features for Rel-12 UEs NTT DOCOMO, INC. Disc REL-12 LTE_TDD_eIMTA-Core, LTE_UTRA_IncMon-Core, LTE_SUMIMO_RX-Perf, GCSE_LTE-MBMS_CM-Core, TEI12

Proposal 1: Mandatory/optional support of the leftover Rel-12 features.

WI	#	Feature group	Responsible W	RAN WG recommendati	TSG-RAN decision
7. eIMTA	7-1	UL-DL re-configuration via L1 signaling for non-CA and CA (if supported) with TDD Pcell	RAN1	FFS	Optional
17. Increasing the min. num. of freqs to monitor	17-1	Increased number of monitoring carriers for LTE and UTRA	RAN4	No consensus	For LTE IncMon (both in LTE and 3G): Mandatory except for Cat.0 For 3G IncMon (both in LTE and 3G): Optional
18. Interf. cancel and suppress	18-1	SU-MIMO Advanced receiver	RAN4	No consensus	Optional
19. Group call eMBMS congestion management	19-1	MTCH suspension	RAN2/3	FFS	Optional
20. TEI12	20-9	RSRQ lower value range extension	RAN4	No consensus	Optional
	20-10	RSRQ on all symbols	RAN4	No consensus	Optional

Proposal 2: The need of FDD/TDD differentiation for the small cell discovery features (as shown below) is decided later when their implementation becomes realistic.

WI	#	Feature group	Need of FDD/TDD differentiation
3. SCE Physical Layer	3-3	UE procedure related to Small cell on/off by CA SCell activation/deactivation	Same as 3-4
	3-4	CRS-based discovery signal/procedure	TBD
	3-5	CSI-RS-based discovery signal/procedure	Same as 3-4

Proposal 3: TSG-RAN should inform RAN WGs of the final decision by replying their LSs [2] = RP-150816.

discussion: Vodafone:concern related to eMBMS (MTCH suspension)
Intel: concern related to IncMon (cat.0 UEs)
conclusion: proposal 1: 7./18./20. agreed; proposal 17 & 19. to be discussed offline; will come back to proposals 2. & 3.

after offline discussion:
NTT DOCOMO: proposal 1 and proposal 2 can be agreed
conclusion: proposal 1 & 2 are agreed
the revision RP-150815 in RP-151065 is no longer needed

Samsung Exhibit 1025, Page 1907 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151065 Way forward on leftover features for Rel-12 UEs NTT DOCOMO, INC. Disc REL-12 LTE_TDD_eIMTA-Core, LTE_UTRA_IncMon-Core, LTE_SUMIMO_RX-Perf, GCSE_LTE-MBMS_CM-Core, TEI12
conclusion: withdrawn

RP-150816 [DRAFT] Reply LS to R1-150947 = RP-150032, R2-150703 = RP-150034 and R4-151044 = RP-150036 on LTE Rel-12 UE feature list
(to: RAN1, RAN2, RAN4; cc: -; contact: NTT DOCOMO) NTT DOCOMO, INC. LSout REL-12 TEI12
LSin RP-150032, RP-150034 and RP-150036 were received at RAN #67
discussion: Vodafone: MTC suspension aspect: would be interesting for public safety to have it mandatory; we should send the LS also to SA6: to indicate that there are optional RAN features that may be of interest for them
conclusion: revised in RP-151066 (but finally RP-151066 was withdrawn)
revised in RP-151105 (adding SA6 on cc)

RP-151105 Reply LS to R1-150947 = RP-150032, R2-150703 = RP-150034, R4-151044 = RP-150036 on LTE Rel-12 UE feature list (to: RAN1, RAN2, RAN4; cc: RAN3, RAN5, SA6; contact: NTT DOCOMO) RAN LSout REL-12 TEI12
LSin RP-150032, RP-150034 and RP-150036 were received at RAN #67; revision of RP-150816
conclusion: approved

RP-151066 [DRAFT] Reply LS to R1-150947 = RP-150032, R2-150703 = RP-150034 and R4-151044 = RP-150036 on LTE Rel-12 UE feature list (to: RAN1, RAN2, RAN4; cc: -; contact: NTT DOCOMO) NTT DOCOMO, INC. LSout REL-12 TEI12
conclusion: withdrawn

PCell mandatory/optional support for TDD-FDD CA:

RP-150818 PCell mandatory/optional support for TDD-FDD CA NTT DOCOMO, INC. Disc REL-12 LTE_CA_TDD_FDD-Core
In RAN4#75, it was approved that PCell mandatory/optional discussion on TDD-FDD CA should be discussed in RAN Plenary in conjunction with tdd-FDD-CA-PCellDuplex discussion. Therefore, Tdoc discusses the relationship between the capability and RAN4 PCell mandatory/optional discussion.
Proposal 1:
- *UEs supporting tdd-FDD-CA-PCellDuplex are allowed to select one of the following three options regardless of the outcome of RAN4 discussion on TDD-FDD CA PCell mandatory support.*
  1. *Only TDD PCell is allowed.*
  2. *Only FDD PCell is allowed.*
  3. *Both TDD and FDD PCell are allowed.*

Proposal 2:
- *What RAN4 decides on PCell mandatory support for TDD-FDD CA is applicable under the condition that UEs support tdd-FDD-CA-PCellDuplex with the above option 3.*

discussion: CMCC: who will decide for which option to go? RAN4? operator?
NTT DOCOMO: market decision
conclusion: noted

RP-150841 Considerations on PCell support in FDD-TDD CA Qualcomm Incorporated Disc REL-12 LTE_CA_TDD_FDD-Core
proposing the following framework for the discussion of PCell support in FDD-TDD CA combinations:
1. *PCell support for FDD-TDD combinations with only 2 bands should be based on the baseband capability and should therefore be excluded from the "RAN4 PCell discussion"*
2. *PCell support for FDD-TDD combinations with more than 2 bands, in which PCell can be supported in multiple bands based on the baseband capability (e.g. 2 or more FDD bands, 2 or more TDD bands) should be discussed in the same framework as all other band combinations. This discussion should not contradict the already defined baseband capability.*

discussion: CMCC: not just market needs but also RF aspects to be taken into account so RAN4 discussion needed
Softbank: if baseline supports both features for 2 band what will happen then?
NTT DOCOMO: number of bands is not related to this discussion
Intel: both Tdocs indicate PCell support should not be in conflict with baseline capability

Samsung Exhibit 1025, Page 1908 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Sprint: RAN1 has made a feature optional can RAN4 make it mandatory again, this discussion should take place in RAN4
conclusion: noted, offline discussion (rapporteur: NTT DOCOMO) see outcome in RP-151074

RP-151074 Way forward on TDD-FDD CA PCell mandatory support discussion NTT DOCOMO, INC., Intel, LG Electronics, Huawei, HiSilicon Disc REL-12 LTE_CA_TDD_FDD-Core
conclusion: way forward endorsed

New UE category:

RP-150554 LS on new UE categories in Rel-12
(R1-152220; to: RAN2; cc: RAN; contact: Huawei) RAN1
LSin REL-12 TEI12
no RAN action requested
RAN1:
"RAN1 has made the following agreements on new UE categories in Rel-12:
- *Introduce two new DL UE categories:*
  - *DL category 15: covering 750Mbps and 800Mbps, including the feature combinations with CA and up to 4*4MIMO;*
  - *DL category 16: covering 1000Mbps and 1050Mbps, including the feature combinations with CA and up to 4*4MIMO;*
- *For each new DL category, all possible UL peak data rate, i.e. 50Mbps, 75Mbps, 100Mbps and 150Mbps are allowed."*

conclusion: noted, no LS answer

RP-150926 RAN2 agreed CRs on introduction of new DL UE categories 15&16 RAN2 CRset REL-12 LTE_CA-Core, LTE_SC_enh_L1-Core, TEI12
discussion: Huawei: concern to R2-152784: DL cat 15/16 shall not fallback to DL cat 13, because DL category 13 supports 256 QAM as mandatory; MCC: company CR RP-150951 is provided to revise R2-152784 of RP-150926;
conclusion: R2-152886 is approved and R2-152784 is revised in RP-150951

RP-150951 Introduction of new DL UE categories 15&16 Huawei, HiSilicon, Qualcomm Incorporated, Samsung, Nokia Networks, Intel Corporation CR36.306 0280 1 C REL-12 LTE_CA-Core, LTE_SC_enh_L1, TEI12
company CR to replace R2-152784 in RP-150926 because DL cat 15/16 shall not fallback to DL cat 13, because DL category 13 supports 256 QAM as mandatory
conclusion: approved

UL 64QAM:

RP-150568 Reply LS to R2-150733 = RP-150042 on per-band UL 64 QAM support
(R4-153813; to: RAN2; cc: RAN, RAN1; contact: Vodafone) RAN4
LSin REL-12 LTE-L23, TEI12
note: 64QAM UL functionality for LTE exists in 3GPP specs since REL-8; however, signalling of a UE capability is introduced for REL-12 (see R2-150713 in RP-150379 and R2-150715 in RP-150377) and RF requirements are introduced via REL-13 WI LTE_UL64QAM-Core; (compare RP-142226 for DL 256QAM); no RAN action requested;
RAN4: "a UE that supports 64QAM in UL shall support 64QAM in UL in all supported frequency bands"
conclusion: noted, no LS answer

Rank3/4 in TM3 and TM4:

RP-150572 LS regarding rank3/4 in TM3 and TM4 for additional UE categories
(R4-153907; to: RAN, RAN1, RAN2; cc: -; contact: Nokia) RAN4
LSin REL-13 LTE_4Rx_AP_DL
RAN action requested
conclusion: noted, Nokia Network will draft an LS answer in RP-151090

RP-150666 Discussion on release for supporting rank3/4 in TM3/4 for additional UE categories Nokia Networks Disc REL-13 LTE_4Rx_AP_DL
related to LSin RP-150572; RAN4#75 has agreed that RAN1/RAN2 should discuss how to introduce the spec changes needed to support rank 3 and rank 4 for TM3 and TM4, considering UE categories

Samsung Exhibit 1025, Page 1909 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

6 and higher. However, the work in RAN1/RAN2 is pending RAN decision on the REL for this change. This Tdoc provides background information for this decision.

Observation:

Specification restriction for higher rank TM3/4 can be solved by introducing UE capability signalling for support of TM3/4 with 4-layers and network signalling for RI bit width to be used by the UE.

Proposal:

Consider to support high rank (3/4) operation for TM3/4 in Release 10 and UE categories 6, 7 and higher.

discussion: Deutsche Telekom: agrees with Nokia Networks proposal
Intel: REL-10 specs have been frozen for a long time so we need to be careful and would like to see more operator views
T-Mobile: supports it from REL-10
NTT DOCOMO: additional signalling is needed for this for REL-10?
Ericsson: agrees that signalling can be in REL-11 or REL-12
Huawei: no REL-10 cat.6 UE in the market so we could do this
Telecom Italia: supports Nokia Networks proposal and would like to have it as soon as possible
AT&T: to Intel's question, operators indicated in source field of reference [2] of RP-150666 are interested
Qualcomm: premature to decide about the REL
NTT DOCOMO: different WGs may have different understanding which REL is considered
Nokia Networks: feasible signalling support in RAN2 is also our intention

conclusion: noted, offline discussion, see RP-151090 as outcome

RP-151090 Draft reply LS to RP-150572 on rank3/4 in TM3 and TM4 for additional UE categories (to: RAN1, RAN2, RAN4; cc: -; contact: Nokia Networks) Nokia Networks REL-13 LTE_4Rx_AP_DL

discussion: Ericsson: what does "early implementation" mean here? signalling from REL-11 to be supported by REL-10 is not good
Intel: ambiguous sentence, we indicated the problem with 2nd paragraph and show rather remove it
Nokia Networks: problems was already discussed at length by email, fine to remove the 2nd part
Qualcomm: not ok to remove the last paragraph, likelyhood of confusion is low
Ericsson: 2nd paragraph makes it sufficiently clear; 1st paragraph: UE indicates REL-10 but has some REL-11 capability bits: this should not happen
RAN chair: suggest further offline discussion during Thu lunch break

conclusion: revised in RP-151106

RP-151106 Draft reply LS to RP-150572 on rank3/4 in TM3 and TM4 for additional UE categories (to: RAN1, RAN2, RAN4; cc: -; contact: Nokia Networks) Nokia Networks LSout REL-13 LTE_4Rx_AP_DL

discussion: Deutsche Telekom: "new features in addtion to existing ones" not clear; we have a strong view on that new modes are in addition to existing ones and not replacing them
RAN2 chair: 1 bit enough?

conclusion: revised in RP-151113

RP-151113 LS response to R4-153907 = RP-150572 regarding rank3/4 in TM3 and TM4 for additional UE categories (to: RAN1, RAN2, RAN4; cc: -; contact: Nokia Networks) RAN LSout REL-13 LTE_4Rx_AP_DL

conclusion: approved

15 Inter WG/TSG-related discussions & decisions

Cellular Internet of Things "Clean Slate" (GERAN SI):

GERAN SI: FS_IoT_LC,
TR 45.820 "Cellular System Support for Ultra Low Complexity and Low Throughput Internet of Things"

LSin:

RP-150559 Reply LS to GPC150122 and S3-151201 on work split for Study on Cellular IoT (SP-150170; to: SA2, SA3, GERAN; cc: SA1, RAN; contact: Huawei) SA LSin REL-13 FS_IoT_LC

Samsung Exhibit 1025, Page 1910 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

no RAN action requested; GPC150122 and S3-151201 was not sent to/cc RAN
conclusion: noted, no LS answer

RP-150547 LS on LTE/UMTS coexistence studies for FS_IoT_LC
(GPC150305; to: RAN4; cc: RAN, GERAN, SA; contact: Vodafone) GERAN1 CIoT ad hoc
LSin REL-13 FS_IoT_LC
no RAN action requested
conclusion: noted, no LS answer

Reports:

RP-150582 Agreed PCG way forward on Clean Slate CIoT activities RAN chairman (Qualcomm) Report
REL-13 FS_IoT_LC
PCG #34 agreed way forward proposal PCG34_39r2
conclusion: noted

RP-150589 Status of the Clean Slate track of activities of GERAN SI "Study on Cellular system support for ultra Low Complexity and low throughput Internet of Things" Vodafone (SI rapporteur) Report
REL-13 FS_IoT_LC
input to address the PCG34_39r2 decision of slide 2: "At TSG RAN#68, GERAN will present the latest status of the Clean Slate track of activities"; latest SID: GP-140421
candidate clean slate solutions:
1. Narrow Band M2M (NB M2M)
2. Narrow Band OFDMA (NB-OFDMA)
*3. Cooperative Ultra Narrow Band (C-UNB) **
*4. Combined Narrowband and Chirp Spread Spectrum *: No contributions presented in GERAN#66*
*5. Converged (NB M2M and NB OFDMA) solution * Only an initial overview presented in GERAN#66*
**: Proposals only – content not yet available in TR*
discussion: RAN1 chair: RAN WGs need to review proposals?
RAN chair: RAN WGs will take over from where GERAN will stop, agrees that this not happened before; GERAN will conclude in Aug. with some recommendations and then we will work on WID
RAN1 chair: question is whether new ideas can be included as well
RAN chair: RAN1 will start based on GERAN output so no additional evaluation intended
LG: separate specifications intended
RAN chair: yes, new series because it is a new RAT
Ericsson: does not see it impossible to also put it in existing specs
ALU: reusing existing specs may have some synergies
RAN chair: if you could use synergies this is welcome but doubts that you can handle the new RAT in existing specs
Nokia Networks: RRC encoding, we use ASN.1 in RAN while GERAN does not
Vodafone: the statement is the GERAN outcome
Nokia Networks: are there some drawbacks/efficiency issues with ASN.1?
Vodafone: no comparison with ASN.1 was done
Huawei: IoT will not be part of RAN prioritization or TU considerations, so will be done in parallel to normal RAN work
Mediatek: still some organization in RAN is needed
RAN chair: we will approve the WI but WI will not be dependent on time constraints given by other WIs/SIs, this was decided at PCG and we have to respect this
Nokia Networks: we decided in the past in RAN when discussing what to use for UMTS that CSN.1 should not be considered as it has a number of drawbacks and caused problems in GSM times
RAN3 chair: confirmed ASN.1 vs. CSN.1 and took ASN.1 at the end
LG: clean slate discussion will continue in GERAN?
RAN chair: no, clean slate will be handled in RAN, non-clean-slate related aspects will continue in GERAN
Qualcomm: to clarify: GERAN has clean-slate (new radio) and evolution of GERAN (existing radio) in the same SI
Ericsson: one problem is that GERAN has several clean-slate proposals instead of working on one common clean-slate proposal so it is the question whether has to evaluate the output
RAN chair: of course we will not start from zero, evaluate and then come with something else or stop it at the end; RAN will base their work on the GERAN conclusions
Ericsson: is it not better to move the clean-slate work as soon as possible to RAN?

Samsung Exhibit 1025, Page 1911 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN1 chair: it is a new RAT and we will have 5G in parallel so we need careful planning in RAN
ZTE: clean-slate is a new physical layer but we may still consider what we can do on higher layers (e.g. a reduction)
Microsoft: supports Ericsson view to take over the work as soon as possible
RAN chair: we will not change the PCG decision here but you are free to send your experts to GERAN in the next quarter
ALU: drafting of the WID will be the tricky part since this is usually the point where we decide what can be taken over from the SI into the WI so RAN should at least already think about how a WID could look like
RAN chair: there is a WID proposal from Vodafone later that is provided for information to RAN #68

conclusion: noted

Documents related to future planning

RP-150868 Clean slate Cellular IoT solutions - background and planning Vodafone Disc REL-13 FS_IoT_LC
Background and planning for migrating GERAN work on "Cellular IoT clean-slate" to TSG RAN
proposed:
- *RAN 1/2 ad hoc: 14 – 18 December 2015, TBD*
- *RAN 1/2/4(ad hoc): 11 – 15 January 2016 TBD*

Summary:
- *M2M market developing fast*
- *Non-3GPP competition is appearing*
- *Vodafone wants 3GPP to provide the capability for low-cost, extended-coverage, long battery life solutions*
- *Reuse of 3GPP architecture*
- *Rapid standardisation desired*
- *Rel-13 completion feasible*

conclusion: noted

RP-150667 Discussion on Cellular IoT work in 3GPP RAN Nokia Networks Disc REL-13 FS_IoT_LC
moved from AI 13.1.1 to AI 15
Proposal 1: GERAN study findings captured in the GERAN TR45.820 should be utilized when defining the CleanSlate RAN WID.
Proposal 2: To avoid impacts on LTE Rel-13 organise practical work in RAN1 and RAN2 in parallel HSPA sessions and separate RAN4 parallel session. When feasible, also avoid overlapping sessions with similar topics like LTE-M to enable better expert participation.
Proposal 3: LTE-M Rel-14 evolution should not be impacted by the development of the CleanSlate specifications
Proposal 4: Discuss and analyse CleanSlate core network interface option jointly with RAN and SA
conclusion: noted

RP-150709 Views on specification for a Cellular IoT system in RAN Huawei Disc REL-13 FS_IoT_LC
discussing ongoing M2M activities in 3GPP and organization of the work in RAN for CIoT; moved from AI 13.1.1 to AI 15
Proposal: if a CIoT clean-slate WI is approved at RAN69:
- *CIoT would have 2 parallel sessions:*
  - *RAN1/RAN2 parallel sessions*
  - *RAN4 parallel session*
- *The CIoT session should avoid conflict with:*
  - *RAN WG main sessions*
  - *LTE eMTC sessions, as far as possible*
  - *GERAN sessions if co-located with RAN WG*
- *Ensure enough extra rooms for future meetings*
- *Add 2 CIoT ad-hoc meetings before March 2016*

discussion: discussion of RP-150868/RP-150667/RP-150709 together:
RAN1 chair: Vodafone proposed 2 additional ad hoc meetings, even with this there are doubts that it will be possible to complete the work in REL-13
Telecom Italia: we also may have logistic issues for having ad hoc rooms of unpredictable size
Broadcom: 2 ad hocs is fine but the suggested dates just before Xmas are nor useful
Ericsson: same view as Broadcom

Samsung Exhibit 1025, Page 1912 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Nokia Networks: sees no problem to address the GERAN parallel issues
RAN chair: exact logistics will be agreed in Sep.
CMCC: this may be too late to solve logistics
RAN chair: ok, if we can have some tentative dates already
Mediatek: worried whether we can really plan in detail without knowing what needs to be done
Vodafone: PCG decided to strive for REL-13 and if we do not plan in advance we will fail
RAN1 chair: 3 day parallel session and avoiding overlaps will not fit together and will impact REL-13
Huawei: LTE MTC has 3 TUs/6 hours so we could avoid overlap
ZTE: does not agree on need to have 2 ad hocs in Dec
Deutsche Telekom: all companies need make resources available to complete REL-13 and to respect the PCG decision
NEC: June and August ad hocs already planned, will facilities be large enough if we send a lot of RAN people?
GERAN chair: Ericsson hosted ad hoc in Kista and Huawei hosted ad hoc in China, please register as soon as possible that hosts plan appropriately
Telefonica: suggests that leaders decide the meeting schedule
LG: meeting time depends on the work we have to do so we should decide this first
Orange: parallel sessions for RAN4 will be problematic, we should keep the work in normal RF sessions
RAN4 chair: will not be possible to put this in RF
NTT DOCOMO: sees also problems for parallel sessions in RAN1
RAN chair: putting it in existing sessions will not be possible, that's physics
Nokia Networks: we should decide meeting schedules this week so that people can plan
RAN2 chair: as we do not yet know RAN2 impacts we will probably have to limit the scope to be able to finish the work in time

conclusion: noted

RP-150869 Clean slate Cellular IoT - architectural considerations Vodafone Disc REL-13 FS_IoT_LC

Architectural considerations for Clean Slate Cellular IoT

Summary:

- *Gb architecture natively optimised for transfer of pair of small packets*
  - *radio capacity*
  - *battery life*
  - *core network signalling load*
- *Significant S1 architecture changes needed to match Gb architecture*
- *CIoT core network "size and shape" vastly different to that for Mobile BroadBand*
- *CIoT latencies favour virtualisation of Core Network*
- *Small scale CIoT launch? -> significant vendor support for combined MME/SGSN*
- *Migration from R12 CN to future lightweight CN possible with sensible R13 CIoT design*

discussion: ALU: comparison with S1 is a bit unfair, WI proposal from Ericsson which would address this problem was not accepted this week
Vodafone: to clarify this is the status at the moment, if there is an S1 solution we are happy but then we need to involve SA2 as well
AT&T: what sort of batteries are considered?
Vodafone: 2 AA
AT&T: 14 years lifetime with AA?
Vodafone: with Lithium batteries this may be possible
Samsung: prioritizing SA2 SI may impact other work
RAN3 chair: Gb experts should come to RAN3 room to standardize Gb?
SA chair (Samsung): who will take the decision Gb or S1?
GERAN chair (Ericsson): hopes to conclude the Gb/S1 already in the SI
Mediatek: SA will have a number of stage 2 exceptions for REL-13
ALU: we need to have a WI description first and RAN should decide the interface
Telecom Italia: SA decided that SA2 SI could be completed in REL-13
Deutsche Telekom: neither Gb nor S1 is an optimized interface so possibility to extend later is very useful
CMCC: interface decision also depends on where the operator wants to deploy it so we should standardize both
Qualcomm: suggests LS to SA that RAN prefers S1 interface and to ask SA to prioritize SA2 SI

Samsung Exhibit 1025, Page 1913 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

ALU: there is a TR that we could use for S1 for Gb SA2 would have security work
RAN chair: there seems to be a preference from RAN to consider S1
Mediatek: we need to also indicate the GERAN preference for Gb
SA2 chair (Huawei): work is contribution driven so if we get the LS we also need to know what we need to work on
SA chair: worried that we leave this TSG cycle without a plenary decision about who decides the interface
GERAN chair: if any LS, please involve GERAN

conclusion: noted, offline discussion about interface aspect on Wed 18:30 (rapporteur: Vodafone) , see LS RP-151046 for the outcome

RP-151046 Draft LS on architecture for Clean Slate CIOT (to: SA; cc: GERAN, GERAN1, GERAN2; contact: Qualcomm) Qualcomm Incorporated
LSout REL-13 FS_AE_CIoT

discussion: AT&T: S1 interface is important for us, Gb is not
RAN chair: S1 priorities will be discussed in discussions in SA
Sprint: we also want to see the S1 interface
Telecom Italia: we want to see the SA results to make up our mind
AT&T: expected that we can make decision at RAN #69?
RAN chair: yes
RAN2 chair: text is not 100% clear as at the end we talk about Gb
AT&T: we should indicate S1 in the LS
RAN3 chair: we used "E-UTRAN architecture based" as S1 is RAN3 domain
RAN chair: will present the LS on Thu afternoon to SA

conclusion: revised in RP-151087

RP-151087 LS on architecture for Clean Slate CIOT (to: SA; cc: GERAN, GERAN1, GERAN2; contact: Qualcomm) Qualcomm Incorporated LSout REL-13 FS_AE_CIoT

conclusion: approved; sent out on Thu of RAN #68

Draft WI proposal

RP-150870 WI proposal (for info): Clean slate Cellular IoT Vodafone Disc REL-13 FS_IoT_LC

some topics on which discussion is invited:

a. *Number of specifications: Should the new RAT follow UMTS (25 series) / LTE (36 series) family of specifications or write fewer specifications?*
b. *Other than the GSM 900 band, what frequency band(s) are companies interested to contribute work on?*
c. *Understanding the work plan and timeline for the completion of the work within Release-13 (March 2016).*
d. *Architecture: Whether Gb-based architecture or S1-based architecture? Please note that the majority of the signalling specifications on those reference points are in CT WG1.*
e. *Layer 3 message encoding rules:ASN.1 PER or CSN.1?*

discussion: RAN chair: further offline discussion about these points is encouraged

conclusion: postponed

GERAN report:

RP-150587 TSG GERAN Status report to TSG RAN#68 GERAN chairman (Ericsson) Report - -

discussion: Specs Manager: database has 3 levels 3GPP/TSG/WG so organizing in SWG will be difficult/impossible
RAN chair: how do you manage SA2 and SA5 who use SWG?
Specs Manager: we do not see/manage them
RAN chair: so we do the same for RAN6

conclusion: noted

16 Outputs to other groups

No contributions

Samsung Exhibit 1025, Page 1914 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

17 Project management

Work plan:

RP-150540 3GPP Work Plan review at Plenary #68 (post CT #68 version) ETSI MCC Workplan - -
conclusion: revised in RP-150580

RP-150580 3GPP Work Plan review at Plenary #68 (post RAN #68 version) ETSI MCC Workplan - -
discussion: AT&T: stage 1 REL-14 freeze: not before March 2016?
workplan manager: simply to not yet fix it and being able to add more in REL-14
Telecom Italia: stage 2 freeze has any impact on REL-13 freeze?
workplan manager: no intention to shift the stage 3 freeze but there are exceptions; slide 12/13: SA2 has completed most of their work
conclusion: noted

Others:

RP-150541 3GPP Support Team Report ETSI MCC Report - -
conclusion: revised in RP-150578

RP-150578 3GPP Support Team Report ETSI MCC Report - -
conclusion: noted

Samsung Exhibit 1025, Page 1915 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

18 Future meeting schedule

Meeting schedule 2010/2011/2012/2013/2014/2015/2016:

MEETING	DATES	LOCATION	HOST
RAN #47	16 March – 19 March 2010	Vienna, Austria	EF3
RAN #48	1 June – 4 June 2010	Seoul, Korea	TTA
RAN #49	14 Sep. – 17 Sep. 2010	San Antonio, USA	NAF3
RAN #50	7 Dec. – 10 Dec. 2010	Istanbul, Turkey	EF3
RAN #51	15 March – 18 March 2011	Kansas City, USA	Sprint Nextel
RAN #52	31 May – 3 June 2011	Bratislava, Slovakia	EF3
RAN #53	13 Sep. – 16 Sep. 2011	Fukuoka, Japan	ARIB & TTC
RAN #54	6 Dec. – 9 Dec. 2011	Berlin, Germany	EF3
RAN #55	28 Feb. – 2 March 2012	Xiamen, China	ZTE, CMCC
workshop ***	11 June - 12 June 2012	Ljubljana, Slovenia	EF3
RAN #56	13 June – 15 June 2012	Ljubljana, Slovenia	EF3
RAN #57	4 Sep. – 7 Sep. 2012	Chicago, USA	NAF3
RAN #58	4 Dec. – 7 Dec. 2012	Barcelona, Spain	EF3
RAN #59	26 Feb. – 1 March 2013	Vienna, Austria	EF3
RAN #60	11 June – 14 June 2013	Oranjestad, Aruba	NAF3
RAN #61	3 Sep. – 6 Sep. 2013	Porto, Portugal	EF3
RAN #62	3 Dec. – 6 Dec. 2013	Busan, Korea	TTA
RAN #63 **	3 March – 6 March 2014	Fukuoka, Japan	ARIB & TTC
RAN #64	10 June – 13 June 2014	Sophia Antipolis, France	ETSI
RAN workshop LTE-U	13 June 2014	Sophia Antipolis, France	ETSI
RAN #65	9 Sep. – 12 Sep. 2014	Edinburgh, Scotland	EF3
RAN #66 **	8 Dec. – 11 Dec. 2014	Maui, USA	NAF3
RAN #67 **	9 March – 12 March 2015	Shanghai, China	Huawei
**RAN #68 **	**15 June – 18 June 2015**	**Malmö, Sweden**	**EF3**
workshop LAA (new)	29 Aug. 2015	Beijing, China	Huawei
RAN #69 **	14 Sep. – 16 Sep. 2015	Phoenix, USA	NAF3
workshop 5G	17 Sep. – 18 Sep. 2015	Phoenix, USA	NAF3
RAN #70 **	7 Dec. – 10 Dec. 2015	Sitges, Spain	EF3
RAN #71 **	7 March – 10 March 2016	Göteborg, Sweden	EF3
RAN #72 **	13 June – 16 June 2016	tbd, Korea	TTA
RAN #73 **	19 Sep. – 22 Sep. 2016	tbd, USA	NAF3
RAN #74 **	5 Dec. – 8 Dec. 2016	Vienna, Austria	EF3
RAN #75 ** (new)	6 March - 9 March 2017	Dubrovnik, Croatia (tbc)	EF3
RAN #76 ** (new)	6 June - 8 June 2017		tbd
RAN #77 ** (new)	11 Sep. - 14 Sep. 2017		tbd
RAN #78 ** (new)	18 Dec. - 21 Dec. 2017	Lisbon, Portugal (tbc)	EF3

***: RAN Workshop on REL-12 and onwards

**: 1 week TSG i.e. in same week with CT and SA, therefore RAN starting on Monday

19 Any other business

ZTE: announcement for IEEE massive MIMO workshop in Hongkong PIMRC2015, 30.08.-02.09.15.

Samsung Exhibit 1025, Page 1916 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

20 Closing of the meeting

The TSG RAN chairman Dino Flore (Qualcomm) thanked the delegates for participating and contributing to RAN meeting #68, he thanked the host for organizing the meeting and he closed the meeting on Thursday June.18th, 2015 at about 16:40.

Samsung Exhibit 1025, Page 1917 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex A:
List of participants

The list of participants of this RAN meeting #68 is attached to this report.

Total number of participants: 207 (registered before the meeting: 262)

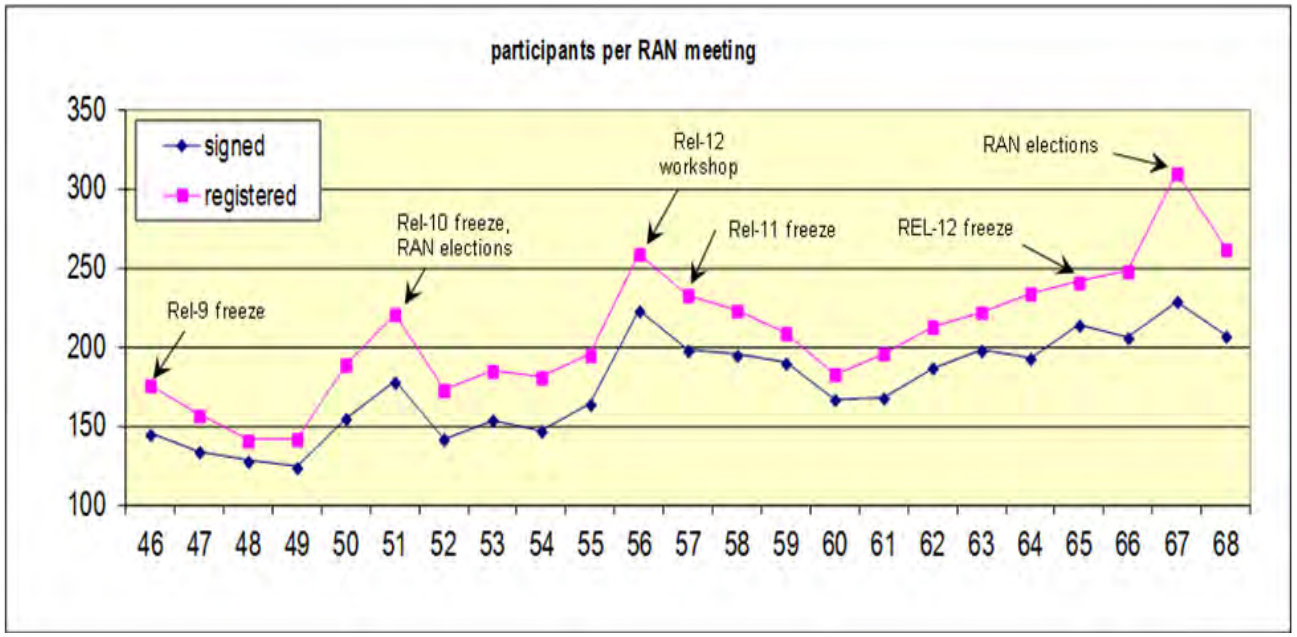


Fig. A-1: Participants per RAN meeting (registered beforehand and actual participants who signed)
(1 week TSG: #63, #66 and further meetings)

Samsung Exhibit 1025, Page 1918 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex B:
List of Tdocs

The list of Tdocs of this RAN meeting #68 is attached to this report.

Total number of Tdocs: 591 (RP-150525 - RP-151115) of which 566 Tdocs are available, i.e. 25 are not available and they are withdrawn.

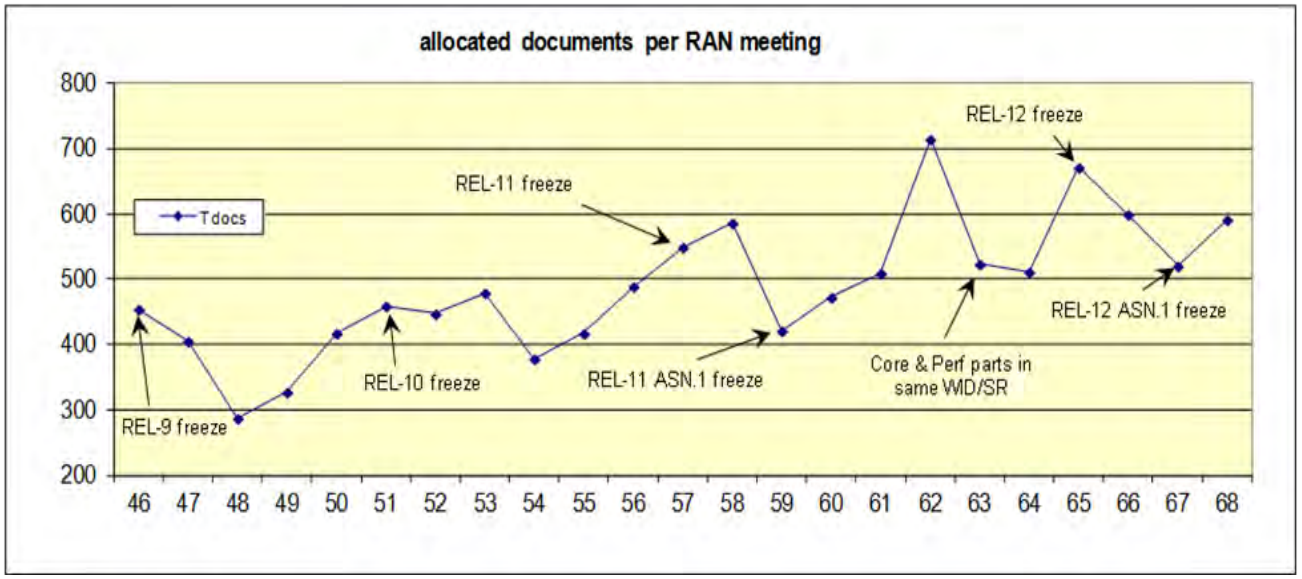


Fig. B-1: Number of allocated Tdocs per RAN meeting

Samsung Exhibit 1025, Page 1919 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex C:
Incoming liaison statements (LSin)

In total 33 LSs/LTIs were received for RAN #68 (0 of them received during the meeting). 33 LSs/LTIs were treated.

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-150542	Liaison on NGMN 5G White Paper (NGMN_LS_150323; to: SA, SA1, RAN, CT; cc: -; contact: NGMN Office)	NGMN	-	-	yes	noted	RP-151088	compare RP-150019
RP-150543	LS regarding clarification of LBT Categories and LAA/802.11 Coexistence (IEEE802_LMSC_LS_150318; to: RAN, RAN1; cc: IEEE 802.19 Coexistence WG; contact: Chairman IEEE 802 LMSC)	IEEE 802 LMSC	REL-13	FS_LTE_LAA	yes	noted	no	LMSC = Local and Metropolitan Area Network Standards Committee; LBT = Listen Before Talk; see RAN1 answer in RP-150551; LS treated under AI 12.4.3; draft reply LS in RP-150773 was finally withdrawn
RP-150544	Reply LS to SP-140886 regarding scope and status relevant to PPDR work items and study items (APT/AWG/2015/LS-1; to: SA, RAN; cc: ITU-R WP5A, ITU-R WP5D; contact: Chairman APT Wireless Group)	APT Wireless Group	-	-	yes	noted	no	APT = ASIA-PACIFIC TELECOMMUNITY; PPDR = Public Protection and Disaster Relief; SP-140886 was not sent to/cc RAN
RP-150545	Reply LS to RP-150505 on Licensed-Assisted Access (BRAN(15)000015r2; to: RAN, RAN1; cc: -; contact: Cisco)	ETSI TC BRAN	REL-13	FS_LTE_LAA	yes	noted	no	LS treated under AI 12.4.3; no LS answer but a different LSout in RP-151098
RP-150546	LS on Cooperation for Energy Efficiency Measurements (EE(15)000003r1; to: SA5, SA, RAN2, RAN3; cc: RAN, ETSI TC ATTM; contact: Alcatel-Lucent)	ETSI TC EE	REL-12	-	not explicitly	noted	no	
RP-150547	LS on LTE/UMTS coexistence studies for FS_IoT_LC (GPC150305; to: RAN4; cc: RAN, GERAN, SA; contact: Vodafone)	GERAN1 CIoT ad hoc	REL-13	FS_IoT_LC	no	noted	no	LS treated under AI 15.
RP-150548	Reply LS to SP-150166 = RP-150558 on information regarding V2X study in 3GPP (ITS(15)000063 rev 1; to: SA, SA1; cc: RAN, IEEE1609, US SAE; contact: ITS Chairman)	ETSI TC ITS	REL-14	FS_V2XLTE	no	noted	no	LS treated under REL-13 AI 11.3.5 (in connection with RP-150558)
RP-150549	LS on Internet of Things (ISO_IEC_JTC1_WG 10_LS_150224; to: GERAN, RAN, SA, Industrial Internet Consortium (IIC), NIST CPS PWG, ETSI TC Smart M2M, ETSI IoT Group, GS1, ITU-T, OMG, OGC, OMA, W3C, OASIS, IEEE P2413, UPnP, IETF, OnM2M; cc: -; contact: Convenor ISO/IEC JTC 1/WG 10)	ISO/IEC JTC 1/WG 10	-	-	no	noted	no	

Samsung Exhibit 1025, Page 1920 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-150550	LS on CTIA Test Plan for Wireless Device Over-the-Air Performance (CTIA_LS_150311; to: RAN, RAN4, RAN5, GSMA TSGAP, GCF SG, GCF OTA Task Force, COST IC1004 TWG-O; cc: -; contact: Spirent Communications)	CTIA	REL-13	LTE_MIMO_OTA-Core, LTE_UTRA_TRP_TRS-Core	no	noted	no	CTIA = Cellular Telecommunications & Internet Association; LS treated under 11.2.4
RP-150551	Response LS to IEEE802_LMSC_LS_150318 = RP-150543 on Clarification of LBT Categories (R1-152182; to: IEEE802 LMSC; cc: RAN; contact: Qualcomm)	RAN1	REL-13	FS_LTE_LAA	no	noted	no	LMSC = Local and Metropolitan Area Network Standards Committee; LBT = Listen Before Talk; LS treated under AI 12.4.3
RP-150552	LS on Wireless Fronthaul Transport Requirements over Access Systems (ITU-T_COM15_LS232_E; to: NGMN, RAN3, RAN4, RAN1; cc: RAN; contact: Huawei)	ITU-T SG15	-	-	no	noted	no	
RP-150553	Response LS to IEEE802_LMSC_LS_150318 = RP-150543 on LAA-802.11 Coexistence (R1-152183; to: IEEE802 LMSC, RAN; cc: -; contact: Qualcomm)	RAN1	REL-13	FS_LTE_LAA	no	noted	no	LS treated under AI 12.4.3
RP-150554	LS on new UE categories in Rel-12 (R1-152220; to: RAN2; cc: RAN; contact: Huawei)	RAN1	REL-12	TEI12	no	noted	no	LS treated under AI 14
RP-150555	Reply LS to S2-150691 on public safety discovery (R2-151723; to: SA2; cc: RAN1, SA3, RAN; contact: Intel)	RAN2	REL-13	eProSe-Ext	no	noted	no	LS treated under REL-13 AI 11.3.5
RP-150557	Reply LS to RP-142312 on LTE based Vehicular Communication (S1-151629; to: RAN; cc: SA; contact: LG)	SA1	REL-14	FS_V2XLTE	not explicitly	noted	no	LS treated under REL-13 AI 11.3.5
RP-150558	LS on information regarding V2X study in 3GPP (SP-150166; to: ETSI TC ITS, US SAE, US ITSA, Korean Ministry of Land, Infrastructure and Transport, GSMA Connected Living, IEEE; cc: RAN, SA1; contact: Nokia Networks)	SA	REL-14	FS_V2XLTE	no	noted	no	LS treated under REL-13 AI 11.3.5
RP-150559	Reply LS to GPC150122 and S3-151201 on work split for Study on Cellular IoT (SP-150170; to: SA2, SA3, GERAN; cc: SA1, RAN; contact: Huawei)	SA	REL-13	FS_IoT_LC	no	noted	no	GPC150122 and S3-151201 was not sent to/cc RAN
RP-150560	LS on CRs for MSR specifications (R4-152566; to: GERAN1; cc: RAN; contact: Ericsson)	RAN4	REL-13	RInImp9-RFmulti, TEI13	no	noted	no	MSR = Multi Standard Radio; RInImp9-RFmulti was a REL-9 WI; includes a REL-13 CR to TS 37.141

Samsung Exhibit 1025, Page 1921 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-150561	Response LS to RP-150509 on 3GPP RAN requesting information on the current regulations regarding regional/band-specific regulatory possibilities/constraints of utilizing UL spectrum for transmission from the network to UEs (ECC-PT1(15)066_A06; to: RAN; cc: ETSI TC ERM; ETSI TC MSG TFES; contact: Agence nationale des fréquences)	CEPT ECC PT1	REL-13	FS_LTE_flex_duplex_reg	not explicitly	noted	no	RP-150509 was sent from RAN #67; ECC = Electronic Communications Committee; LS will be treated under AI 12.4.9
RP-150562	LS about ETSI ISG IP6 creation and interaction with other groups (IP6(15)001031; to: RAN, CT, SA, OneM2M, ETSI ISG NFV, ETSI ISG MEC, ETSI TC SmartM2M, ETSI TC NTECH; cc: -; contact: ETSI ISG IP6 chairman)	ETSI ISG IP6	-	-	no	noted	no	ISG = Industry Specification Group
RP-150563	LS on Standardization of New E-UTRA Band and OOBE Limits Requirement (ASMG_3_1303_150514; to: RAN; cc: RAN4; contact: Etisalat)	ASMG	REL-13	-	yes	noted	no	ASMG = Arab Spectrum Management Group; LS treated under AI 13.2; related new WID in RP-150618
RP-150566	LS as follow-up regarding LAA (IEEE802_LMSC_LS_150518; to: RAN, RAN1; cc: IEEE 802, IEEE 802.19 Coexistence WG; contact: Chairman IEEE 802 LMSC)	IEEE 802 LMSC	REL-13	FS_LTE_LAA	yes	noted	no	LAA = License Assisted Access; LS treated under AI 12.4.3; no LS answer but see LSout RP-151095
RP-150567	Reply LS to R4-152566 = RP-150560 on CRs for MSR specifications (GP-150663; to: RAN, RAN4 ; cc: -; contact: Ericsson)	GERAN1	REL-9	RInImp9-RFmulti	no	noted	no	MSR = Multi Standard Radio; RInImp9-RFmulti was a REL-9 WI
RP-150568	Reply LS to R2-150733 = RP-150042 on per-band UL 64 QAM support (R4-153813; to: RAN2; cc: RAN, RAN1; contact: Vodafone)	RAN4	REL-12	LTE-L23, TEI12	no	noted	no	note: 64QAM UL functionality for LTE exists in 3GPP specs since REL-8; however, signalling of a UE capability is introduced for REL-12 (see R2-150713 in RP-150379 and R2-150715 in RP-150377) and RF requirements are introduced via REL-13 WI LTE_UL64QAM-Core; (compare RP-142226 for DL 256QAM); LS treated under AI 14.
RP-150569	LS on Request for specification of Dedicated Core Network (DECOR) feature (S2-151997; to: CT4, RAN3; cc: RAN; contact: NTT DOCOMO)	SA2	REL-13	DECOR	no	noted	no	DECOR is an SA2 REL-13 WI started in June 14 (WID: SP-140707); note: A related WI proposal is submitted under AI 13.1.3 in RP-150826
RP-150570	Response LS to IEEE802_LMSC_LS_150518 = RP-150566 related to LAA-802.11 Coexistence (R1-153659; to: IEEE 802 LAN/MAN Standards Committee; cc: RAN; contact: Qualcomm)	RAN1	REL-13	FS_LTE_LAA	no	noted	no	LS treated under AI 12.4.3

Samsung Exhibit 1025, Page 1922 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RAN Tdoc	title (incoming LS, to, cc, contact)	source	REL	WI	RAN action requested	status	LS answer to source	additional comments
RP-150571	Draft reply LS to ITU-T SG15/COM15-LS225-E =RP-150574 on work on time synchronization and future target requirements (R4-153594; to:RAN; cc: RAN1, RAN3; contact: Ericsson)	RAN4	-	-	yes	noted	no	note: Although RP-150571 is unfortunately written like a reply from RAN4 to ITU-T SG15, this LS was not yet sent out and has to be sent from RAN; RP-150571 is used as basis to reply to RP-150574
RP-150572	LS regarding rank3/4 in TM3 and TM4 for additional UE categories (R4-153907; to: RAN, RAN1, RAN2; cc: -; contact: Nokia)	RAN4	REL-13	LTE_4Rx_AP_DL	yes	noted	RP-151113	LS treated under AI 14
RP-150573	LS on Establishment of new Focus Group on "IMT-2020" (ITU-T_COM13_L107_E; to: RAN, CT, SA; cc: IEEE 802.1/802.3, IEEE SA, ETSI ISG NFV, ARIB, ATIS, CCSA, TTA, TTC, OIF, ONF, NGMN Alliance, GSMA and IETF/IRTF; contact: OFCOM Switzerland)	ITU-T SG13	-	-	no	noted	no	
RP-150574	LS on work on time synchronization and future target requirements (ITU-T_COM15-LS225-E; to: RAN; cc: RAN1, RAN3, RAN4; contact: Ericsson)	ITU-T SG15	-	-	yes	noted	RP-151001	RAN4 has prepared an LS answer to RP-150574 in RP-150571; LS treated under AI 6.3 together with RP-150571
RP-150575	Reply LS to RP-150509 on 3GPP RAN Study on regulatory aspects for flexible duplex for E-UTRAN (FCC_150605; to: RAN; cc: -; contact: FCC Chief Engineer)	FCC	REL-13	FS_LTE_flex_duplex_reg	not explicitly	noted	no	LS treated under AI 12.4.9
RP-150576	Reply LS to RP-150509 on 3GPP RAN Study on regulatory aspects for flexible duplex for E-UTRAN (ARIB_150612; to: RAN; cc: -; contact: Fujitsu)	ARIB	REL-13	FS_LTE_flex_duplex_reg	not explicitly	noted	no	LS treated under AI 12.4.9
RP-150577	LS on new power class for 3GPP Band 41 (GTI_150615; to: RAN; cc: -; contact: GTI Secretariat)	GTI	REL-13	-	yes	noted	no	GTI = Global TD-LTE Initiative; related to new WI proposal RP-150591; LS treated under AI 13.2

***: uses Letter to ITU template (LTI)

Note: RP-150556 was withdrawn as S1-151605 was not agreed by SA1.

Samsung Exhibit 1025, Page 1923 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

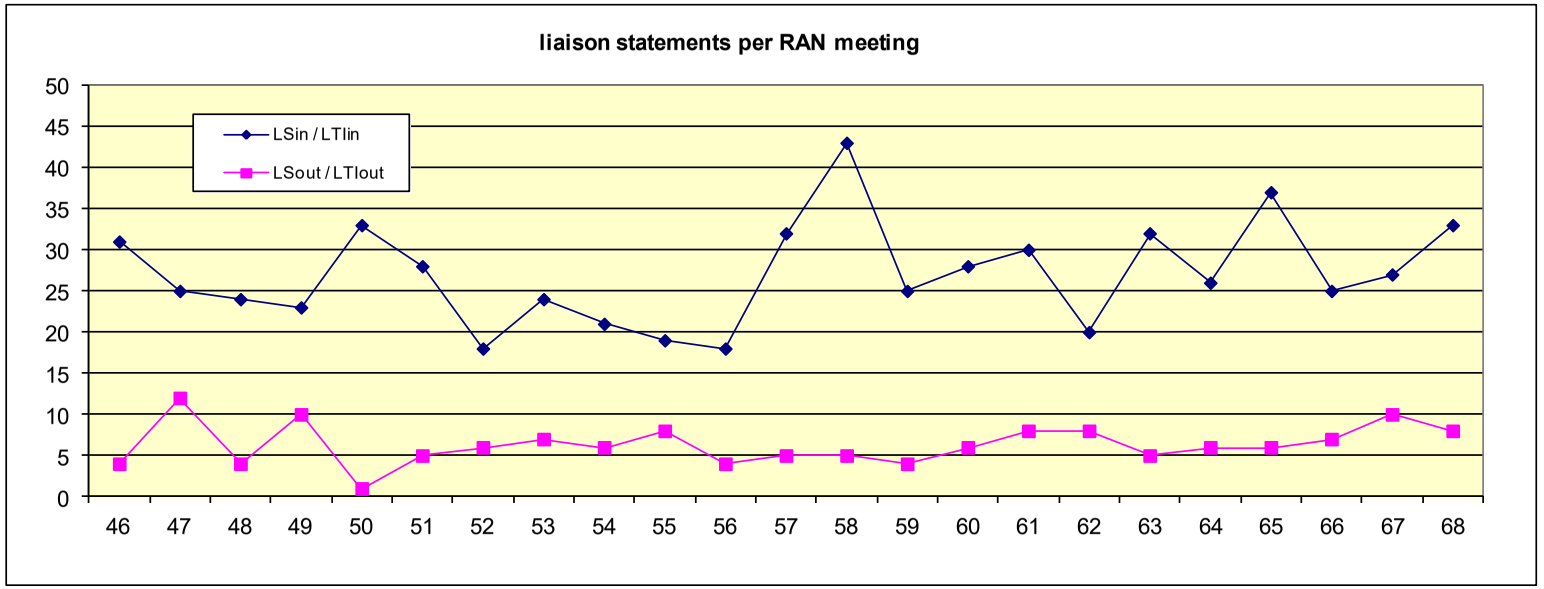


Fig. C-1: Number of incoming/outgoing Liason Statements (LS) and Letter to ITU (LTI) per RAN meeting

Samsung Exhibit 1025, Page 1924 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex D:
Outgoing liaison statements (LSout)

Only final outgoing LSs are listed here.
8 outgoing LSs/LTIs of RAN #68 (0 of them approved by email after the meeting):

final LS Tdoc	title	to	cc	contact	reply to	release	WI	comments
RP-151001	Work on time synchronization and future target requirements	ITU-T SG15	RAN1, RAN3, RAN4	Ericsson	ITU-T SG15/COM15-LS225-E = RP-150574	-	-	based on RP-150571
RP-151087	Architecture for Clean Slate CIOT	SA	GERAN, GERAN1, GERAN2	Qualcomm	-	REL-13	FS_AE_CIoT	sent out on Thu of RAN #68
RP-151088	NGMN 5G Initiative	NGMN Forum -- 5G Initiative Steering Committee	-	Huawei	NGMN_LS_150323 = RP-150542	-	-	
RP-151095	3GPP RAN Workshop on License-Assisted Access (LAA)	IEEE 802 LMSC, Wi-Fi Alliance, ETSI BRAN, FCC, Wireless Broadband Alliance, GSMA, OFCOM, CCSA	-	Qualcomm	-	REL-13	FS_LTE_LAA	links to invitation and registration to be added before LS is made available; LS Tdoc was provided on 24.06.15 via the RAN reflector
RP-151098	Licensed-Assisted Access	ETSI BRAN	-	Huawei	-	REL-13	LTE_LAA	has RP-150879 (TR 36.889) and RP-151045 (LAA WID) as attachments
RP-151105	LTE Rel-12 UE feature list	RAN1, RAN2, RAN4	RAN3, RAN5, SA6	NTT DOCOMO	R1-150947 = RP-150032, R2-150703 = RP-150034, R4-151044 = RP-150036	REL-12	TEI12	LSin RP-150032, RP-150034 and RP-150036 were received at RAN #67
RP-151113	Rank3/4 in TM3 and TM4 for additional UE categories	RAN1, RAN2, RAN4	-	Nokia Networks	R4-153907 = RP-150572	REL-13	LTE_4Rx_AP_DL	
RP-151115	LAA capabilities and scope	IEEE 802 LMSC, Wi-Fi Alliance	-	RAN chairman (Qualcomm)	-	REL-13	FS_LTE_LAA	revision of RP-151097 which had the wrong meeting header; has RP-151096 as attachment

***: uses Letter to ITU template (LTI)

Samsung Exhibit 1025, Page 1925 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex E:
List of Change Requests (CRs)

This list of 1193 CRs includes all CRs submitted to RAN #68 with 1173 approved CRs.

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
25.101	1067	-	Rel-12	F	RP-150957	R4-152754	approved	Receiver spurious emissions requirements for downlink-only bands (Band XXXII)	12.7.0	12.8.0	R4	LTE_UTRA_SDL_BandL-Core
25.113	0063	-	Rel-11	F	RP-150955	R4-151771	approved	EMC testing of multi-band operation for UTRA BS	11.0.0	11.1.0	R4	MB_MSR_RF-Perf
25.113	0064	-	Rel-12	A	RP-150955	R4-151772	approved	EMC testing of multi-band operation for UTRA BS	12.1.0	12.2.0	R4	MB_MSR_RF-Perf
25.133	1399	-	Rel-12	F	RP-150957	R4-151344	approved	Correction to measurement scaling factor for incmon	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Core
25.133	1400	-	Rel-12	F	RP-150959	R4-151577	approved	25.133 CR to insert missing scale factor in Idle mode IRAT EUTRA reduced performance group requirement	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
25.133	1401	2	Rel-12	B	RP-150959	R4-153869	approved	Incmon CR for Idle mode interRAT reselection to EUTRA TDD	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
25.133	1402	2	Rel-12	B	RP-150959	R4-153868	approved	Incmon CR for Cell FACH interfrequency reselection	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
25.133	1403	2	Rel-12	B	RP-150959	R4-153866	approved	Incmon CR for Cell DCH interRAT correct reporting of E-UTRA FDD events with reduced performance group configured	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
25.133	1404	2	Rel-12	B	RP-150959	R4-153867	approved	Incmon CR for Cell DCH interRAT correct reporting of E-UTRA TDD events with reduced performance group configured	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
25.133	1405	-	Rel-12	B	RP-150959	R4-152839	approved	Testcase for UTRA Incmon interfrequency measurements in cell DCH with reduced performance group configured	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
25.133	1406	-	Rel-12	B	RP-150959	R4-152840	approved	Idle mode testcase for UTRA Incmon interfrequency reselection	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
25.133	1407	1	Rel-12	B	RP-150959	R4-153606	approved	RRM test case for IncMon UTRA (Cell DCH interfrequency correct reporting of events without reduced performance group configured)	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
25.133	1409	1	Rel-12	B	RP-150959	R4-153611	approved	RRM test case for IncMon UTRA (Idle mode interRAT reselection to EUTRA FDD)	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
25.214	0737	-	Rel-11	F	RP-150934	R1-153353	approved	Clarifications to Multiflow	11.11.0	11.12.0	R1	HSDPA_MFTX-Core
25.214	0738	-	Rel-12	A	RP-150934	R1-153354	approved	Clarifications to Multiflow	12.2.0	12.3.0	R1	HSDPA_MFTX-Core
25.300	0014	-	Rel-12	F	RP-150919	R2-152803	approved	Clarification for Access Group based access control	12.3.0	12.4.0	R2	EDCH_enh-Core
25.304	0387	-	Rel-12	D	RP-150923	R2-152055	approved	Cleanup corrections to TS 25.304	12.5.0	12.6.0	R2	TEI12
25.308	0167	-	Rel-13	B	RP-150924	R2-152806	approved	Introduction of the Multiflow 3F-4C configuration	12.2.0	13.0.0	R2	HSDPA_MFTX_enh-Core
25.319	0133	-	Rel-12	F	RP-150916	R2-152057	approved	Clarification for common E-DCH resource release during CELL FACH to CELL FACH transition	12.2.0	12.3.0	R2	RANimp-UplinkEnhState, TEI12
25.331	5764	-	Rel-12	F	RP-150917	R2-152056	approved	Correction to usage of Signalling radio bearer RB4 to transmit UE INFORMATION RESPONSE message	12.5.0	12.6.0	R2	MDT_UMTSLTE-Core, ANR_UTRAN-Core, eMDT_UMTSLTE-Core, TEI12
25.331	5765	-	Rel-12	F	RP-150923	R2-152073	approved	Clarification to the setting of RSRQ on all symbols	12.5.0	12.6.0	R2	TEI12

Samsung Exhibit 1025, Page 1926 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
25.331	5767	-	Rel-12	F	RP-150919	R2-152804	approved	Correction to presence of UE capability Simultaneous support for DCH Enhancements and Compressed Mode operation	12.5.0	12.6.0	R2	UTRA_DCHenh-Core
25.331	5768	-	Rel-11	F	RP-150918	R2-152801	approved	Disable default configuration for CELL_FACH	11.13.0	11.14.0	R2	TEI11
25.331	5769	-	Rel-12	A	RP-150918	R2-152802	approved	Disable default configuration for CELL_FACH	12.5.0	12.6.0	R2	TEI11
25.331	5770	-	Rel-12	F	RP-150920	R2-152811	approved	CR to 25.331 on cleanup corrections to IncMon	12.5.0	12.6.0	R2	LTE_UTRA_IncMon-Core
25.331	5771	-	Rel-12	F	RP-150919	R2-152810	approved	CR to 25.331 on cleanup corrections of Radio Links without DPCH and F-DPCH	12.5.0	12.6.0	R2	UTRA_HetNet_enh-Core
25.331	5772	-	Rel-12	F	RP-150923	R2-152805	approved	Clarification for F-DPCH support with HS	12.5.0	12.6.0	R2	TEI12
25.423	1868	2	Rel-12	F	RP-150941	R3-151007	approved	Correction of the Additional E-DCH FDD Information IE	12.4.0	12.5.0	R3	RANimp-DC_HSUPA, TEI12
25.423	1870	1	Rel-12	F	RP-150942	R3-151194	approved	Corrections of EUL Enhancements	12.4.0	12.5.0	R3	EDCH_enh-Core
25.433	2067	1	Rel-12	F	RP-150942	R3-151193	approved	Corrections of EUL Enhancements	12.4.0	12.5.0	R3	EDCH_enh-Core
34.108	0978	1	Rel-12	F	RP-150905	R5-151886	approved	Addition of band XXXII to 34.108	11.13.0	12.0.0	R5	LTE_UTRA_SDL_BandL-UEConTest
34.108	0979	1	Rel-12	F	RP-150903	R5-151991	approved	Introduction of Reference system configuration for UTRA-WLAN interworking	11.13.0	12.0.0	R5	UTRA_LTE_WLAN_interw-UEConTest
34.108	0980	1	Rel-12	F	RP-150903	R5-151992	approved	Corrections to preamble steps for UTRA-WLAN interworking	11.13.0	12.0.0	R5	UTRA_LTE_WLAN_interw-UEConTest
34.108	0981	1	Rel-12	F	RP-150903	R5-151993	approved	Adding contents Dedicated WLAN offload information in UTRAN Mobility Information	11.13.0	12.0.0	R5	UTRA_LTE_WLAN_interw-UEConTest
34.108	0982	1	Rel-12	F	RP-150904	R5-151729	approved	Correction to the multiple messages to include Rel. 11 and Rel. 12 IEs	11.13.0	12.0.0	R5	UTRA_DCHenh-UEConTest
34.108	0983	-	Rel-11	F	RP-150886	R5-151712	approved	Correction to RADIO BEARER SETUP message condition A25c	11.13.0	11.14.0	R5	TEI9_Test
34.121-1	1598	1	Rel-12	F	RP-150905	R5-151887	approved	Addition of band XXXII to 34.121-1 clause 4	11.6.0	12.0.0	R5	LTE_UTRA_SDL_BandL-UEConTest
34.121-1	1599	1	Rel-12	F	RP-150905	R5-151888	approved	Addition of band XXXII to 34.121-1 clause 5	11.6.0	12.0.0	R5	LTE_UTRA_SDL_BandL-UEConTest
34.121-1	1600	-	Rel-11	F	RP-150888	R5-151362	approved	Corrections to Test Case 8.4.3.1A	11.6.0	11.7.0	R5	TEI10_Test
34.121-1	1601	-	Rel-11	F	RP-150888	R5-151363	approved	Corrections to test procedure of Test Cases 8.7.11 and 8.7.13	11.6.0	11.7.0	R5	TEI10_Test
34.121-1	1602	1	Rel-12	F	RP-150905	R5-151889	approved	Addition of Band XXXII in Receiver test cases	11.6.0	12.0.0	R5	LTE_UTRA_SDL_BandL-UEConTest
34.121-1	1603	2	Rel-11	F	RP-150881	R5-152132	approved	Correction to Rx spurious emissions test case	11.6.0	11.7.0	R5	TEI_Test
34.121-1	1604	1	Rel-11	F	RP-150881	R5-152012	approved	Correction to Tx spurious emissions test cases	11.6.0	11.7.0	R5	TEI_Test
34.121-1	1605	1	Rel-11	F	RP-150899	R5-152026	approved	Test tolerance update to TC 921M	11.6.0	11.7.0	R5	TEI11_Test
34.121-2	0161	1	Rel-12	F	RP-150905	R5-151890	approved	Addition of frequency UTRA band 32	11.5.0	12.0.0	R5	LTE_UTRA_SDL_BandL-UEConTest
34.122	0436	-	Rel-11	F	RP-150888	R5-151364	approved	Corrections to Test Case 8.6.5.4	11.10.0	11.11.0	R5	TEI10_Test
34.123-1	3737	1	Rel-11	F	RP-150883	R5-151720	approved	Correction to Absolute Priority Cell reselection testcases 8.3.1.52, 8.3.1.53, 8.3.1.54	11.6.0	11.7.0	R5	TEI8_Test
34.123-1	3738	1	Rel-12	F	RP-150881	R5-151721	approved	Upgrade of TC 8.1.5.7 to Rel-12 ASN.1 baseline	11.6.0	12.0.0	R5	TEI_Test
34.123-1	3739	-	Rel-11	F	RP-150886	R5-151138	approved	Correction to CSG test case 6.3.1.3	11.6.0	11.7.0	R5	TEI9_Test

Samsung Exhibit 1025, Page 1927 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.123-1	3740	-	Rel-11	F	RP-150883	R5-151294	approved	Correction to UTRA CSG test cases 12.2.1.5e and 12.2.2.7e	11.6.0	11.7.0	R5	TEI8_Test
34.123-1	3741	-	Rel-11	F	RP-150881	R5-151384	approved	Corrections to RRC test case 8.3.2.10	11.6.0	11.7.0	R5	TEI_Test
34.123-1	3742	-	Rel-11	F	RP-150883	R5-151445	approved	Corrections to SS test case 15.9.1	11.6.0	11.7.0	R5	TEI8_Test
34.123-1	3743	-	Rel-11	F	RP-150883	R5-151447	approved	Corrections to SS test case 15.9.3	11.6.0	11.7.0	R5	TEI8_Test
34.123-1	3744	-	Rel-11	F	RP-150883	R5-151449	approved	Corrections to SS test case 15.9.4	11.6.0	11.7.0	R5	TEI8_Test
34.123-1	3745	-	Rel-11	F	RP-150883	R5-151450	approved	Corrections to SS test case 15.9.5	11.6.0	11.7.0	R5	TEI8_Test
34.123-1	3746	-	Rel-12	F	RP-150903	R5-151451	approved	Introduction of Reference to 3GPP TS 36.508	11.6.0	12.0.0	R5	UTRA_LTE_WLAN_interw-UEConTest
34.123-1	3747	1	Rel-12	F	RP-150903	R5-151994	approved	Introduction of generic test procedure for offload to/from WLAN	11.6.0	12.0.0	R5	UTRA_LTE_WLAN_interw-UEConTest
34.123-1	3748	-	Rel-11	F	RP-150883	R5-151467	approved	Correction to Rel-8 SS testcases 15.10.1, 15.10.2, 15.10.3, 15.10.4	11.6.0	11.7.0	R5	TEI8_Test
34.123-1	3749	1	Rel-11	F	RP-150886	R5-151722	approved	Correction to Rel-9 CSG testcase 6.3.4.1	11.6.0	11.7.0	R5	TEI9_Test
34.123-1	3750	-	Rel-11	F	RP-150886	R5-151469	approved	Correction to Rel-9 CSG testcase 6.3.1.4	11.6.0	11.7.0	R5	TEI9_Test
34.123-1	3751	-	Rel-11	F	RP-150882	R5-151470	approved	Correction to Rel-7 NISPC testcases 11.1.5.1, 11.1.5.2, 11.2.1a, 11.2.1b, 11.3.2a and 11.9.1	11.6.0	11.7.0	R5	TEI7_Test
34.123-1	3752	-	Rel-11	F	RP-150899	R5-151612	approved	Correction to UTRA eMDT test case 8.6.5.1	11.6.0	11.7.0	R5	TEI11_Test
34.123-1	3753	1	Rel-11	F	RP-150899	R5-151725	approved	Introduction of New TC 8.3.1.1d Inter-frequency absolute priority based reselection in CELL_FACH (Lower Priority)	11.6.0	11.7.0	R5	TEI11_Test
34.123-1	3754	1	Rel-11	F	RP-150899	R5-151726	approved	Introduction of New TC 8.3.1.1e Inter-frequency absolute priority based reselection in CELL_FACH (Higher Priority)	11.6.0	11.7.0	R5	TEI11_Test
34.123-1	3755	1	Rel-11	F	RP-150899	R5-151727	approved	Introduction of New TC 8.3.1.1f - Inter-frequency reselection to a no priority layer when NW and UE supports absolute priority in CELL_FACH	11.6.0	11.7.0	R5	TEI11_Test
34.123-1	3756	1	Rel-12	F	RP-150904	R5-152068	approved	Introduction of new test case 8.2.2.89 - Radio Bearer Reconfiguration in CELL_DCH: Successful Reconfiguration of DCH Enhancement in Basic Mode	11.6.0	12.0.0	R5	UTRA_DCHenh-UEConTest
34.123-1	3757	-	Rel-11	F	RP-150886	R5-151711	approved	Correction to F-DPCH channelisation code in DC-HSUPA test cases	11.6.0	11.7.0	R5	TEI9_Test
34.123-2	0734	1	Rel-11	F	RP-150881	R5-152065	approved	[PTCO] Correction to applicability of R99 RAB test cases	11.6.0	11.7.0	R5	TEI_Test
34.123-2	0735	1	Rel-12	F	RP-150905	R5-151965	approved	Addition of frequency for UTRA band 32	11.6.0	12.0.0	R5	LTE_UTRA_SDL_BandL-UEConTest
34.123-2	0736	1	Rel-11	F	RP-150899	R5-151723	approved	Correction to conditions C647a and C731a for Further Enhanced CELL_FACH test cases	11.6.0	11.7.0	R5	TEI11_Test
34.123-2	0737	1	Rel-11	F	RP-150883	R5-152066	approved	Corrections to the applicability of DC-HSDPA test cases	11.6.0	11.7.0	R5	TEI8_Test
34.123-2	0739	1	Rel-12	F	RP-150904	R5-152069	approved	Add Applicability for New DCH Enhancement Test Case 8.2.2.89	11.6.0	12.0.0	R5	UTRA_DCHenh-UEConTest
34.123-2	0740	1	Rel-11	F	RP-150899	R5-151728	approved	Add Applicability for New FE-FACH Test Cases 8.3.1.1d, 8.3.1.1e and 8.3.1.1f	11.6.0	11.7.0	R5	TEI11_Test
34.123-3	3328	1	Rel-11	F	RP-150912	R5-152071	approved	Routine maintenance for TS 34.123-3	11.6.0	11.7.0	R5	TEI12_Test
34.123-3	3329	-	Rel-12	F	RP-150905	R5-151131	approved	Band 32 - Guidance on UTRAN test execution	11.6.0	12.0.0	R5	LTE_UTRA_SDL_BandL-UEConTest

Samsung Exhibit 1025, Page 1928 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.123-3	3330	1	Rel-11	F	RP-150881	R5-152067	approved	[PTCO] Introduction of new PIXIT for optional execution of implicit R99 RAB test cases	11.6.0	11.7.0	R5	TEI_Test
34.123-3	3331	-	Rel-11	F	RP-150891	-	approved	CR to 34.123-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.123-3 (prose), Annex A	11.6.0	11.7.0	R5	TEI7_Test
34.123-3	3332	-	Rel-11	F	RP-150892	R5s150154	approved	Corrections to handling of RGCH Configuration	11.6.0	11.7.0	R5	TEI6_Test
34.123-3	3333	-	Rel-11	F	RP-150892	R5s150155	approved	Corrections to Rel-9 CSG testcase 6.3.1.4	11.6.0	11.7.0	R5	TEI9_Test
34.123-3	3334	-	Rel-11	F	RP-150892	R5s150156	approved	Corrections to Rel-9 testcases 8.2.2.74 and 8.2.2.75	11.6.0	11.7.0	R5	TEI9_Test
34.123-3	3335	-	Rel-11	F	RP-150892	R5s150161	approved	Correction of Rel-8 UTRA SS test cases 15.10.x in SS NITZ test suite	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3336	-	Rel-11	F	RP-150892	R5s150196	approved	Correction to UTRA CSG test case 6.3.4.2	11.6.0	11.7.0	R5	TEI9_Test
34.123-3	3337	-	Rel-11	F	RP-150892	R5s150197	approved	Correction to UTRA TTCN-3 test case 8.1.5.7	11.6.0	11.7.0	R5	TEI_Test
34.123-3	3338	-	Rel-11	F	RP-150892	R5s150203	approved	Correction in checking of Classmark3 message	11.6.0	11.7.0	R5	TEI_Test
34.123-3	3339	-	Rel-11	B	RP-150892	R5s150208	approved	Correction of Rel-8 Enh. Cell FACH UL Test Cases in D15wk09 HSPA8_ENH ATS	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3340	-	Rel-11	F	RP-150892	R5s150213	approved	Correction of Rel-8 UTRA SS test cases SS NITZ test suite	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3341	-	Rel-11	F	RP-150892	R5s150218	approved	Corrections to iwd-TTCN2-B2012-03_D15wk09	11.6.0	11.7.0	R5	TEI7_Test
34.123-3	3342	-	Rel-11	F	RP-150892	R5s150228	approved	Correction for UTRA SS/NITZ test cases 15.3.1, 15.3.2	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3343	-	Rel-11	F	RP-150892	R5s150240	approved	Corrections to Rel-8 Supplementary service test cases	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3344	-	Rel-11	F	RP-150892	R5s150241	approved	Corrections to Rel-7 NISPC testacse 11.3.2a	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3345	-	Rel-11	F	RP-150892	R5s150243	approved	Corrections to Rel-8 Absolute priority cell reselection testcases	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3346	-	Rel-11	F	RP-150892	R5s150246	approved	Corrections to Rel-7 NISPC test case 11.1.5.2	11.6.0	11.7.0	R5	TEI7_Test
34.123-3	3347	-	Rel-11	F	RP-150892	R5s150247	approved	Corrections to Rel-10 NAS test case 9.4.3.3a	11.6.0	11.7.0	R5	TEI10_Test
34.123-3	3348	-	Rel-11	F	RP-150892	R5s150248	approved	Corrections to UTRA CSG test case 6.3.1.4	11.6.0	11.7.0	R5	TEI9_Test
34.123-3	3349	-	Rel-11	F	RP-150892	R5s150250	approved	Corrections to Rel-9 CSG testcase 6.3.1.4	11.6.0	11.7.0	R5	TEI9_Test
34.123-3	3350	-	Rel-11	F	RP-150892	R5s150264	approved	Corrections to UTRA CSG test case 6.3.4.1	11.6.0	11.7.0	R5	TEI9_Test
34.123-3	3351	-	Rel-11	F	RP-150892	R5s150265	approved	Correction for UTRAN CSG test case 6.3.1.3.	11.6.0	11.7.0	R5	TEI9_Test
34.123-3	3352	-	Rel-11	F	RP-150892	R5s150266	approved	Correction to selection expression for test case 7.1.6.2.5	11.6.0	11.7.0	R5	TEI6_Test
34.123-3	3353	-	Rel-11	F	RP-150892	R5s150275	approved	Correction to function f_CheckUE_SupportedEUTRA_Bands_Chunk()	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3354	-	Rel-11	B	RP-150892	R5s150279	approved	Addidtion of Rel-7 NISPC testcase 11.2.1a to UTRAN testsuite	11.6.0	11.7.0	R5	TEI7_Test
34.123-3	3355	-	Rel-11	B	RP-150892	R5s150281	approved	Addidtion of Rel-7 NISPC testcase 11.2.1b to UTRAN testsuite	11.6.0	11.7.0	R5	TEI7_Test
34.123-3	3356	-	Rel-11	B	RP-150892	R5s150283	approved	Addidtion of Rel-7 NISPC testcase 11.9.1 to UTRAN testsuite	11.6.0	11.7.0	R5	TEI7_Test
34.123-3	3357	-	Rel-11	F	RP-150892	R5s150321	approved	Corrections to GCF WI-140 Rel-7 NISPC testacse 11.3.2a	11.6.0	11.7.0	R5	TEI7_Test
34.123-3	3358	-	Rel-12	F	RP-150892	R5s150330	approved	Rel-12 baseline upgrade for UTRAN TTCN-3 Test Suites	11.6.0	12.0.0	R5	TEI12_Test
34.123-3	3359	-	Rel-11	F	RP-150892	R5s150341	approved	Corrections to HSD suite test case 8.3.11.9.	11.6.0	11.7.0	R5	TEI5_Test
34.123-3	3360	-	Rel-11	F	RP-150892	R5s150358	approved	Corrections to GCF WI-158 UTRA CSG test case 6.3.1.3	11.6.0	11.7.0	R5	TEI9_Test
34.123-3	3361	-	Rel-11	F	RP-150892	R5s150359	approved	Corrections to Rel-7 Enhanced Cell FACH Downlink test case 14.5.3	11.6.0	11.7.0	R5	TEI7_Test

Samsung Exhibit 1025, Page 1929 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.123-3	3362	-	Rel-11	F	RP-150892	R5s150360	approved	Corrections to Rel-7 CPC test cases to handle RGCH configuration	11.6.0	11.7.0	R5	TEI7_Test
34.123-3	3363	-	Rel-11	F	RP-150892	R5s150361	approved	Corrections to Rel-8 CS Voice Over HSPA test cases to handle RGCH configuration	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3364	-	Rel-11	F	RP-150892	R5s150367	approved	Correction to WI-101 Rel-7 testcase 8.3.11.1a	11.6.0	11.7.0	R5	TEI7_Test
34.123-3	3365	-	Rel-11	F	RP-150892	R5s150376	approved	Corrections to NAS suite test case 12.6.1.3.2	11.6.0	11.7.0	R5	TEI_Test
34.123-3	3366	-	Rel-11	F	RP-150892	R5s150379	approved	Correction to Rel-8 testcase 7.1.7.4	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3367	-	Rel-11	F	RP-150892	R5s150380	approved	Correction to Rel-9 DC-HSUPA RRC testcases.	11.6.0	11.7.0	R5	TEI9_Test
34.123-3	3368	-	Rel-11	F	RP-150892	R5s150418	approved	Correction to the postamble of UTRA CSG test cases 6.3.1.1	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3369	-	Rel-11	F	RP-150892	R5s150419	approved	Correction to UTRA CSG test cases 12.2.1.5e and 12.2.2.7e	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3370	-	Rel-11	F	RP-150892	R5s150428	approved	Correction to applicability of DC-HSDPA testcases.	11.6.0	11.7.0	R5	TEI8_Test
34.123-3	3371	-	Rel-11	F	RP-150892	R5s150435	approved	Correction to UTRA TTCN-2 test case 11.1.1.1a	11.6.0	11.7.0	R5	TEI5_Test
34.229-1	0657	1	Rel-12	F	RP-150884	R5-151795	approved	Updates for GBA testing - Part1	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0658	-	Rel-12	F	RP-150884	R5-151112	approved	Add GBA related abbreviations	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0659	1	Rel-12	F	RP-150884	R5-152091	approved	Correction to Annex Procedure C.25	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0660	-	Rel-12	F	RP-150884	R5-151166	approved	Update of test case 15.14a	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0661	-	Rel-12	F	RP-150884	R5-151183	approved	Update generic procedure C.21	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0662	1	Rel-12	F	RP-150884	R5-151796	approved	Update generic procedure C.25	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0663	-	Rel-12	F	RP-150884	R5-151235	approved	Update generic procedure C.39	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0664	-	Rel-12	F	RP-150884	R5-151236	approved	Update generic procedure C.40	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0665	1	Rel-12	F	RP-150884	R5-151797	approved	Update test case 15.21b	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0666	-	Rel-12	F	RP-150884	R5-151242	approved	Update REGISTER message with accesstype	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0667	1	Rel-12	F	RP-150906	R5-151968	approved	Add new generic procedure for MO speech / EVS	12.5.0	12.6.0	R5	EVS_codec-UEConTest
34.229-1	0668	-	Rel-12	F	RP-150906	R5-151437	approved	Add new test case for MO speech / EVS	12.5.0	12.6.0	R5	EVS_codec-UEConTest
34.229-1	0669	-	Rel-12	F	RP-150884	R5-151441	approved	Editorial correction in generic procedure C.21	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0671	1	Rel-12	F	RP-150884	R5-151798	approved	Correction to A.2.10 MO REFER Message	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0673	1	Rel-12	F	RP-150884	R5-151799	approved	Correction to Annex Procedure C.28	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0674	-	Rel-12	F	RP-150886	R5-151516	approved	Update to test case 19.3.1 for location information	12.5.0	12.6.0	R5	TEI9_Test
34.229-1	0675	-	Rel-12	F	RP-150886	R5-151517	approved	Update to test cases 19.1.1, 19.1.2, 19.3.3, 19.3.4, 19.4.1, 19.5.13.1 and Annex A.2.1 for location information	12.5.0	12.6.0	R5	TEI9_Test
34.229-1	0676	-	Rel-12	F	RP-150886	R5-151519	approved	Correction to test case 19.1.3	12.5.0	12.6.0	R5	TEI9_Test
34.229-1	0677	-	Rel-12	F	RP-150886	R5-151520	approved	Correction to test case 19.3.2	12.5.0	12.6.0	R5	TEI9_Test
34.229-1	0678	-	Rel-12	F	RP-150886	R5-151521	approved	Correction to test case 19.3.2b	12.5.0	12.6.0	R5	TEI9_Test
34.229-1	0679	-	Rel-12	F	RP-150886	R5-151522	approved	Correction to test case 19.3.2c	12.5.0	12.6.0	R5	TEI9_Test
34.229-1	0680	1	Rel-12	F	RP-150884	R5-151794	approved	Correction to test cases 8.1, 8.10 and 8.11	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0683	1	Rel-12	F	RP-150912	R5-151951	approved	Updates to Annex C.40	12.5.0	12.6.0	R5	TEI12_Test
34.229-1	0684	1	Rel-12	F	RP-150884	R5-151952	approved	Correction and alignment of test cases 15.21 and 15.21b	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0687	1	Rel-12	F	RP-150884	R5-151953	approved	New TC 20.1 Mobile Originating CAT – Forking Model	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0690	1	Rel-12	F	RP-150886	R5-152092	approved	Correction to IMS Emergency Call test case 19.4.2	12.5.0	12.6.0	R5	TEI9_Test

Samsung Exhibit 1025, Page 1930 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.229-1	0691	-	Rel-12	F	RP-150884	R5-151681	approved	Correction for C.10 and C.38	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0692	1	Rel-12	F	RP-150884	R5-151954	approved	Correction for C.19 and C.37	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0694	-	Rel-12	F	RP-150884	R5-151684	approved	Further corrections for SDP o-lines	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0696	1	Rel-12	F	RP-150884	R5-151956	approved	Correction of TC 17.2	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0697	1	Rel-12	F	RP-150884	R5-151957	approved	Correction to C.31 and C.24	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0700	1	Rel-12	F	RP-150884	R5-151960	approved	Correction to step number reference in 19.5.6, 19.5.8, 19.5.10	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0701	1	Rel-12	F	RP-150884	R5-152093	approved	References to default messages in C.10	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0703	1	Rel-12	F	RP-150884	R5-152094	approved	Corrections to TC 18.1	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0704	1	Rel-12	F	RP-150884	R5-151961	approved	Corrections to TC 15.19	12.5.0	12.6.0	R5	TEI8_Test
34.229-1	0704	-	Rel-12	F	RP-150884	R5-151710	approved	Correction for test cases 15.21a and 15.21c	12.5.0	12.6.0	R5	TEI8_Test
34.229-2	0139	1	Rel-12	F	RP-150884	R5-151962	approved	Updates for GBA testing - Part2	12.4.0	12.5.0	R5	TEI8_Test
34.229-2	0140	-	Rel-12	F	RP-150884	R5-151243	approved	Add capability for accesstype	12.4.0	12.5.0	R5	TEI8_Test
34.229-2	0142	1	Rel-12	F	RP-150906	R5-151969	approved	Add capability for EVS	12.4.0	12.5.0	R5	EVS_codec-UEConTest
34.229-2	0143	1	Rel-12	F	RP-150906	R5-151970	approved	Add applicability for new MO EVS test case	12.4.0	12.5.0	R5	EVS_codec-UEConTest
34.229-2	0144	1	Rel-12	F	RP-150884	R5-151963	approved	Change of applicablility for Testcase 8.3	12.4.0	12.5.0	R5	TEI8_Test
34.229-2	0145	-	Rel-12	F	RP-150886	R5-151518	approved	Correction to test case applicability 19.1.1 and 19.3.1 for location information	12.4.0	12.5.0	R5	TEI9_Test
34.229-2	0146	1	Rel-12	F	RP-150884	R5-151964	approved	Applicability for new TC 20.1 Mobile Originating CAT – Forking Model	12.4.0	12.5.0	R5	TEI8_Test
34.229-3	0284	-	Rel-10	F	RP-150884	R5-151102	approved	Routine maintenance for TS 34.229-3	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0285	-	Rel-11	F	RP-150893	-	approved	CR to 34.229-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 34.229-3 (prose), Annex A	10.6.0	11.0.0	R5	TEI11_Test
34.229-3	0286	-	Rel-10	F	RP-150894	R5s150061	approved	Corrections to Emergency Services Over IMS test case 19.1.3	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0287	-	Rel-10	F	RP-150894	R5s150091	approved	Corrections for Emergency Services over IMS test case 19.1.5	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0288	-	Rel-10	F	RP-150894	R5s150148	approved	Correction to IMS XCAP Testcases	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0289	-	Rel-10	F	RP-150894	R5s150153	approved	Correction of RR and RS modifiers	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0290	-	Rel-10	F	RP-150894	R5s150157	approved	Correction to IMS Emergency Call testcase 19.4.5	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0291	-	Rel-10	F	RP-150894	R5s150158	approved	Correction to IMS Emergency Call testcase 19.3.1	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0292	-	Rel-10	F	RP-150894	R5s150174	approved	Correction of SPI matching error at runtime	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0293	-	Rel-10	F	RP-150894	R5s150180	approved	Correction for checking of video feature tag	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0294	-	Rel-10	F	RP-150894	R5s150193	approved	Correction to IMS Emergency Call testcase 19.3.1	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0295	-	Rel-10	F	RP-150894	R5s150195	approved	Correction to GCF WI-154 IMS Emergency Call testcase 19.5.7	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0296	-	Rel-10	F	RP-150894	R5s150202	approved	Correction regarding XCAP Root URI	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0297	-	Rel-10	F	RP-150894	R5s150205	approved	Correction to Annex Procedure C.28	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0298	-	Rel-10	F	RP-150894	R5s150236	approved	Correction in IMS MTSI Video call test case 12.21	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0299	-	Rel-10	F	RP-150894	R5s150237	approved	Correction of Require header in 200 OK	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0300	-	Rel-10	F	RP-150894	R5s150244	approved	Corrections for upper tester for IMS XCAP call forwarding test cases	10.6.0	10.7.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1931 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
34.229-3	0301	-	Rel-10	F	RP-150894	R5s150245	approved	Corrections for Emergency Services over IMS test case 19.5.7	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0302	-	Rel-10	B	RP-150894	R5s150259	approved	Addition of GCF WI-103 MTSI Message Waiting Indication test case 15.15 ^^(using 36.523-3 and 34.229-4 test models)	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0303	-	Rel-10	F	RP-150894	R5s150267	approved	Correction of multi-PDN PCO handling	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0304	-	Rel-10	F	RP-150894	R5s150269	approved	Correction for inactivity timer in IMS XCAP test cases	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0305	-	Rel-10	F	RP-150894	R5s150270	approved	Corrections for TCP connection handling for IMS test cases	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0306	-	Rel-10	F	RP-150894	R5s150273	approved	Correction to IMS emergency services test case 19.1.3	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0307	-	Rel-10	F	RP-150894	R5s150274	approved	Correction of Require header in 200 OK - continued	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0308	-	Rel-10	F	RP-150894	R5s150276	approved	Correction of IMS TC 15.19	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0309	-	Rel-10	B	RP-150894	R5s150289	approved	Addition of GCF WI-103 IMS XCAP Testcase 15.10 over 36.523-3 Test Model	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0310	-	Rel-10	B	RP-150894	R5s150327	approved	Addition of GCF WI-154 IMS Emergency Call test case 19.4.2 ^^(using 36.523-3 test model)	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0311	-	Rel-11	F	RP-150894	R5s150339	approved	IMS type definition updates for rSRVCC	10.6.0	11.0.0	R5	TEI11_Test
34.229-3	0312	-	Rel-10	F	RP-150894	R5s150342	approved	Correction to TC 8.2 on expiration values	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0313	-	Rel-10	B	RP-150894	R5s150371	approved	Addition of GCF WI-103 IMS Testcase 15.12a over 36.523-3 Test Model	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0314	-	Rel-10	B	RP-150894	R5s150373	approved	Addition of GCF WI-198 IMS Testcase 15.19a over 36.523-3 Test Model	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0315	-	Rel-10	B	RP-150894	R5s150382	approved	Addition of GCF WI-103 IMS Testcase 15.21a over 36.523-3 Test Model	10.6.0	10.7.0	R5	TEI8_Test
34.229-3	0316	-	Rel-10	F	RP-150894	R5s150414	approved	Correction to IMS Emergency Call test case 19.3.1	10.6.0	10.7.0	R5	TEI9_Test
34.229-3	0317	-	Rel-10	F	RP-150894	R5s150446	approved	Correction of IMS TC 8.1	10.6.0	10.7.0	R5	TEI8_Test
36.101	2780	3	Rel-13	B	RP-150958	R4-153755	approved	Introduction of dual uplink CA into 36.101	12.7.0	13.0.0	R4	LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core
36.101	2785	2	Rel-13	B	RP-150646	-	approved	Introduction of intra-band CA_42D to TS 36.101	12.7.0	13.0.0	R4	LTE_CA_C_B42_3DL-Core
36.101	2868	-	Rel-10	F	RP-150954	R4-151305	approved	Intra-band contiguous CA reference sensitivity definition for Class D	10.18.0	10.19.0	R4	LTE_CA-Core
36.101	2869	-	Rel-11	A	RP-150954	R4-151306	approved	Intra-band contiguous CA reference sensitivity definition for Class D	11.12.0	11.13.0	R4	LTE_CA-Core
36.101	2870	2	Rel-12	F	RP-150958	R4-152537	approved	Intra-band contiguous CA reference sensitivity definition for Class D	12.7.0	12.8.0	R4	LTE_CA-Core, LTE_CA_C_B40_3DL, LTE_CA_C_B41_3DL
36.101	2881	2	Rel-12	F	RP-150961	R4-152647	approved	CR on MTC CQI tests	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.101	2882	2	Rel-12	F	RP-150962	R4-152648	approved	CR on 256QAM demodulation performance requirements	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.101	2883	3	Rel-12	B	RP-150962	R4-153621	approved	CR on 256QAM sustained data rate tests for single carrier and TDD or FDD CA	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.101	2885	4	Rel-12	B	RP-150962	R4-153626	approved	CR on 256QAM CQI test	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf

Samsung Exhibit 1025, Page 1932 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	2886	3	Rel-12	B	RP-150963	R4-153630	approved	CR on DC SDR tests	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.101	2887	2	Rel-12	F	RP-150963	R4-152651	approved	Maintenance CR for DC demodulation performance requirements	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.101	2888	-	Rel-12	F	RP-150958	R4-151589	approved	CR to restore R.10-2 FDD	12.6.0	12.7.0	R4	LTE_CA_Mult-Perf
36.101	2889	3	Rel-12	B	RP-150961	R4-153603	approved	Introduction of UE category 0 PDSCH/PHICH/PBCH performance requirements	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.101	2899	-	Rel-10	F	RP-150954	R4-151814	approved	UE to UE co-existence between B42/B43	10.18.0	10.19.0	R4	RInImp8-UMTSLTE3500, LTE-RF
36.101	2900	-	Rel-11	A	RP-150954	R4-151815	approved	UE to UE co-existence between B42/B43	11.12.0	11.13.0	R4	RInImp8-UMTSLTE3500, LTE-RF
36.101	2901	-	Rel-12	A	RP-150954	R4-151816	approved	UE to UE co-existence between B42/B43	12.7.0	12.8.0	R4	RInImp8-UMTSLTE3500, LTE-RF
36.101	2902	-	Rel-12	F	RP-150958	R4-151821	approved	Correction of maximum aggregated bandwidth for CA_26A-41A	12.7.0	12.8.0	R4	LTE_CA_B26_B41_B41-Core
36.101	2903	2	Rel-12	F	RP-150957	R4-152508	approved	Introduction of TDD SU-MIMO multi-cell test	12.7.0	12.8.0	R4	LTE_SUMIMO_RX-Perf
36.101	2904	-	Rel-12	F	RP-150958	R4-151886	approved	Correction of FRC table for CA demodulation with power imbalance	12.7.0	12.8.0	R4	LTE_CA_Mult-Perf
36.101	2905	1	Rel-12	F	RP-150958	R4-152357	approved	Add Scell power levels for 2DL CA power imbalance test	12.7.0	12.8.0	R4	LTE_CA_Mult-Perf
36.101	2907	-	Rel-12	F	RP-150955	R4-151908	approved	Corrections on UL transmit power for CA receiver requirements	12.7.0	12.8.0	R4	TEI11
36.101	2908	-	Rel-11	F	RP-150955	R4-151909	approved	Corrections on UL transmit power for CA receiver requirements	11.12.0	11.13.0	R4	TEI11
36.101	2909	-	Rel-12	F	RP-150958	R4-151924	approved	Corrections to the CA power imbalance test	12.7.0	12.8.0	R4	LTE_CA_Mult-Perf
36.101	2910	1	Rel-12	F	RP-150957	R4-152434	approved	Clarification on RMC for D2D UE	12.7.0	12.8.0	R4	LTE_D2D_Prox
36.101	2911	-	Rel-12	F	RP-150960	R4-151927	approved	Corrections on eIMTA PDSCH functionality test	12.7.0	12.8.0	R4	LTE_TDD_eIMTA-Perf
36.101	2916	-	Rel-11	F	RP-150958	R4-151957	approved	Editorial CR for CA UE performance tests in 36.101 in Rel-11	11.12.0	11.13.0	R4	LTE_CA_Mult-Perf
36.101	2929	1	Rel-10	F	RP-150954	R4-152409	approved	3.5 GHz out-of-band blocking	10.18.0	10.19.0	R4	RInImp8-UMTSLTE3500, LTE-RF
36.101	2930	-	Rel-11	A	RP-150954	R4-152222	approved	3.5 GHz out-of-band blocking	11.12.0	11.13.0	R4	RInImp8-UMTSLTE3500, LTE-RF
36.101	2931	-	Rel-12	A	RP-150954	R4-152223	approved	3.5 GHz out-of-band blocking	12.7.0	12.8.0	R4	RInImp8-UMTSLTE3500, LTE-RF
36.101	2933	-	Rel-12	F	RP-150965	R4-152253	approved	Correction of FRC names	12.7.0	12.8.0	R4	TEI12
36.101	2936	-	Rel-12	F	RP-150954	R4-152262	approved	Correction of the 3DL CA REFSENS	12.7.0	12.8.0	R4	LTE_CA-Core
36.101	2939	1	Rel-12	B	RP-150962	R4-153622	approved	CR on 256QAM sustained data rate tests for TDD FDD CA	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.101	2940	1	Rel-12	F	RP-150958	R4-153686	approved	Maintenance CR for 3DL CA performance requirements	12.7.0	12.8.0	R4	LTE_CA_Mult-Perf
36.101	2941	1	Rel-12	F	RP-150958	R4-153687	approved	Maintenance CR for TDD FDD CA demodulation performance requirements	12.7.0	12.8.0	R4	LTE_CA_Mult-Perf
36.101	2942	-	Rel-11	F	RP-150958	R4-152610	approved	Correction of CA performance tests (Rel-11)	11.12.0	11.13.0	R4	LTE_CA_Mult-Perf
36.101	2944	-	Rel-12	F	RP-150965	R4-152688	approved	Some corrections on 2UL intra-band non-contiguous CA requirements.	12.7.0	12.8.0	R4	TEI12
36.101	2945	-	Rel-10	F	RP-150958	R4-152692	approved	Updates to the definitions of CA capability (Rel-10)	10.18.0	10.19.0	R4	LTE_CA_Mult-Perf
36.101	2946	-	Rel-11	F	RP-150958	R4-152693	approved	Updates to the definitions of CA capability (Rel-11)	11.12.0	11.13.0	R4	LTE_CA_Mult-Perf
36.101	2947	-	Rel-12	F	RP-150958	R4-152694	approved	Updates to the definitions of CA capability (Rel-12)	12.7.0	12.8.0	R4	LTE_CA_Mult-Perf
36.101	2949	-	Rel-11	F	RP-150955	R4-152707	approved	Clarification of PDSCH allocation in CSI PUSCH 3-0 feICIC tests (Rel-11)	11.12.0	11.13.0	R4	TEI11
36.101	2950	-	Rel-12	A	RP-150955	R4-152708	approved	Clarification of PDSCH allocation in CSI PUSCH 3-0 feICIC tests (Rel-12)	12.7.0	12.8.0	R4	TEI11

Samsung Exhibit 1025, Page 1933 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	2951	2	Rel-13	B	RP-150968	R4-153932	approved	Introduction of additional 2DL inter-band CA	12.7.0	13.0.0	R4	LTE_CA_B1_B40-Core, LTE_CA_B2_B28-Core, LTE_CA_B3_B5_BWset-Core, LTE_CA_B3_B31-Core, LTE_CA_B3_B38-Core, LTE_CA_B4_B28-Core, LTE_CA_B5_B7_BWset-Core, LTE_CA_B5_B40-Core, LTE_CA_B7_B22-Core, LTE_CA_B20_B31-Core, LTE_CA_B25_B26-Core
36.101	2952	1	Rel-13	B	RP-150972	R4-153785	approved	Introduction of additional 3DL inter-band CA	12.7.0	13.0.0	R4	LTE_CA_B1_B3_B28-Core, LTE_CA_B1_B3_B42-Core, LTE_CA_B1_B7_B28-Core, LTE_CA_B1_B19_B42-Core, LTE_CA_B1_B21_B42-Core, LTE_CA_B2_B2_B12-Core, LTE_CA_B2_B5_B29-Core, LTE_CA_B3_B3_B5-Core, LTE_CA_B3_B3_B8-Core, LTE_CA_B3_B7_B7-Core, LTE_CA_B3_B7_B8-Core, LTE_CA_B3_B7_B28-Core, LTE_CA_B3_B19_B42-Core, LTE_CA_B7_B7_B28-Core, LTE_CA_B8_B41_B41-Core, LTE_CA_B19_B21_B42-Core, LTE_CA_B21_B42_B42-Core, LTE_CA_B38_B40_B40-Core, LTE_CA_B41_B42_B42-Core
36.101	2953	2	Rel-13	B	RP-150974	R4-153921	approved	Introduction of 4DL inter-band CA	12.7.0	13.0.0	R4	LTE_CA_B2_B2_B4_B4-Core, LTE_CA_B2_B2_B4_B12-Core, LTE_CA_B2_B2_B5_B30-Core, LTE_CA_B2_B2_B12_B30-Core, LTE_CA_B2_B2_B29_B30-Core, LTE_CA_B2_B4_B4_B12-Core, LTE_CA_B2_B4_B5_B30-Core, LTE_CA_B2_B4_B12_B30-Core, LTE_CA_B2_B4_B29_B30-Core, LTE_CA_B25_B41_B41_B41-Core
36.101	2954	1	Rel-10	F	RP-150954	R4-153818	approved	NS value for intra-band contiguous CA configurations not allowed A-MPR	10.17.0	10.18.0	R4	LTE_CA-Core
36.101	2955	-	Rel-11	A	RP-150954	R4-152744	approved	NS value for intra-band contiguous CA configurations not allowed A-MPR	11.12.0	11.13.0	R4	LTE_CA-Core
36.101	2956	-	Rel-12	A	RP-150954	R4-152745	approved	NS value for intra-band contiguous CA configurations not allowed A-MPR	12.7.0	12.8.0	R4	LTE_CA-Core

Samsung Exhibit 1025, Page 1934 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	2957	1	Rel-11	F	RP-150957	R4-153701	approved	Receiver spurious emissions requirements for downlink-only bands	11.12.0	11.13.0	R4	LTE_UTRA_SDL_BandL-Core
36.101	2958	-	Rel-12	A	RP-150957	R4-152748	approved	Receiver spurious emissions requirements for downlink-only bands	12.7.0	12.8.0	R4	LTE_UTRA_SDL_BandL-Core
36.101	2959	-	Rel-12	F	RP-150958	R4-152749	approved	Amendments to MPR for uplink inter-band and intra-band non-contiguous CA	12.7.0	12.8.0	R4	LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A5-Core, LTE_CA_NC_2UL-Core
36.101	2960	1	Rel-12	F	RP-150958	R4-153819	approved	NS values for secondary cells of non-contigous CA configurations	12.6.0	12.7.0	R4	LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core, LTE_CA_2UL-A5-Core, LTE_CA_NC_2UL-Core
36.101	2961	1	Rel-12	F	RP-150955	R4-153725	approved	Corrections to test configurations for intra-band non-contiguous CA	12.7.0	12.8.0	R4	LTE_CA_enh-Core
36.101	2962	-	Rel-12	F	RP-150954	R4-152753	approved	Corrections to test configurations for 3DL inter-band CA	12.7.0	12.8.0	R4	LTE_CA-Core
36.101	2967	-	Rel-12	F	RP-150958	R4-152872	approved	Adding REFSENS exception requirements for 1+3+26	12.7.0	12.8.0	R4	LTE_CA_B1_B3_B26-Core
36.101	2969	1	Rel-10	F	RP-150954	R4-153695	approved	NS_22 and NS_23 corrections	10.18.0	10.19.0	R4	RInImp8-UMTSLTE3500
36.101	2970	-	Rel-11	A	RP-150954	R4-152965	approved	NS_22 and NS_23 corrections	11.12.0	11.13.0	R4	RInImp8-UMTSLTE3500
36.101	2971	-	Rel-12	A	RP-150954	R4-152966	approved	NS_22 and NS_23 corrections	12.7.0	12.8.0	R4	RInImp8-UMTSLTE3500
36.101	2972	-	Rel-12	F	RP-150958	R4-152974	approved	Corrections to 41D fallback	12.7.0	12.8.0	R4	LTE_CA_C_B41_3DL-Core
36.101	2973	1	Rel-12	F	RP-150957	R4-153727	approved	Corrections to EVM requirements for ProSe and Annex F of 36.101	12.7.0	12.8.0	R4	LTE_D2D_Prox
36.101	2976	-	Rel-12	F	RP-150958	R4-153061	approved	Removal of B27 from 2UL CA_7A_20A co-existence protected band list	12.7.0	12.8.0	R4	LTE_CA_2UL-A4-Core
36.101	2977	1	Rel-12	F	RP-150957	R4-153728	approved	CR on corrections to D2D RF core requirements	12.7.0	12.8.0	R4	LTE_D2D_Prox
36.101	2978	1	Rel-12	B	RP-150963	R4-153631	approved	Applicability rule for DC SDR test	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.101	2979	-	Rel-12	F	RP-150957	R4-153117	approved	CR clarification of RMC for HD FDD	12.7.0	12.8.0	R4	LC_MTC_LTE-Core
36.101	2980	1	Rel-12	B	RP-150960	R4-153605	approved	Introducaiotn of CQI reqruiement for TDD eIMTA	12.7.0	12.8.0	R4	LTE_TDD_eIMTA-Perf
36.101	2985	-	Rel-12	F	RP-150958	R4-153224	approved	Change of 1.4MHz single carrier SNR values for multiple CA configurations	12.7.0	12.8.0	R4	LTE_CA_Mult-Perf
36.101	2990	-	Rel-10	F	RP-150954	R4-153274	approved	Clarification to spurious emission requirement for the edge of spurious domain	10.18.0	10.19.0	R4	TEI10
36.101	2991	-	Rel-11	A	RP-150954	R4-153275	approved	Clarification to spurious emission requirement for the edge of spurious domain	11.12.0	11.13.0	R4	TEI10
36.101	2992	-	Rel-12	A	RP-150954	R4-153276	approved	Clarification to spurious emission requirement for the edge of spurious domain	12.7.0	12.8.0	R4	TEI10
36.101	2994	1	Rel-13	B	RP-150975	R4-153748	approved	Introduction of non-contiguous Carrier Aggregation (CA) in Band 42 for 3DL	12.7.0	13.0.0	R4	LTE_CA_NC_B42_3DL-Core
36.101	2995	1	Rel-11	F	RP-150955	R4-153699	approved	Correction to CA_7C A-MPR in CA-NS_06	11.12.0	11.13.0	R4	LTE_CA_B7-Core
36.101	2996	-	Rel-12	A	RP-150955	R4-153375	approved	Correction to CA_7C A-MPR in CA-NS_06	12.7.0	12.8.0	R4	LTE_CA_B7-Core

Samsung Exhibit 1025, Page 1935 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.101	2998	1	Rel-12	F	RP-150965	R4-153844	approved	CR to update UE performance tests for UE DL category in 36.101 in Rel-12	12.7.0	12.8.0	R4	TEI12
36.101	2999	-	Rel-12	F	RP-150965	R4-153458	approved	CR to update Annex for new DL category in 36.101 in Rel-12	12.7.0	12.8.0	R4	TEI12
36.101	3000	-	Rel-10	F	RP-150958	R4-153459	approved	CR for updating CA applicability rule in 36.101 in Rel-10	10.18.0	10.19.0	R4	LTE_CA_Mult-Perf
36.101	3001	-	Rel-11	F	RP-150958	R4-153460	approved	CR for updating CA applicability rule in 36.101 in Rel-11	11.12.0	11.13.0	R4	LTE_CA_Mult-Perf
36.101	3002	-	Rel-12	F	RP-150958	R4-153461	approved	CR for updating CA applicability rule in 36.101 in Rel-12	12.7.0	12.8.0	R4	LTE_CA_Mult-Perf
36.101	3005	1	Rel-12	B	RP-150957	R4-153652	approved	CR for Rel-12 NAICS - Definitions	12.7.0	12.8.0	R4	LTE_NAICS
36.101	3005	2	Rel-12	B	RP-150865	-	withdrawn	CR for Rel-12 NAICS definitions	12.7.0		R4	LTE_NAICS-Perf
36.101	3011	1	Rel-13	B	RP-150967	R4-153877	approved	CR to 36.101: New CA bandwidth classes for FeCA	12.7.0	13.0.0	R4	LTE_CA_enh_b5C-Core
36.101	3012	1	Rel-12	F	RP-150965	R4-153726	approved	Clarification on uplink configuration for reference sensitivity of inter-band CA	12.6.0	12.7.0	R4	TEI12
36.101	3013	1	Rel-11	A	RP-150954	R4-153698	approved	Clarification on uplink configuration for reference sensitivity of inter-band CA	11.11.0	11.12.0	R4	TEI10
36.101	3014	1	Rel-10	F	RP-150954	R4-153697	approved	Clarification on uplink configuration for reference sensitivity of inter-band CA	10.17.0	10.18.0	R4	TEI10
36.101	3015	-	Rel-10	F	RP-150954	R4-153730	approved	EVM for Intra-band contiguous UL CA for non-equal Channel BWs	10.17.0	10.18.0	R4	TEI10
36.101	3017	-	Rel-11	A	RP-150954	R4-153776	approved	EVM for Intra-band contiguous UL CA for non-equal Channel BWs	11.11.0	11.12.0	R4	TEI10
36.101	3018	-	Rel-12	A	RP-150954	R4-153777	approved	EVM for Intra-band contiguous UL CA for non-equal Channel BWs	12.6.0	12.7.0	R4	TEI10
36.101	3019	-	Rel-12	F	RP-150958	R4-153812	approved	A-MPR correction for CA_39C CA_NS_07	12.6.0	12.7.0	R4	LTE_CA_C_B39-Core
36.101	3021	-	Rel-13	B	RP-150668	-	approved	Introduction of CA_3A-40A to TS 36.101	12.7.0	13.0.0	R4	LTE_CA_B3_B40
36.101	3022	-	Rel-13	B	RP-150673	-	approved	Introduction of CA_3A-40C to TS 36.101	12.7.0	13.0.0	R4	LTE_CA_B3_B40_B40
36.104	0630	4	Rel-13	B	RP-150968	R4-153757	approved	Introduction of 2DL CA combinations	12.7.0	13.0.0	R4	LTE_CA_B2_B28-Core, LTE_CA_B4_B28-Core, LTE_CA_B25_B26-Core, LTE_CA_B20_B31-Core, LTE_CA_B1_B40-Core, LTE_CA_B7_B22-Core, LTE_CA_B5_B40-Core, LTE_CA_B3_B38-Core, LTE_CA_B3_B31-Core

Samsung Exhibit 1025, Page 1936 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.104	0631	4	Rel-13	B	RP-150972	R4-153790	approved	Introduction of 3DL CA combinations	12.7.0	13.0.0	R4	LTE_CA_B1_B3_B28-Core, LTE_CA_B2_B2_B12-Core, LTE_CA_B2_B5_B29-Core, LTE_CA_B3_B7_B28-Core, LTE_CA_B8_B41_B41-Core, LTE_CA_B3_B3_B8-Core, LTE_CA_B3_B7_B8-Core, LTE_CA_B21_B42_B42-Core, LTE_CA_B1_B7_B28-Core, LTE_CA_B1_B3_B42-Core, LTE_CA_B1_B19_B42-Core, LTE_CA_B1_B21_B42-Core, LTE_CA_B3_B19_B42-Core, LTE_CA_B19_B21_B42-Core, LTE_CA_B19_B21_B42-Core, LTE_CA_B38_B40_B40-Core
36.104	0646	1	Rel-11	F	RP-150955	R4-152420	approved	Clarification of parameter P for emission requirements	11.11.0	11.12.0	R4	TEI11
36.104	0647	-	Rel-12	A	RP-150955	R4-151284	approved	Clarification of parameter P for emission requirements	12.7.0	12.8.0	R4	TEI11
36.104	0651	1	Rel-13	B	RP-150974	R4-152732	approved	Introduction of 4DL CA combinations	12.7.0	13.0.0	R4	LTE_CA_B2_B2_B4_B4-Core, LTE_CA_B2_B2_B4_B12-Core, LTE_CA_B2_B4_B4_B12-Core, LTE_CA_B2_B4_B5_B30-Core, LTE_CA_B2_B4_B12_B30-Core, LTE_CA_B2_B4_B29_B30-Core
36.104	0657	1	Rel-11	F	RP-150955	R4-153708	approved	Some corrections related to single carrier requirements	11.11.0	11.12.0	R4	TEI11
36.104	0658	-	Rel-12	A	RP-150955	R4-152676	approved	Some corrections related to single carrier requirements	12.7.0	12.8.0	R4	TEI11
36.104	0664	-	Rel-13	B	RP-150669	-	approved	Introduction of CA_3A-40A to TS 36.104	12.7.0	13.0.0	R4	LTE_CA_B3_B40
36.116	0012	1	Rel-11	F	RP-150955	R4-152426	approved	Corrections on power class for relay backhaul link	11.4.0	11.5.0	R4	LTE_Relay2-Core
36.116	0013	-	Rel-12	A	RP-150955	R4-151377	approved	Corrections on power class for relay backhaul link	12.1.0	12.2.0	R4	LTE_Relay2-Core
36.116	0014	1	Rel-11	F	RP-150955	R4-153715	approved	Clarification on requirement description for TS 36.116	11.4.0	11.5.0	R4	LTE_Relay2-Core
36.116	0015	-	Rel-12	A	RP-150955	R4-153324	approved	Clarification on requirement description for TS 36.116	12.1.0	12.2.0	R4	LTE_Relay2-Core
36.117	0004	1	Rel-11	F	RP-150955	R4-152427	approved	Corrections on power class for relay backhaul link	11.1.0	11.2.0	R4	LTE_Relay2-Core
36.117	0005	-	Rel-12	A	RP-150955	R4-151379	approved	Corrections on power class for relay backhaul link	12.0.0	12.1.0	R4	LTE_Relay2-Core
36.117	0008	1	Rel-11	F	RP-150955	R4-153717	approved	Corrections for transmitter requirements in TS 36.117	11.1.0	11.2.0	R4	LTE_Relay2-Perf
36.117	0009	-	Rel-12	A	RP-150955	R4-152684	approved	Corrections for transmitter requirements in TS 36.117	12.0.0	12.1.0	R4	LTE_Relay2-Perf

Samsung Exhibit 1025, Page 1937 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	2825	-	Rel-12	B	RP-150972	R4-151299	approved	3 DL CA Phase I tests # 1-2: Event triggered reporting tests with deactivated SCells in non-DRX for TDD-FDD CA	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf
36.133	2828	-	Rel-12	B	RP-150961	R4-151337	approved	RMC for 10 MHz for UE category 0 RRM tests	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2829	-	Rel-12	F	RP-150957	R4-151345	approved	Correction to measurement scaling factor for incmon	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Core
36.133	2832	-	Rel-12	F	RP-150957	R4-151362	approved	RSRP requierment for SCE	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Core, TEI12
36.133	2833	1	Rel-12	B	RP-150962	R4-152327	approved	CR on FDD-FDD inter-frequency absolute and relative CRS RSRP accuracy test case	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2834	1	Rel-12	B	RP-150962	R4-152328	approved	CR on TDD-TDD inter-frequency absolute and relative CRS RSRP accuracy test case	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2835	1	Rel-12	B	RP-150962	R4-152329	approved	CR on FDD absolute and relative CSI-RSRP accuracy test case for E-UTRAN Carrier Aggregation	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2836	1	Rel-12	B	RP-150962	R4-152394	approved	CR on TDD absolute and relative CSI-RSRP accuracy test case for E-UTRAN Carrier Aggregation	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2837	1	Rel-12	B	RP-150962	R4-152330	approved	CR on FDD-FDD inter-frequency absolute and relative CSI-RSRP accuracy test case	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2838	1	Rel-12	B	RP-150962	R4-152331	approved	CR on TDD-TDD inter-frequency absolute and relative CSI-RSRP accuracy test case	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2839	1	Rel-12	B	RP-150962	R4-152332	approved	CR on FDD intra frequency absolute and relative CSI-RSRP accuracy test case	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2840	1	Rel-12	B	RP-150962	R4-152333	approved	CR on TDD intra frequency absolute and relative CSI-RSRP accuracy test case	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2842	1	Rel-12	B	RP-150962	R4-152334	approved	Intra-frequency absolute and relative RSRP accuracies in CRS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2843	1	Rel-12	B	RP-150962	R4-152335	approved	Absolute and relative RSRP accuracies for E-UTRAN Carrier Aggregation in CRS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2845	1	Rel-12	B	RP-150962	R4-152336	approved	SCE FDD intra-frequency absolute RSRQ accuracy	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2846	1	Rel-12	B	RP-150962	R4-152337	approved	SCE TDD intra-frequency absolute RSRQ accuracy	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2847	-	Rel-12	B	RP-150962	R4-151565	approved	SCE FDD absolute RSRQ accuracy for CA	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2848	-	Rel-12	B	RP-150962	R4-151566	approved	SCE TDD absolute RSRQ accuracy for CA	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2849	1	Rel-12	B	RP-150961	R4-152311	approved	Test for CGI acqusition requirements for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2850	1	Rel-12	B	RP-150961	R4-152312	approved	Test for cell identification for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf

Samsung Exhibit 1025, Page 1938 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	2851	-	Rel-12	B	RP-150961	R4-151618	approved	Test for handover requirements for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2852	-	Rel-12	B	RP-150961	R4-151619	approved	Test for RRC re-establishment requirements for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2853	1	Rel-12	B	RP-150961	R4-152313	approved	HD-FDD handover requirements for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2855	1	Rel-12	F	RP-150957	R4-152305	approved	Correction of requirements for ProSe in DRX	12.7.0	12.8.0	R4	LTE_D2D_Prox-Core
36.133	2857	1	Rel-12	B	RP-150962	R4-152338	approved	E-UTRAN FDD intra frequency CRS based discovery signal measurements when DRX is used	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2858	1	Rel-12	B	RP-150962	R4-152339	approved	E-UTRAN TDD intra frequency CRS based discovery signal measurements when DRX is used	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2859	1	Rel-12	B	RP-150962	R4-152340	approved	E-UTRAN FDD-FDD inter-frequency event triggered reporting under fading propagation conditions in DRX based on CRS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2860	1	Rel-12	B	RP-150962	R4-152341	approved	E-UTRAN TDD-TDD inter-frequency event triggered reporting under fading propagation conditions in DRX based on CRS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-perf
36.133	2861	1	Rel-12	B	RP-150962	R4-152342	approved	E-UTRAN FDD event triggered reporting under deactivated SCell in non-DRX based on CRS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2862	1	Rel-12	B	RP-150962	R4-152343	approved	E-UTRAN TDD event triggered reporting under deactivated SCell in non-DRX based on CRS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2866	1	Rel-12	B	RP-150961	R4-152512	approved	RSRP accuracy FD-FDD Intra frequency case for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2867	1	Rel-12	B	RP-150961	R4-152513	approved	RSRP accuracy HD-FDD Intra frequency case for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2868	1	Rel-12	B	RP-150961	R4-152514	approved	RSRP accuracy TDD Intra frequency case for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2869	1	Rel-12	B	RP-150961	R4-152515	approved	RSRQ accuracy FD-FDD Intra frequency case for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2870	1	Rel-12	B	RP-150961	R4-152516	approved	RSRQ accuracy HD-FDD Intra frequency case for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2871	1	Rel-12	B	RP-150961	R4-152517	approved	RSRQ accuracy TDD Intra frequency case for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2872	1	Rel-12	B	RP-150972	R4-152389	approved	Test case for 3DL CA: PCell in FDD: Event triggered reporting on deactivated SCells and interruption probability (0.5%) without DRX (TDD-FDD CA)	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42-Perf, LTE_CA_B3_B19_B42-Perf, LTE_CA_B19_B21_B42-Perf, LTE_CA_B7_B20_B38-Perf

Samsung Exhibit 1025, Page 1939 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	2873	1	Rel-12	B	RP-150972	R4-152390	approved	Test case for 3DL CA: PCell in TDD: Event triggered reporting on deactivated SCells and interruption probability (0.5%) without DRX (TDD-FDD CA)	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42-Perf, LTE_CA_B3_B19_B42-Perf, LTE_CA_B19_B21_B42-Perf, LTE_CA_B7_B20_B38-Perf
36.133	2874	1	Rel-12	B	RP-150958	R4-152391	approved	Test case for 3DL CA: Event triggered reporting on deactivated SCells and interruption probability (0.5%) without DRX (FDD CA)	12.7.0	12.8.0	R4	LTE_CA_B1_B3_B5-Perf, LTE_CA_B1_B3_B8-Perf, LTE_CA_B1_B3_B19-Perf, LTE_CA_B1_B3_B20-Perf, LTE_CA_B1_B3_B26-Perf, LTE_CA_B1_B5_B7-Perf, LTE_CA_B1_B7_B20-Perf, LTE_CA_B1_B18_B28-Perf, LTE_CA_B1_B19_B21-Perf, LTE_CA_B2_B2_B5-Perf, LTE_CA_B2_B2_B13-Perf, LTE_CA_B2_B4_B4-Perf, LTE_CA_B2_B4_B5-Perf, LTE_CA_B2_B4_B12-Perf, LTE_CA_B2_B4_B13-Perf, LTE_CA_B2_B4_B29-Perf, LTE_CA_B2_B5_B12-Perf, LTE_CA_B2_B5_B13-Perf, LTE_CA_B2_B5_B30-Perf, LTE_CA_B2_B12_B30-Perf, LTE_CA_B2_B29_B30-Perf, LTE_CA_B3_B7_B20-Perf, LTE_CA_B4_B4_B5-Perf, LTE_CA_B4_B4_B7-Perf, LTE_CA_B4_B4_B12-Perf, LTE_CA_B4_B4_B13-Perf, LTE_CA_B4_B5_B12-Perf, LTE_CA_B4_B5_B13-Perf, LTE_CA_B4_B5_B30-Perf, LTE_CA_B4_B7_B12-Perf,

Samsung Exhibit 1025, Page 1940 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
												LTE_CA_B4_B12_B30-Perf, LTE_CA_B4_B29_B30-Perf, LTE_CA_B7_B8_B20-Perf
36.133	2875	1	Rel-12	B	RP-150968	R4-152392	approved	Test case for 3DL CA: Event triggered reporting on deactivated SCells and interruption probability (0.5%) without DRX (TDD 3 DL CA)	12.7.0	12.8.0	R4	LTE_CA_B39_B41_B41-Perf, LTE_CA_B39_B39_B41-Perf
36.133	2880	-	Rel-12	F	RP-150965	R4-151705	approved	OTDOA RSTD Measurements on different secondary component carriers	12.7.0	12.8.0	R4	TEI12
36.133	2884	-	Rel-12	A	RP-150955	R4-151732	approved	E-UTRAN TDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells for 20 MHz +20 MHz bandwidth R12	12.7.0	12.8.0	R4	LTE_CA_B41-Perf
36.133	2885	-	Rel-12	F	RP-150958	R4-151733	approved	E-UTRAN TDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells for 20 MHz +10 MHz bandwidth R12	12.7.0	12.8.0	R4	LTE_CA_C_B39-Perf
36.133	2886	-	Rel-12	A	RP-150955	R4-151734	approved	E-UTRAN TDD with 20 MHz +20 MHz bandwidth to UTRAN TDD cell search under fading propagation conditions R12	12.7.0	12.8.0	R4	LTE_CA_B41-Perf
36.133	2887	-	Rel-12	A	RP-150958	R4-151735	approved	E-UTRAN TDD with 20 MHz +10 MHz bandwidth to UTRAN TDD cell search under fading propagation conditions R12	12.7.0	12.8.0	R4	LTE_CA_C_B39-Perf
36.133	2888	-	Rel-11	F	RP-150955	R4-151736	approved	E-UTRAN TDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells for 20 MHz +20 MHz bandwidth R11	11.12.0	11.13.0	R4	LTE_CA_B41-Perf
36.133	2890	-	Rel-11	F	RP-150955	R4-151738	approved	E-UTRAN TDD with 20 MHz +20 MHz bandwidth to UTRAN TDD cell search under fading propagation conditions R11	11.12.0	11.13.0	R4	LTE_CA_B41-Perf
36.133	2893	-	Rel-13	F	RP-150969	R4-151741	approved	Carrier aggragation test cases for band 31	12.7.0	13.0.0	R4	LTE_CA_B3_B31-Core
36.133	2897	-	Rel-12	F	RP-150957	R4-151873	approved	Further clarification of MBMSBLER reporting in section 9	12.7.0	12.8.0	R4	MBMS_LTE_OS
36.133	2903	1	Rel-12	B	RP-150962	R4-152350	approved	Test case of FDD-FDD inter-frequency RSRQ measurement accuracy in discovery signal occasions	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2904	-	Rel-12	F	RP-150962	R4-151981	approved	CR on side conditions for inter-frequency measurement for SCE	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2905	-	Rel-12	B	RP-150962	R4-151983	approved	CR on test case for RSRQ TDD-TDD inter frequency measurement accuracy requirement for SCE	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2906	1	Rel-12	F	RP-150955	R4-152507	approved	Maximum Rx difference between Pcell and Scell in section 7.9	12.7.0	12.8.0	R4	LTE_CA_enh-Perf
36.133	2908	1	Rel-12	B	RP-150962	R4-152344	approved	FDD-FDD intra frequency event triggered reporting in DRX based on CSI-RS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2909	1	Rel-12	B	RP-150962	R4-152345	approved	TDD-TDD intra frequency event triggered reporting in DRX based on CSI-RS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2910	1	Rel-12	B	RP-150962	R4-152346	approved	FDD-FDD inter frequency event triggered reporting in DRX based on CSI-RS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2911	1	Rel-12	B	RP-150962	R4-152347	approved	TDD-TDD inter frequency event triggered reporting in DRX based on CSI-RS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2912	1	Rel-12	B	RP-150962	R4-152348	approved	FDD event triggered reporting under deactivated SCell in non-DRX based on CSI-RS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf

Samsung Exhibit 1025, Page 1941 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	2913	1	Rel-12	B	RP-150962	R4-152349	approved	TDD event triggered reporting under deactivated SCell in non-DRX based on CSI-RS based discovery signal	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2915	2	Rel-12	F	RP-150957	R4-152534	approved	CR of DC interruption requirements	12.7.0	12.7.0	R4	LTE_SC_enh_dualC-Core
36.133	2916	1	Rel-12	B	RP-150965	R4-152383	approved	Event triggered reporting on deactivated SCells in non-DRX (FDD CA)	12.7.0	12.7.0	R4	TEI12
36.133	2917	1	Rel-12	B	RP-150965	R4-152384	approved	Event triggered reporting on deactivated SCells in non-DRX (TDD CA)	12.7.0	12.7.0	R4	TEI12
36.133	2919	1	Rel-12	B	RP-150972	R4-152385	approved	Introduction of RRM test case for E-UTRAN TDD-FDD 3 DL CA activation and deactivation of known SCell in non-DRX with PCell in FDD	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42-Perf, LTE_CA_B3_B19_B42-Perf, LTE_CA_B19_B21_B42-Perf, LTE_CA_B7_B20_B38-Perf
36.133	2920	1	Rel-12	B	RP-150972	R4-152386	approved	Introduction of RRM test case for E-UTRAN TDD-FDD 3 DL CA activation and deactivation of known SCell in non-DRX with PCell in TDD	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42-Perf, LTE_CA_B3_B19_B42-Perf, LTE_CA_B19_B21_B42-Perf, LTE_CA_B7_B20_B38-Perf

Samsung Exhibit 1025, Page 1942 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	2921	-	Rel-12	B	RP-150972	R4-152387	approved	3DL CA Phase I tests #11_3DL FDD CA SCell activation and deactivation for known SCells without DRX	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42-Perf, LTE_CA_B3_B19_B42-Perf, LTE_CA_B19_B21_B42-Perf, LTE_CA_B7_B20_B38-Perf
36.133	2922	-	Rel-12	B	RP-150972	R4-152388	approved	3DL CA Phase I tests #12_3DL TDD CA SCell activation and deactivation for known SCells without DRX	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42-Perf, LTE_CA_B3_B19_B42-Perf, LTE_CA_B19_B21_B42-Perf, LTE_CA_B7_B20_B38-Perf
36.133	2923	2	Rel-12	B	RP-150959	R4-153896	approved	Incmon CR for TDD-TDD Interfrequency correct reporting of measurement events without reduced performance group configured, non DRX	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	2928	1	Rel-12	B	RP-150963	R4-153633	approved	FDD RLM Test Case for Out-of-sync in DRX for PSCell in asynchronous DC	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2929	1	Rel-12	B	RP-150963	R4-153635	approved	FDD RLM Test Case for In-sync in DRX for PSCell in asynchronous DC	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2930	1	Rel-10	F	RP-150954	R4-153821	approved	Correction of Cell Time offset in RSTD CA Test cases (Rel-10)	10.18.0	10.19.0	R4	LTE_CA
36.133	2931	-	Rel-11	A	RP-150954	R4-152739	approved	Correction of Cell Time offset in RSTD CA Test cases (Rel-11)	11.12.0	11.13.0	R4	LTE_CA
36.133	2932	-	Rel-12	A	RP-150954	R4-152740	approved	Correction of Cell Time offset in RSTD CA Test cases (Rel-12)	12.7.0	12.8.0	R4	LTE_CA
36.133	2933	1	Rel-12	B	RP-150963	R4-153641	approved	Introduction of DC intra-frequency event triggered reporting with DRX in synchronous FDD DC	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf

Samsung Exhibit 1025, Page 1943 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	2934	1	Rel-12	B	RP-150963	R4-153642	approved	Introduction of DC intra-frequency event triggered reporting with DRX in synchronous TDD DC	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2935	1	Rel-12	B	RP-150963	R4-153643	approved	Introduction of DC intra-frequency event triggered reporting with DRX in asynchronous FDD DC	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2936	1	Rel-12	B	RP-150963	R4-153644	approved	Introduction of DC inter-frequency event triggered reporting with DRX in synchronous FDD DC	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2937	1	Rel-12	B	RP-150963	R4-153645	approved	Introduction of DC inter-frequency event triggered reporting with DRX in synchronous TDD DC	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2938	1	Rel-12	B	RP-150959	R4-153615	approved	Testcases for E-UTRA Incmon idle interfrequency reselection	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	2940	2	Rel-12	F	RP-150962	R4-153897	approved	CR on minimum number of subframes for discovery-based measurements	12.7.0	12.8.0	R4	LTE_SC_enh_L1-Perf
36.133	2941	1	Rel-12	B	RP-150961	R4-153600	approved	E-UTRAN FD-FDD Radio Link Monitoring Tests for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2942	1	Rel-12	B	RP-150961	R4-153601	approved	E-UTRAN HD-FDD Radio Link Monitoring Tests for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2943	1	Rel-12	B	RP-150961	R4-153602	approved	E-UTRAN TDD Radio Link Monitoring Tests for UE category 0	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2944	1	Rel-12	B	RP-150958	R4-153832	approved	Absolute and relative RSRP accuracies in FDD 3 DL CA	12.7.0	12.8.0	R4	LTE_CA_B1_B3_B5-Perf, LTE_CA_B1_B3_B8-Perf, LTE_CA_B1_B3_B19-Perf, LTE_CA_B1_B3_B20-Perf, LTE_CA_B1_B3_B26-Perf, LTE_CA_B1_B5_B7-Perf, LTE_CA_B1_B7_B20-Perf, LTE_CA_B1_B18_B28-Perf, LTE_CA_B1_B19_B21-Perf, LTE_CA_B2_B2_B5-Perf, LTE_CA_B2_B2_B13-Perf, LTE_CA_B2_B4_B4-Perf, LTE_CA_B2_B4_B5-Perf, LTE_CA_B2_B4_B12-Perf, LTE_CA_B2_B4_B13-Perf, LTE_CA_B2_B4_B29-Perf, LTE_CA_B2_B5_B12-Perf, LTE_CA_B2_B5_B13-Perf, LTE_CA_B2_B5_B30-Perf, LTE_CA_B2_B12_B30-Perf, LTE_CA_B2_B29_B30-Perf, LTE_CA_B3_B7_B20-Perf, LTE_CA_B4_B4_B5-Perf, LTE_CA_B4_B4_B7-Perf, LTE_CA_B4_B4_B12-Perf, LTE_CA_B4_B4_B13-Perf, LTE_CA_B4_B5_B12-Perf, LTE_CA_B4_B5_B13-Perf, LTE_CA_B4_B5_B30-Perf, LTE_CA_B4_B7_B12-Perf, LTE_CA_B4_B12_B30-Perf,

Samsung Exhibit 1025, Page 1944 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
												LTE_CA_B4_B29_B30-Perf, LTE_CA_B7_B8_B20-Perf
36.133	2945	1	Rel-12	B	RP-150968	R4-153833	approved	Absolute and relative RSRP accuracies in TDD 3 DL CA	12.7.0	12.8.0	R4	LTE_CA_B39_B41_B41-Perf, LTE_CA_B39_B39_B41-Perf
36.133	2946	1	Rel-12	B	RP-150972	R4-153834	approved	PCell in FDD: absolute and relative RSRQ accuracies in TDD-FDD 3 DL CA	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42-Perf, LTE_CA_B3_B19_B42-Perf, LTE_CA_B19_B21_B42-Perf, LTE_CA_B7_B20_B38-Perf
36.133	2947	1	Rel-12	B	RP-150972	R4-153835	approved	PCell in TDD: absolute and relative RSRQ accuracies in TDD-FDD 3 DL CA	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42-Perf, LTE_CA_B3_B19_B42-Perf, LTE_CA_B19_B21_B42-Perf, LTE_CA_B7_B20_B38-Perf
36.133	2950	-	Rel-12	B	RP-150959	R4-152916	approved	FDD-FDD Interfrequency correct reporting of measurement events with reduced performance group configured for non DRX IncMon	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	2951	-	Rel-12	B	RP-150959	R4-152917	approved	TDD-TDD Interfrequency correct reporting of measurement events with reduced performance group configured for non DRX IncMon	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	2952	1	Rel-12	B	RP-150963	R4-153636	approved	E-UTRAN FDD Radio Link Monitoring Test for In-sync in DRX for PSCell in synchronous dual connectivity	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf

Samsung Exhibit 1025, Page 1945 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	2953	1	Rel-12	B	RP-150963	R4-153638	approved	E-UTRAN TDD Radio Link Monitoring Test for In-sync in DRX for PSCell in synchronous dual connectivity	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2954	1	Rel-12	B	RP-150961	R4-153647	approved	E-UTRAN FDD PCell interruption at transitions between active and non-active when DRX is used in PSCell in asynchronous dual connectivity	12.7.0	12.8.0	R4	LC_MTC_LTE-Perf
36.133	2955	-	Rel-12	F	RP-150958	R4-152943	approved	E-UTRAN TDD - UE Transmit Timing Accuracy Tests for SCell for 20 MHz +10 MHz bandwidth R12	12.7.0	12.8.0	R4	LTE_CA_C_B39-Perf
36.133	2956	-	Rel-12	F	RP-150955	R4-152944	approved	E-UTRAN TDD - UE Transmit Timing Accuracy Tests for SCell in sTAG for 20 MHz +20 MHz bandwidth R12	12.7.0	12.8.0	R4	LTE_CA_B41-Perf
36.133	2957	-	Rel-12	F	RP-150958	R4-152945	approved	E-UTRAN TDD - UE Transmit Timing Accuracy Tests for SCell in sTAG for 20 MHz +10 MHz bandwidth R12	12.7.0	12.8.0	R4	LTE_CA_C_B39-Perf
36.133	2958	-	Rel-12	F	RP-150955	R4-152946	approved	E-UTRAN TDD – UE Timing Advance Adjustment Accuracy Test for Scell in sTAG for 20 MHz +20 MHz bandwidth R12	12.7.0	12.8.0	R4	LTE_CA_B41-Perf
36.133	2959	-	Rel-12	F	RP-150958	R4-152947	approved	E-UTRAN TDD – UE Timing Advance Adjustment Accuracy Test for Scell in sTAG for 20 MHz +10 MHz bandwidth R12	12.7.0	12.8.0	R4	LTE_CA_C_B39-Perf
36.133	2960	-	Rel-11	F	RP-150955	R4-152948	approved	E-UTRAN TDD activation and deactivation of known SCell in non-DRX for 20 MHz +20 MHz bandwidth R11	11.12.0	11.13.0	R4	LTE_CA_B41-Perf
36.133	2961	-	Rel-11	F	RP-150955	R4-152949	approved	E-UTRAN TDD activation of unknown SCell in non-DRX for 20 MHz +20 MHz bandwidth R11	11.12.0	11.13.0	R4	LTE_CA_B41-Perf
36.133	2962	-	Rel-12	F	RP-150965	R4-152952	approved	Addition PDSCH RMC for 5MHz with user data	12.7.0	12.8.0	R4	TEI12
36.133	2966	-	Rel-13	B	RP-150974	R4-152980	approved	4DL CA RRM requirements for “UE Measurements Procedures in RRC_CONNECTED State”	12.7.0	13.0.0	R4	LTE_CA_B2_B2_B5_B30-Core, LTE_CA_B2_B2_B12_B30-Core, LTE_CA_B2_B2_B29_B30-Core, LTE_CA_B2_B4_B5_B30-Core, LTE_CA_B2_B4_B12_B30-Core, LTE_CA_B2_B4_B29_B30-Core, LTE_CA_B25_B41_B41_B41-Core, LTE_CA_B2_B2_B4_B4-Core, LTE_CA_B2_B2_B4_B12-Core, LTE_CA_B2_B4_B4_B12-Core, LTE_CA_B2_B4_B5_B29-Core
36.133	2967	1	Rel-12	B	RP-150972	R4-153838	approved	3 DL CA Phase II tests # 1-2: RSRP measurement accuracies for TDD-FDD CA	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf

Samsung Exhibit 1025, Page 1946 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	2970	1	Rel-13	B	RP-150974	R4-153683	approved	RRM Requirements in Section 7 for 4 DL CA	12.7.0	13.0.0	R4	LTE_CA_B2_B2_B5_B30-Core, LTE_CA_B2_B2_B12_B30-Core, LTE_CA_B2_B2_B29_B30-Core, LTE_CA_B2_B4_B5_B30-Core, LTE_CA_B2_B4_B12_B30-Core, LTE_CA_B2_B4_B29_B30-Core, LTE_CA_B25_B41_B41_B41-Core, LTE_CA_B2_B2_B4_B4-Core, LTE_CA_B2_B2_B4_B12-Core, LTE_CA_B2_B4_B4_B12-Core, LTE_CA_B2_B4_B5_B29-Core
36.133	2971	1	Rel-12	B	RP-150963	R4-153650	approved	PSCell Add and Release Delay Tests for Synchronous DC	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2972	1	Rel-12	B	RP-150963	R4-153651	approved	PSCell Add and Release Delay Tests for Asynchronous DC	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2975	1	Rel-12	B	RP-150959	R4-153616	approved	Idle mode FDD to UTRA FDD interRAT reselection	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	2976	1	Rel-12	B	RP-150959	R4-153617	approved	Idle mode TDD to UTRA FDD interRAT reselection	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	2977	-	Rel-12	B	RP-150959	R4-153047	approved	E-UTRA FDD InterRAT UTRA FDD correct reporting of measurement events with reduced performance group configured, non DRX	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	2978	-	Rel-12	B	RP-150959	R4-153048	approved	E-UTRA TDD InterRAT UTRA FDD correct reporting of measurement events with reduced performance group configured, non DRX	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	2979	1	Rel-12	B	RP-150963	R4-153648	approved	E-UTRAN FDD PCell interruption at transitions between active and non-active when DRX is used in PSCell in synchronous dual connectivity	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2980	1	Rel-12	B	RP-150963	R4-153649	approved	E-UTRAN TDD PCell interruption at transitions between active and non-active when DRX is used in PSCell in synchronous dual connectivity	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2981	1	Rel-12	B	RP-150963	R4-153646	approved	E-UTRAN FDD inter-frequency event triggered reporting in asynchronous dual connectivity	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2982	1	Rel-12	F	RP-150957	R4-153598	approved	CR on RRM tests for D2D Discovery	12.7.0	12.8.0	R4	LTE_D2D_Prox-Perf
36.133	2982	-	Rel-12	F	RP-150957	R4-153077	approved	CR on RRM tests for D2D Discovery	12.7.0	12.8.0	R4	LTE_D2D_Prox-Perf
36.133	2983	1	Rel-12	F	RP-150957	R4-153599	approved	CR on RRM tests for D2D Communication	12.7.0	12.8.0	R4	LTE_D2D_Prox-Perf
36.133	2983	-	Rel-12	F	RP-150957	R4-153078	approved	CR on RRM tests for D2D Communication	12.7.0	12.8.0	R4	LTE_D2D_Prox-Perf
36.133	2984	1	Rel-12	F	RP-150958	R4-153839	approved	Modification for interruption period for SCell (de-)activation with 3DL	12.7.0	12.8.0	R4	LTE_CA_Mult-Perf, LTE_CA_C_B41_3DL-Perf, LTE_CA_NC_B41_3DL-Perf, LTE_CA_B3_B42_B42-Perf
36.133	2987	1	Rel-12	B	RP-150959	R4-153614	approved	Test cases of Idle mode E-UTRA to UTRA TDD interRAT cell reselection for IncMon	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	2988	1	Rel-12	B	RP-150959	R4-153620	approved	Test cases of Interfrequency correct reporting of measurement events with reduced performance group configured, DRX	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf

Samsung Exhibit 1025, Page 1947 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	2989	2	Rel-12	B	RP-150963	R4-153639	approved	E-UTRAN FDD Radio Link Monitoring Test for Out-of-sync in DRX for PSCell in synchronous dual connectivity	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2990	2	Rel-12	B	RP-150963	R4-153640	approved	E-UTRAN TDD Radio Link Monitoring Test for Out-of-sync in DRX for PSCell in synchronous dual connectivity	12.7.0	12.8.0	R4	LTE_SC_enh_dualC-Perf
36.133	2992	-	Rel-12	F	RP-150957	R4-153174	approved	CR on interruption during D2D discovery for D2D single RF chain	12.7.0	12.8.0	R4	LTE_D2D_Prox-Core
36.133	2993	-	Rel-12	F	RP-150965	R4-153185	approved	CR on E-UTRAN TDD-TDD inter frequency measurements when DRX is used	12.7.0	12.8.0	R4	TEI12
36.133	2998	-	Rel-12	B	RP-150965	R4-153207	approved	Test case of FDD-FDD inter-frequency new RSRQ measurement accuracy	12.7.0	12.8.0	R4	TEI12
36.133	2999	-	Rel-12	B	RP-150965	R4-153208	approved	Test case of TDD-TDD inter-frequency new RSRQ measurement accuracy	12.7.0	12.8.0	R4	TEI12
36.133	3000	-	Rel-11	F	RP-150955	R4-153278	approved	Correction to feICIC cell configurations in RLM	11.12.0	11.13.0	R4	eICIC_enh_LTE-Perf
36.133	3001	-	Rel-12	A	RP-150955	R4-153280	approved	Correction to feICIC cell configurations in RLM	12.7.0	12.8.0	R4	eICIC_enh_LTE-Perf
36.133	3002	-	Rel-11	F	RP-150955	R4-153283	approved	Correction to A.8.1.8	11.12.0	11.13.0	R4	eICIC_enh_LTE-Perf
36.133	3003	-	Rel-12	A	RP-150955	R4-153284	approved	Correction to A.8.1.8	12.7.0	12.8.0	R4	eICIC_enh_LTE-Perf
36.133	3004	1	Rel-12	B	RP-150972	R4-153836	approved	CR on absolute and relative RSRQ accuracies in TDD 3DL CA	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf
36.133	3005	1	Rel-12	B	RP-150972	R4-153837	approved	CR on absolute and relative RSRQ accuracies in FDD 3DL CA	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf
36.133	3006	-	Rel-12	F	RP-150965	R4-153307	approved	CR for test case of new RSRQ measurement accuracy in FDD	12.7.0	12.8.0	R4	TEI12
36.133	3007	-	Rel-12	F	RP-150965	R4-153308	approved	CR for test case of new RSRQ measurement accuracy in TDD	12.7.0	12.8.0	R4	TEI12

Samsung Exhibit 1025, Page 1948 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.133	3008	1	Rel-12	B	RP-150972	R4-153691	approved	RSTD measurement reporting in FDD 3 DL CA	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf
36.133	3009	1	Rel-12	B	RP-150972	R4-153692	approved	RSTD measurement reporting in TDD 3 DL CA	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf
36.133	3010	1	Rel-12	B	RP-150972	R4-153693	approved	RSTD measurement accuracy in FDD 3 DL CA	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf
36.133	3011	1	Rel-12	B	RP-150972	R4-153694	approved	RSTD measurement accuracy in TDD 3 DL CA	12.7.0	12.8.0	R4	LTE_CA_B1_B41_B41-Perf, LTE_CA_B3_B42_B42-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B1_B8_B40-Perf, LTE_CA_B1_B3_B40-Perf, LTE_CA_B3_B40_B40-Perf, LTE_CA_B7_B40_B40-Perf, LTE_CA_B8_B42_B42-Perf, LTE_CA_B1_B42_B42-Perf, LTE_CA_B21_B42_B42-Perf,

Samsung Exhibit 1025, Page 1949 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
												LTE_CA_B28_B40_B40-Perf, LTE_CA_B25_B41_B41_B41-Perf
36.133	3012	1	Rel-12	F	RP-150957	R4-153597	approved	Clarification of ProSe requirements in ONC	12.7.0	12.8.0	R4	LTE_D2D_Prox-Perf
36.133	3012	2	Rel-12	F	RP-150964	R4-153895	approved	Clarification of ProSe requirements in ONC	12.7.0	12.8.0	R4	LTE_D2D_Prox-Perf
36.133	3012	-	Rel-12	F	RP-150957	R4-153390	approved	Clarification of ProSe requirements in ONC	12.7.0	12.8.0	R4	LTE_D2D_Prox-Perf
36.133	3013	-	Rel-12	F	RP-150957	R4-153533	approved	Correction to Asynchronous Requirements for DC for only FDD-FDD	12.7.0	12.8.0	R4	LTE_SC_enh_dualC
36.133	3014	-	Rel-12	B	RP-150959	R4-153618	approved	E-UTRA TDD InterRAT UTRA TDD correct reporting of measurement events with reduced performance group configured non DRX IncMon	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	3015	-	Rel-12	B	RP-150959	R4-153619	approved	E-UTRA FDD InterRAT UTRA TDD correct reporting of measurement events with reduced performance group configured non DRX for IncMon	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.133	3016	-	Rel-12	F	RP-150958	R4-153689	approved	Correction to E-UTRA TDD event triggered reporting under deactivated SCell in non-DRX for 20 MHz + 10 MHz	12.7.0	12.8.0	R4	LTE_CA_C_B39-perf
36.133	2921a	-	Rel-12	F	RP-150965	R4-152574	approved	Correction of implementation of CR 2644 in Table A.9.8.1.1-1	12.7.0	12.8.0	R4	TEI12
36.133	2922a	2	Rel-12	B	RP-150959	R4-153870	approved	Incmon CR for FDD-FDD Interfrequency correct reporting of measurement events without reduced performance group configured, non DRX	12.7.0	12.8.0	R4	LTE_UTRA_IncMon-Perf
36.141	0701	4	Rel-13	B	RP-150968	R4-153758	approved	Introduction of 2DL CA combinations	12.7.0	13.0.0	R4	LTE_CA_B2_B28-Perf, LTE_CA_B4_B28-Perf, LTE_CA_B25_B26-Perf, LTE_CA_B20_B31-Perf, LTE_CA_B1_B40-Perf, LTE_CA_B7_B22-Perf, LTE_CA_B5_B40-Perf, LTE_CA_B3_B38-Perf, LTE_CA_B3_B31-Perf LTE_CA_B4_B28-Perf, LTE_CA_B25_B26-Perf, LTE_CA_B20_B31-Perf, LTE_
36.141	0702	4	Rel-13	B	RP-150972	R4-153791	approved	Introduction of 3DL CA combinations	12.7.0	13.0.0	R4	LTE_CA_B1_B3_B28-Perf, LTE_CA_B2_B2_B12-Perf, LTE_CA_B2_B5_B29-Perf, LTE_CA_B3_B7_B28-Perf, LTE_CA_B3_B3_B8-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B3_B7_B8-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B1_B7_B28-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42- Perf, LTE_CA_B3_B19_B42- Perf,

Samsung Exhibit 1025, Page 1950 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
												LTE_CA_B19_B21_B42- Perf, LTE_CA_B38_B40_B40- Perf
36.141	0720	1	Rel-11	F	RP-150955	R4-152421	approved	Clarification of parameter P for emission requirements	11.11.0	11.12.0	R4	TEI11
36.141	0721	-	Rel-12	A	RP-150955	R4-151286	approved	Clarification of parameter P for emission requirements	12.7.0	12.8.0	R4	TEI11
36.141	0729	1	Rel-13	B	RP-150974	R4-152733	approved	Introduction of 4DL CA combinations	12.7.0	13.0.0	R4	LTE_CA_ B2_B2_B4_B4-Perf, LTE_CA_ B2_B2_B4_B12-Perf, LTE_CA_B2_B4_B4_B12-Perf, LTE_CA_B2_B4_B5_B30-Perf, LTE_CA_B2_B4_B12_B30-Perf, LTE_CA_B2_B4_B29_B30-Perf, LTE_CA_ B2_B4_B4_B12-Perf, LTE_CA_B2_B4_B5_B30-Perf, LTE_CA_B
36.141	0733	1	Rel-11	F	RP-150955	R4-153709	approved	Some corrections related to single carrier requirements	11.11.0	11.12.0	R4	TEI11
36.141	0734	-	Rel-12	A	RP-150955	R4-152678	approved	Some corrections related to single carrier requirements	12.7.0	12.8.0	R4	TEI11
36.141	0744	-	Rel-13	B	RP-150670	-	approved	Introduction of CA_3A-40A to TS 36.141	12.7.0	13.0.0	R4	LTE_CA_B3_B40
36.211	0201	-	Rel-12	F	RP-150935	R1-152925	approved	Alignment of ProSe parameters	12.5.0	12.6.0	R1	LTE_D2D_Prox-Core
36.212	0169	-	Rel-12	F	RP-150936	R1-152141	approved	Corrections on eIMTA RRC parameter naming	12.4.0	12.5.0	R1	LTE_TDD_eIMTA-Core
36.212	0171	1	Rel-12	F	RP-150937	R1-152218	approved	CR on soft buffer size assumptions	12.4.0	12.5.0	R1	TEI12
36.213	0493	2	Rel-12	F	RP-150931	R1-151450	approved	Clarification on HARQ-ACK repetition	12.5.0	12.6.0	R1	LTE-Phys
36.213	0495	3	Rel-10	F	RP-150932	R1-152176	approved	Clarification on PUCCH Format 3 Resource Derivation for TDD UL/DL Configuration 5	10.12.0	10.13.0	R1	LTE_CA-Core
36.213	0496	3	Rel-11	A	RP-150932	R1-152177	approved	Clarification on PUCCH Format 3 Resource Derivation for TDD UL/DL Configuration 5	11.10.0	11.11.0	R1	LTE_CA-Core
36.213	0497	3	Rel-12	A	RP-150932	R1-152178	approved	Clarification on PUCCH Format 3 Resource Derivation for TDD UL/DL Configuration 5	12.5.0	12.6.0	R1	LTE_CA-Core
36.213	0506	-	Rel-12	F	RP-150933	R1-151259	approved	Clarification on the PRACH power in subframe i2-1 for PCM2	12.5.0	12.6.0	R1	LTE_SC_enh_dualC-Core
36.213	0507	-	Rel-12	F	RP-150933	R1-151260	approved	Clarification on the MTA operation in PCM1	12.5.0	12.6.0	R1	LTE_SC_enh_dualC-Core
36.213	0512	-	Rel-12	F	RP-150933	R1-151758	approved	Correction of higher layer parameter names in dual connectivity	12.5.0	12.6.0	R1	LTE_SC_enh_dualC-Core
36.213	0513	1	Rel-12	F	RP-150935	R1-152191	approved	Correction on UE procedure of determining subframe pool for PSCCH and PSSCH in ProSe	12.5.0	12.6.0	R1	LTE_D2D_Prox-Core
36.213	0514	1	Rel-12	F	RP-150935	R1-152186	approved	Correction on UE procedure of transmitting PSCCH in ProSe	12.5.0	12.6.0	R1	LTE_D2D_Prox-Core
36.213	0515	1	Rel-12	F	RP-150933	R1-152188	approved	Correction on UL Power Control for Synchronous Dual Connectivity	12.5.0	12.6.0	R1	LTE_SC_enh_dualC-Core
36.213	0516	1	Rel-12	F	RP-150933	R1-152201	approved	Correction on UL Power Control for Asynchronous Dual Connectivity	12.5.0	12.6.0	R1	LTE_SC_enh_dualC-Core
36.213	0517	-	Rel-12	F	RP-150937	R1-152069	approved	Correction to Rel-12 UE category signal naming	12.5.0	12.6.0	R1	TEI12
36.213	0520	-	Rel-12	F	RP-150936	R1-152142	approved	Corrections on eIMTA RRC parameter naming	12.5.0	12.6.0	R1	LTE_TDD_eIMTA-Core
36.213	0521	-	Rel-12	F	RP-150933	R1-152291	approved	Correction on Closed Loop Antenna Selection for Dual Connectivity	12.5.0	12.6.0	R1	LTE_SC_enh_dualC-Core
36.213	0523	-	Rel-12	F	RP-150935	R1-153182	approved	Alignment of Prose parameter names	12.5.0	12.6.0	R1	LTE_D2D_Prox-Core

Samsung Exhibit 1025, Page 1951 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.300	0711	4	Rel-13	B	RP-150925	R2-152929	approved	Introduction of enhanced inter-eNB CoMP	12.5.0	13.0.0	R2	COMP_LTE_IeNB_sig-Core
36.300	0712	1	Rel-12	F	RP-150943	R2-152924	approved	Clarification on UE-AMBR for split bearer	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.300	0721	2	Rel-12	F	RP-150921	R2-152926	approved	Correction on SeNB initiated SeNB Modification procedure	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.300	0723	1	Rel-12	F	RP-150921	R2-152925	approved	Introduction of Group Call eMBMS congestion management	12.5.0	12.6.0	R2	GCSE_LTE-MBMS_CM-Core
36.300	0730	6	Rel-13	B	RP-150945	R2-152930	approved	SON support for dynamic deployment changes	12.5.0	13.0.0	R2	UTRA_LTE_SON_AAS-Core
36.300	0733	-	Rel-12	F	RP-150921	R2-152927	approved	Correction on MeNB behaviour for distinguishing downlink PDCP PDUs	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.300	0756	-	Rel-12	F	RP-150921	R2-152054	approved	Resource pool for out of coverage UE	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.300	0757	-	Rel-12	F	RP-150921	R2-152058	approved	Dual Connectivity Corrections	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.300	0758	-	Rel-12	F	RP-150921	R2-152059	approved	Corrections on Stage-2 descriptions for ProSe	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.300	0759	1	Rel-12	F	RP-150921	R2-152078	approved	Need for SIB18 in a cell on non-Public Safety ProSe Carrier	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.300	0760	2	Rel-12	F	RP-150921	R2-152878	approved	Addition of DC Operation Overview and Minor Clarifications	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.300	0761	-	Rel-12	F	RP-150921	R2-152877	approved	Allocation of LCID in DC	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.300	0763	-	Rel-12	F	RP-150921	R2-152881	approved	Clarification on CQI reporting in dual connectivity	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.300	0764	-	Rel-12	F	RP-150921	R2-152885	approved	Correction to the characteristics of SL-DCH	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.300	0771	-	Rel-13	B	RP-150946	R2-152928	approved	eMBMS Alternative IP Multicast distribution address	12.5.0	13.0.0	R2	TEI13
36.302	0060	-	Rel-12	B	RP-150921	R2-152061	approved	Introduction of ProSe	12.3.0	12.4.0	R2	LTE_D2D_Prox-Core
36.304	0267	-	Rel-12	F	RP-150921	R2-152063	approved	Correction on limited service state conditions	12.4.0	12.5.0	R2	LTE_D2D_Prox-Core
36.304	0272	1	Rel-12	F	RP-150923	R2-152849	approved	Correction to SI acquisition failure	12.4.0	12.5.0	R2	TEI12
36.306	0269	-	Rel-12	F	RP-150921	R2-152036	approved	Dual Connectivity L2 buffer size for category combinations with UL64QAM	12.4.0	12.5.0	R2	LTE_SC_enh_dualC-Core
36.306	0270	1	Rel-10	F	RP-150917	R2-152204	approved	Corrections on MIMO capabilities	10.12.0	10.13.0	R2	LTE_eDL_MIMO-Core, LTE_UL_MIMO-Core
36.306	0271	1	Rel-11	A	RP-150917	R2-152206	approved	Corrections on MIMO capabilities	11.10.0	11.11.0	R2	LTE_eDL_MIMO-Core, LTE_UL_MIMO-Core
36.306	0272	1	Rel-12	A	RP-150917	R2-152207	approved	Corrections on MIMO capabilities	12.4.0	12.5.0	R2	LTE_eDL_MIMO-Core, LTE_UL_MIMO-Core
36.306	0274	-	Rel-10	F	RP-150917	R2-152799	approved	UE support of CA fallback configurations	10.12.0	10.13.0	R2	LTE_CA-Core
36.306	0275	-	Rel-11	A	RP-150917	R2-152800	approved	UE support of CA fallback configurations	11.10.0	11.11.0	R2	LTE_CA-Core
36.306	0276	-	Rel-12	A	RP-150917	R2-152871	approved	UE support of CA fallback configurations	12.4.0	12.5.0	R2	LTE_CA-Core
36.306	0277	-	Rel-12	F	RP-150923	R2-152850	approved	Clarification on UL 64QAM capability	12.4.0	12.5.0	R2	TEI12
36.306	0280	1	Rel-12	C	RP-150951	-	approved	Introduction of new DL UE categories 15&16	12.4.0	12.5.0	R2	LTE_CA-Core, LTE_SC_enh_L1, TEI12
36.306	0280	-	Rel-12	C	RP-150926	R2-152784	revised	Introduction of new DL UE categories 15&16	12.4.0		R2	LTE_CA-Core, LTE_SC_enh_L1-Core, TEI12
36.306	0283	1	Rel-12	F	RP-150921	R2-152911	approved	Corrections on requirements of sidelink reception in TS 36.306	12.4.0	12.5.0	R2	LTE_D2D_Prox-Core
36.306	0284	1	Rel-12	F	RP-150980	-	rejected	Additional MIMO/CSI capability for intra-band contiguous CA	12.4.0		R2	LTE_CA-Core, TEI12
36.306	0284	-	Rel-12	F	RP-150745	-	revised	Additional MIMO/CSI capability for intra-band contiguous CA	12.4.0		R2	LTE_CA-Core, TEI12

Samsung Exhibit 1025, Page 1952 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.307	0459	1	Rel-11	B	RP-150958	R4-153266	approved	Introduction of dual uplink CA into 36.307	11.11.0	11.12.0	R4	LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core
36.307	0460	1	Rel-12	B	RP-150958	R4-153267	approved	Introduction of dual uplink CA into 36.307	12.7.0	12.8.0	R4	LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core
36.307	0461	1	Rel-13	B	RP-150958	R4-153273	approved	Introduction of dual uplink CA into 36.307	12.7.0	13.0.0	R4	LTE_CA_2UL-A1-Core, LTE_CA_2UL-A2-Core, LTE_CA_2UL-A3-Core, LTE_CA_2UL-A4-Core
36.307	0471	2	Rel-12	B	RP-150649	-	revised	Introduction of CA_42D to TS 36.307(Rel-12)	12.7.0		R4	LTE_CA_C_B42_3DL-Core
36.307	0471	3	Rel-12	B	RP-151026	R4-151026	approved	Introduction of CA_42D to TS 36.307	12.7.0	12.8.0	R4	LTE_CA_C_B42_3DL-perf
36.307	0472	2	Rel-11	B	RP-150648	-	revised	Introduction of CA_42D to TS 36.307(Rel-11)	11.11.0		R4	LTE_CA_C_B42_3DL-Core
36.307	0472	3	Rel-11	B	RP-151025	R4-151025	approved	Introduction of CA_42D to TS 36.307	11.11.0	11.12.0	R4	LTE_CA_C_B42_3DL-Perf
36.307	0473	2	Rel-10	B	RP-150647	-	revised	Introduction of CA_42D to TS 36.307(Rel-10)	10.4.0		R4	LTE_CA_C_B42_3DL-Core
36.307	0473	3	Rel-10	B	RP-151024	R4-151024	approved	Introduction of CA_42D to TS 36.307	10.14.0	10.15.0	R4	LTE_CA_C_B42_3DL-Perf
36.307	0480	-	Rel-10	B	RP-150958	R4-151545	approved	Removal of CA_2A-2A-13A, CA_4A-4A-13A from rel-10 36.307	10.14.0	10.15.0	R4	LTE_CA_B2_B2_B13-Perf, LTE_CA_B4_B4_B13-Perf
36.307	0481	1	Rel-11	F	RP-150955	R4-152417	approved	Clean up of requirements of band release independent	11.11.0	11.12.0	R4	TEI11
36.307	0486	-	Rel-11	F	RP-150958	R4-151963	approved	CR for CA UE performance tests in 36.307 in Rel-11	11.11.0	11.12.0	R4	LTE_CA_Mult-Perf
36.307	0487	-	Rel-12	F	RP-150958	R4-151964	approved	CR for CA UE performance tests in 36.307 in Rel-12	12.7.0	12.8.0	R4	LTE_CA_Mult-Perf
36.307	0496	2	Rel-10	B	RP-150968	R4-153933	approved	Release independence CR for 2DL inter-band CA Rel-10	10.14.0	10.15.0	R4	LTE_CA_B2_B28-Perf, LTE_CA_B3_B31-Perf, LTE_CA_B4_B28-Perf, LTE_CA_B7_B22-Perf, LTE_CA_B20_B31-Perf, LTE_CA_B25_B26-Perf
36.307	0497	2	Rel-11	B	RP-150968	R4-153934	approved	Release independence CR for 2DL inter-band CA Rel-11	11.11.0	11.12.0	R4	LTE_CA_B2_B28-Perf, LTE_CA_B3_B31-Perf, LTE_CA_B4_B28-Perf, LTE_CA_B7_B22-Perf, LTE_CA_B20_B31-Perf, LTE_CA_B25_B26-Perf
36.307	0498	2	Rel-12	B	RP-150968	R4-153935	approved	Release independence CR for 2DL inter-band CA Rel-12	12.7.0	12.8.0	R4	LTE_CA_B1_B40-Perf, LTE_CA_B2_B28-Perf, LTE_CA_B3_B31-Perf, LTE_CA_B3_B38-Perf, LTE_CA_B4_B28-Perf, LTE_CA_B5_B40-Perf, LTE_CA_B7_B22-Perf, LTE_CA_B20_B31-Perf, LTE_CA_B25_B26-Perf

Samsung Exhibit 1025, Page 1953 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.307	0499	2	Rel-13	B	RP-150968	R4-153936	approved	Release independence CR for 2DL inter-band CA Rel-13	12.7.0	13.0.0	R4	LTE_CA_B1_B40-Perf, LTE_CA_B2_B28-Perf, LTE_CA_B3_B31-Perf, LTE_CA_B3_B38-Perf, LTE_CA_B3_B40-Perf, LTE_CA_B4_B28-Perf, LTE_CA_B5_B40-Perf, LTE_CA_B7_B22-Perf, LTE_CA_B20_B31-Perf, LTE_CA_B25_B26-Perf
36.307	0500	1	Rel-10	B	RP-150972	R4-153786	approved	Release independence CR for 3DL inter-band CA Rel-10	10.14.0	10.15.0	R4	LTE_CA_B1_B3_B28-Perf, LTE_CA_B1_B7_B28-Perf, LTE_CA_B2_B5_B29-Perf, LTE_CA_B3_B3_B5-Perf, LTE_CA_B3_B7_B7-Perf, LTE_CA_B3_B7_B8-Perf, LTE_CA_B3_B7_B28-Perf, LTE_CA_B7_B7_B28-Perf, LTE_CA_B38_B40_B40-Perf, LTE_CA_B41_B42_B42-Perf
36.307	0501	1	Rel-11	B	RP-150972	R4-153787	approved	Release independence CR for 3DL inter-band CA Rel-11	11.11.0	11.12.0	R4	LTE_CA_B1_B3_B28-Perf, LTE_CA_B1_B7_B28-Perf, LTE_CA_B2_B2_B12-Perf, LTE_CA_B2_B5_B29-Perf, LTE_CA_B3_B3_B5-Perf, LTE_CA_B3_B3_B8-Perf, LTE_CA_B3_B7_B7-Perf, LTE_CA_B3_B7_B8-Perf, LTE_CA_B3_B7_B28-Perf, LTE_CA_B7_B7_B28-Perf, LTE_CA_B38_B40_B40-Perf, LTE_CA_B41_B42_B42-Perf

Samsung Exhibit 1025, Page 1954 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.307	0502	1	Rel-12	B	RP-150972	R4-153788	approved	Release independence CR for 3DL inter-band CA Rel-12	12.7.0	12.8.0	R4	LTE_CA_B1_B3_B28-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B7_B28-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42-Perf, LTE_CA_B2_B2_B12-Perf, LTE_CA_B2_B5_B29-Perf, LTE_CA_B3_B3_B5-Perf, LTE_CA_B3_B3_B8-Perf, LTE_CA_B3_B7_B7-Perf, LTE_CA_B3_B7_B8-Perf, LTE_CA_B3_B7_B28-Perf, LTE_CA_B3_B19_B42-Perf, LTE_CA_B7_B7_B28-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B19_B21_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B38_B40_B40-Perf, LTE_CA_B41_B42_B42-Perf
36.307	0503	1	Rel-13	B	RP-150972	R4-153789	approved	Release independence CR for 3DL inter-band CA Rel-13	12.7.0	13.0.0	R4	LTE_CA_B1_B3_B28-Perf, LTE_CA_B1_B3_B42-Perf, LTE_CA_B1_B7_B28-Perf, LTE_CA_B1_B19_B42-Perf, LTE_CA_B1_B21_B42-Perf, LTE_CA_B2_B2_B12-Perf, LTE_CA_B2_B5_B29-Perf, LTE_CA_B3_B3_B5-Perf, LTE_CA_B3_B3_B8-Perf, LTE_CA_B3_B7_B7-Perf, LTE_CA_B3_B7_B8-Perf, LTE_CA_B3_B7_B28-Perf, LTE_CA_B3_B19_B42-Perf, LTE_CA_B7_B7_B28-Perf, LTE_CA_B8_B41_B41-Perf, LTE_CA_B19_B21_B42-Perf, LTE_CA_B21_B42_B42-Perf, LTE_CA_B38_B40_B40-Perf, LTE_CA_B41_B42_B42-Perf
36.307	0504	1	Rel-11	B	RP-150974	R4-153796	approved	Release independence CR for 4DL inter-band CA Rel-11	11.11.0	11.12.0	R4	LTE_CA_B2_B2_B4_B4-Perf, LTE_CA_B2_B2_B4_B12-Perf, LTE_CA_B2_B2_B5_B30-Perf, LTE_CA_B2_B2_B12_B30-Perf, LTE_CA_B2_B2_B29_B30-Perf, LTE_CA_B2_B4_B4_B12-Perf, LTE_CA_B2_B4_B5_B30-Perf, LTE_CA_B2_B4_B12_B30-Perf, LTE_CA_B2_B4_B29_B30-Perf

Samsung Exhibit 1025, Page 1955 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.307	0505	1	Rel-12	B	RP-150974	R4-153797	approved	Release independence CR for 4DL inter-band CA Rel-12	12.7.0	12.8.0	R4	LTE_CA_B2_B2_B4_B4-Perf, LTE_CA_B2_B2_B4_B12-Perf, LTE_CA_B2_B2_B5_B30-Perf, LTE_CA_B2_B2_B12_B30-Perf, LTE_CA_B2_B2_B29_B30-Perf, LTE_CA_B2_B4_B4_B12-Perf, LTE_CA_B2_B4_B5_B30-Perf, LTE_CA_B2_B4_B12_B30-Perf, LTE_CA_B2_B4_B29_B30-Perf, LTE_CA_B25_B41_B41_B41-Perf
36.307	0506	1	Rel-13	B	RP-150974	R4-153798	approved	Release independence CR for 4DL inter-band CA Rel-13	12.7.0	13.0.0	R4	LTE_CA_B2_B2_B4_B4-Perf, LTE_CA_B2_B2_B4_B12-Perf, LTE_CA_B2_B4_B4_B12-Perf, LTE_CA_B25_B41_B41_B41-Perf
36.307	0507	-	Rel-11	B	RP-150975	R4-153317	approved	Introduction of non-contiguous Carrier Aggregation (CA) in Band 42 for 3DL	11.11.0	11.12.0	R4	LTE_CA_NC_B42_3DL-Perf
36.307	0508	-	Rel-12	B	RP-150975	R4-153318	approved	Introduction of non-contiguous Carrier Aggregation (CA) in Band 42 for 3DL	12.7.0	12.8.0	R4	LTE_CA_NC_B42_3DL-Perf
36.307	0509	-	Rel-13	B	RP-150975	R4-153319	approved	Introduction of non-contiguous Carrier Aggregation (CA) in Band 42 for 3DL	12.7.0	13.0.0	R4	LTE_CA_NC_B42_3DL-Perf
36.307	0510	1	Rel-12	B	RP-151067	-	approved	Introduction of CA_3A-40A to TS 36.307 R12	12.7.0	12.8.0	R4	LTE_CA_B3_B40-Perf
36.307	0510	-	Rel-12	B	RP-150671	-	revised	Introduction of CA_3A-40A to TS 36.307 R12	12.7.0		R4	LTE_CA_B3_B40
36.307	0511	1	Rel-13	B	RP-151068	-	approved	Introduction of CA_3A-40A to TS 36.307 R13	12.7.0	13.0.0	R4	LTE_CA_B3_B40-Perf
36.307	0511	-	Rel-13	B	RP-150672	-	revised	Introduction of CA_3A-40A to TS 36.307 R13	12.7.0		R4	LTE_CA_B3_B40
36.307	0512	1	Rel-12	B	RP-151069	-	approved	Introduction of CA_3A-40C to TS 36.307 R12	12.7.0	12.8.0	R4	LTE_CA_B3_B40_B40-Perf
36.307	0512	-	Rel-12	B	RP-150674	-	revised	Introduction of CA_3A-40C to TS 36.307 R12	12.7.0		R4	LTE_CA_B3_B40_B40
36.307	0513	1	Rel-13	B	RP-151070	-	approved	Introduction of CA_3A-40C to TS 36.307 R13	12.7.0	13.0.0	R4	LTE_CA_B3_B40_B40-Perf
36.307	0513	-	Rel-13	B	RP-150675	-	revised	Introduction of CA_3A-40C to TS 36.307 R13	12.7.0		R4	LTE_CA_B3_B40_B40
36.307	0514	-	Rel-13	B	RP-151006	-	approved	Introduction of CA_42D to TS 36.307	12.7.0	13.0.0	R4	LTE_CA_C_B42_3DL-Perf
36.321	0764	-	Rel-12	F	RP-150921	R2-152046	approved	SL-DCH transmission for autonomous resource allocation mode	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.321	0766	-	Rel-12	F	RP-150921	R2-152048	approved	Minor corrections for ProSe	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.321	0767	-	Rel-12	F	RP-150921	R2-152050	approved	Clarification on deactivation operation	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.321	0768	-	Rel-12	F	RP-150916	R2-152051	approved	Handling of erroneous PDU on MCH	12.5.0	12.6.0	R2	LTE-L23, TEI12
36.321	0769	-	Rel-12	F	RP-150921	R2-152052	approved	Corrections on 36.321 for ProSe	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.321	0772	-	Rel-12	F	RP-150921	R2-152834	approved	Correction to the figure of MAC structure overview for sidelink	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.321	0782	-	Rel-12	F	RP-150923	R2-152835	approved	Prohibit timer for SR	12.5.0	12.6.0	R2	TEI12
36.321	0783	-	Rel-12	F	RP-150921	R2-152851	approved	Resource selection for SL-DCH	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.323	0137	-	Rel-12	F	RP-150921	R2-152034	approved	COUNT derivation in ProSe	12.3.0	12.4.0	R2	LTE_D2D_Prox-Core
36.323	0138	-	Rel-12	F	RP-150921	R2-152049	approved	Miscellaneous corrections for DC	12.3.0	12.4.0	R2	LTE_SC_enh_dualC-Core

Samsung Exhibit 1025, Page 1956 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.323	0139	-	Rel-12	F	RP-150921	R2-152833	approved	BSR Triggering for Split Bearers	12.3.0	12.4.0	R2	LTE_SC_enh_dualC-Core
36.331	1800	-	Rel-12	F	RP-150921	R2-152031	approved	Correction field description of networkControlledSyncTx	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.331	1801	-	Rel-12	F	RP-150921	R2-152032	approved	Clarification on SCG reconfiguration	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.331	1802	-	Rel-12	F	RP-150921	R2-152033	approved	Correction for aperiodic CSI trigger	12.5.0	12.6.0	R2	LTE_TDD_eIMTA-Core
36.331	1803	1	Rel-12	F	RP-150921	R2-152076	approved	Correction to SCG and split bearer configuration	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.331	1804	-	Rel-12	F	RP-150920	R2-152037	approved	Correction on handling of wlan-OffloadConfigDedicated upon leaving RRC_CONNECTED	12.5.0	12.6.0	R2	UTRA_LTE_WLAN_interw-Core
36.331	1805	-	Rel-12	F	RP-150921	R2-152038	approved	Reconfiguration of SPS	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.331	1806	1	Rel-12	F	RP-150917	R2-152790	approved	Mandatory present of supportedMIMO-CapabilityDL-r10	12.5.0	12.6.0	R2	LTE_CA-Core, TEI12
36.331	1807	-	Rel-10	F	RP-150916	R2-152043	approved	CR on Aperiodic CSI Reporting for 1.4MHz cell	10.16.0	10.17.0	R2	LTE-L23, TEI10
36.331	1808	-	Rel-11	A	RP-150916	R2-152044	approved	CR on Aperiodic CSI Reporting for 1.4MHz cell	11.11.0	11.12.0	R2	LTE-L23, TEI10
36.331	1809	-	Rel-12	A	RP-150916	R2-152045	approved	CR on Aperiodic CSI Reporting for 1.4MHz cell	12.5.0	12.6.0	R2	LTE-L23, TEI10
36.331	1810	1	Rel-12	F	RP-150921	R2-152077	approved	Clarifications on use of preconfigComm for direct communication	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.331	1811	1	Rel-12	F	RP-150921	R2-152079	approved	Miscellaneous corrections (a.o. Sidelink)	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core, LTE_SC_enh_dualC-Core, LC_MTC_LTE-Core, TEI12
36.331	1813	1	Rel-12	F	RP-150921	R2-152080	approved	Conditions for establishing RRC Connection for sidelink transmission	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.331	1814	1	Rel-12	F	RP-150921	R2-152081	approved	Correction on field description on SL-TF-ResourceConfig	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.331	1815	-	Rel-12	F	RP-150921	R2-152068	approved	Clarification on PDCP reconfiguration	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.331	1816	-	Rel-12	F	RP-150921	R2-152069	approved	Correction to SCG change	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.331	1817	-	Rel-12	F	RP-150921	R2-152070	approved	Minor corrections for PSCell configuration in DC	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.331	1818	-	Rel-12	F	RP-150921	R2-152071	approved	CR on ROHC for split bearer	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.331	1819	-	Rel-12	F	RP-150921	R2-152072	approved	Clarification on FDD/TDD differentiation of FGIs/capabilities in TDD-FDD CA	12.5.0	12.6.0	R2	LTE_CA_TDD_FDD-Core
36.331	1820	4	Rel-12	F	RP-150923	R2-152852	approved	Clarification on extended RSRQ range support	12.5.0	12.6.0	R2	TEI12
36.331	1822	1	Rel-12	F	RP-150921	R2-152908	approved	Change of LCID upon DC-specific DRB reconfiguration	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.331	1823	-	Rel-12	F	RP-150921	R2-152880	approved	Clarification on PUCCH and SRS	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.331	1824	-	Rel-12	F	RP-150923	R2-152887	approved	Clean-up corrections to TS 36.331	12.5.0	12.6.0	R2	TEI12
36.331	1825	1	Rel-10	F	RP-150917	R2-152844	approved	Correction to additionalSpectrumEmission	10.16.0	10.17.0	R2	LTE_CA-Core
36.331	1826	1	Rel-11	A	RP-150917	R2-152845	approved	Correction to additionalSpectrumEmission	11.11.0	11.12.0	R2	LTE_CA-Core
36.331	1827	1	Rel-12	A	RP-150917	R2-152846	approved	Correction to additionalSpectrumEmission	12.5.0	12.6.0	R2	LTE_CA-Core
36.331	1831	1	Rel-12	F	RP-150917	R2-152921	rejected	Additional MIMO/CSI capability for intra-band contiguous CA	12.5.0		R2	LTE_CA-Core, TEI12
36.331	1832	1	Rel-12	F	RP-150921	R2-152909	approved	Correction to PHR format	12.5.0	12.6.0	R2	LTE_SC_enh_dualC-Core
36.331	1834	1	Rel-12	F	RP-150922	R2-152910	revised	Correction on the SL-TF-IndexPair values for ProSe Direct Discovery	12.5.0		R2	LTE_D2D_Prox-Core
36.331	1834	2	Rel-12	F	RP-150811	-	approved	Correction on the SL-TF-IndexPair values for ProSe Direct Discovery	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.331	1836	-	Rel-10	C	RP-150917	R2-152873	approved	Restriction to CA capability signalling	10.16.0	10.17.0	R2	LTE_CA-Core

Samsung Exhibit 1025, Page 1957 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.331	1837	-	Rel-11	A	RP-150917	R2-152874	approved	Restriction to CA capability signalling	11.11.0	11.12.0	R2	LTE_CA-Core
36.331	1838	-	Rel-12	A	RP-150917	R2-152875	approved	Restriction to CA capability signalling	12.5.0	12.6.0	R2	LTE_CA-Core
36.331	1842	1	Rel-12	F	RP-150921	R2-152912	approved	Correction on conditions for sidelink operation	12.5.0	12.6.0	R2	LTE_D2D_Prox-Core
36.331	1846	1	Rel-12	F	RP-150918	R2-152907	approved	Correction to IDC signalling	12.5.0	12.6.0	R2	SPIA_IDC_LTE-Core, TEI12
36.331	1847	-	Rel-11	F	RP-150917	R2-152797	approved	Clarification regarding no MBMS sessions ongoing	11.11.0	11.12.0	R2	MBMS_LTE_enh-Core, TEI11
36.331	1849	-	Rel-12	C	RP-150926	R2-152886	approved	Introduction of new DL UE categories 15&16	12.5.0	12.6.0	R2	LTE_CA-Core, LTE_SC_enh_L1-Core, TEI12
36.331	1852	-	Rel-12	A	RP-150917	R2-152798	approved	Clarification regarding no MBMS sessions ongoing	12.5.0	12.6.0	R2	MBMS_LTE_enh-Core, TEI11
36.331	1853	-	Rel-12	F	RP-150923	R2-152796	approved	Clarification on Cell barring for downlink only bands	12.5.0	12.6.0	R2	TEI12
36.413	1289	2	Rel-12	F	RP-150943	R3-150895	approved	Add indication in the E-RAB MODIFICATION CONFIRM for E-RAB(s) that shall be released	12.5.0	12.6.0	R3	LTE_SC_enh_dualC-Core
36.413	1293	-	Rel-12	F	RP-150943	R3-150579	approved	Adding Criticality Diagnostics in E-RAB Modification Confirm message	12.5.0	12.6.0	R3	LTE_SC_enh_dualC-Core
36.413	1303	2	Rel-13	B	RP-150945	R3-150924	approved	eNB behaviour for IRAT handovers in AAS	12.5.0	13.0.0	R3	UTRA_LTE_SON_AAS-Core
36.413	1305	3	Rel-12	F	RP-150944	R3-151286	approved	Masked IMEISV IE correction	12.5.0	12.6.0	R3	TEI12
36.413	1310	1	Rel-12	F	RP-150943	R3-151198	approved	Correction of Muting procedure	12.5.0	12.6.0	R3	LTE_SC_enh_L1-Core
36.413	1311	2	Rel-12	F	RP-150944	R3-151199	approved	Correction of PWS Broadcast Completed Area List	12.5.0	12.6.0	R3	TEI12
36.413	1312	1	Rel-12	F	RP-150944	R3-151262	approved	Updating SRVCC Operation Possible in EUTRAN	12.5.0	12.6.0	R3	TEI12
36.423	0807	1	Rel-12	F	RP-150943	R3-150828	approved	Correction on the definition of SeNB Reconfiguration Complete	12.5.0	12.6.0	R3	LTE_SC_enh_dualC-Core
36.423	0808	8	Rel-13	B	RP-150945	R3-151306	approved	Addition of Intra-LTE notifications of AAS-based reconfigurations	12.5.0	13.0.0	R3	UTRA_LTE_SON_AAS-Core
36.423	0827	1	Rel-12	F	RP-150943	R3-150829	approved	Introduction of a new DC cause for not supported configurations	12.5.0	12.6.0	R3	LTE_SC_enh_dualC-Core
36.423	0831	-	Rel-12	F	RP-150943	R3-150827	approved	Clarification on UE-AMBR for split bearer	12.5.0	12.6.0	R3	LTE_SC_enh_dualC-Core
36.443	0093	5	Rel-13	B	RP-150946	R3-150894	approved	eMBMS Alternative IP Multicast Distribution Address	12.2.0	13.0.0	R3	TEI13
36.444	0068	3	Rel-13	B	RP-150946	R3-150628	approved	eMBMS Alternative IP Multicast Distribution Address	12.2.0	13.0.0	R3	TEI13
36.508	0587	-	Rel-12	F	RP-150886	R5-151104	approved	APN IE requirements for IMS emergency PDN	12.5.0	12.6.0	R5	TEI9_Test
36.508	0588	-	Rel-12	F	RP-150900	R5-151113	approved	CA RF: Connection diagrams for 3DL CA (RF) testing	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0589	1	Rel-12	F	RP-150908	R5-152058	approved	Addition of Device to Device Proximity Services Test Environment	12.5.0	12.6.0	R5	LTE_D2D_Prox-UEConTest
36.508	0590	1	Rel-12	F	RP-150909	R5-151975	approved	Update of default SIB1 for Low Cost MTC testing	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.508	0591	1	Rel-12	F	RP-150900	R5-151967	approved	Addition of 2DL CA and 3DL CA Frequencies to 36.508 Chapter 6	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0592	-	Rel-12	F	RP-150905	R5-151327	approved	Addition of band 32 to 36.508	12.5.0	12.6.0	R5	LTE_UTRA_SDL_BandL-UEConTest
36.508	0594	-	Rel-12	F	RP-150912	R5-151365	approved	Updates to 36.508 for CA_7C, CA_40C, CA_41C, CA_41D	12.5.0	12.6.0	R5	TEI12_Test
36.508	0595	-	Rel-12	F	RP-150888	R5-151423	approved	Change of default Network Signalling Value for Uplink Carrier aggregation test cases	12.5.0	12.6.0	R5	TEI10_Test
36.508	0596	2	Rel-12	F	RP-150906	R5-151976	approved	Add generic procedure for IMS MO speech for EVS	12.5.0	12.6.0	R5	EVS_codec-UEConTest
36.508	0598	1	Rel-12	F	RP-150903	R5-151995	approved	Introduction of EUTRA-WLAN interworking test environment parameters and message contents	12.5.0	12.6.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.508	0599	1	Rel-12	F	RP-150903	R5-152117	approved	Introduction of generic procedures for EUTRA-WLAN interworking	12.5.0	12.6.0	R5	UTRA_LTE_WLAN_interw-UEConTest

Samsung Exhibit 1025, Page 1958 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.508	0600	1	Rel-12	F	RP-150888	R5-151804	approved	Addition of exception of RRC Connection Setup(UTRA)	12.5.0	12.6.0	R5	TEI10_Test
36.508	0601	1	Rel-12	F	RP-150888	R5-151737	approved	Addition of Carrier Aggregation band combination 2 to 13	12.5.0	12.6.0	R5	TEI10_Test
36.508	0602	-	Rel-12	F	RP-150900	R5-151582	approved	Addition of test frequencies for CA_1A-18A-28A in 36 508	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0603	1	Rel-12	F	RP-150912	R5-151801	approved	Removal of SIB1 transmission in 5.2A.5 Exceptions for feICIC tests	12.5.0	12.6.0	R5	TEI12_Test
36.508	0604	-	Rel-12	F	RP-150900	R5-151626	approved	Correction to test frequencies for CA_18A-28A in 36.508	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0605	1	Rel-12	F	RP-150883	R5-151738	approved	New generic procedure 4.5A.15 Generic Test Procedure for IMS MO Customized Alerting Tones and speech establishment in E-UTRA	12.5.0	12.6.0	R5	TEI8_Test
36.508	0607	-	Rel-12	F	RP-150900	R5-151658	approved	36.508: Test frequencies definition for CA_12B	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0608	-	Rel-12	F	RP-150900	R5-151660	approved	36.508: Signalling test frequencies definition for CA_12B	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.508	0609	1	Rel-12	F	RP-150888	R5-152140	approved	Correction to default E-UTRA channel bandwidth combination for CA_39C	12.5.0	12.6.0	R5	TEI10_Test
36.508	0610	1	Rel-12	F	RP-150903	R5-152141	approved	Update to registration procedure to support multi PDN for RAN assisted WLAN interworking	12.5.0	12.6.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.509	0141	1	Rel-12	F	RP-150908	R5-152059	approved	Addition of Device to Device Proximity Services Test Loop	10.3.0	12.0.0	R5	LTE_D2D_Prox-UEConTest
36.521-1	1841	-	Rel-12	F	RP-150912	R5-151067	approved	Removal of Extreme Conditions from TC 6.6.2.1A test environment	12.5.1	12.6.0	R5	TEI12_Test
36.521-1	1842	1	Rel-12	F	RP-150912	R5-151806	approved	Missing NS Value for Band 30 Reference Sensitivity Testing and Missing Message Content Exceptions	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1843	-	Rel-12	F	RP-150883	R5-151114	approved	RF: Missing power class information	12.5.0	12.6.0	R5	TEI8_Test
36.521-1	1844	1	Rel-12	F	RP-150889	R5-151950	approved	CA RF: PCC/SCC mapping onto physical CC-s definition cleanup	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1845	-	Rel-12	F	RP-150889	R5-151116	approved	CA RF: Clarification of PHICH configuration	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1846	-	Rel-12	F	RP-150883	R5-151117	approved	RF: Corrections to CSI RMCs references	12.5.0	12.6.0	R5	TEI8_Test
36.521-1	1848	1	Rel-12	F	RP-150889	R5-152000	approved	CA RF: Corrections to power imbalance test	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1849	1	Rel-12	F	RP-150889	R5-151929	approved	CA RF: Corrections to sustained data rate test	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1850	-	Rel-12	F	RP-150899	R5-151121	approved	ePDCCH RF: Corrections to sustained data rate test	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1851	-	Rel-12	F	RP-150899	R5-151122	approved	feICIC RF: Updates to TC 9.2.1.6_E.1	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1852	-	Rel-12	F	RP-150899	R5-151123	approved	feICIC RF: Corrections to CSI TCs	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1853	-	Rel-12	F	RP-150889	R5-151151	approved	Correction to the requirements of test case 6.6.2.1A	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1854	-	Rel-12	F	RP-150889	R5-151152	approved	Addition of Rx paramter for test case 7.6.2A.1 and 7.6.2A.2	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1855	-	Rel-12	F	RP-150889	R5-151181	approved	CA RF: Corrections to the applicability clause	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1856	1	Rel-12	F	RP-150900	R5-152013	revised	Addition of Chapter 7 3DL CA Test Configuration Tables	12.5.0		R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1856	2	Rel-12	F	RP-150790	-	revised	Addition of Chapter 7 3DL CA Test Configuration Tables	12.5.0		R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1856	3	Rel-12	F	RP-150948	-	approved	Addition of Chapter 7 3DL CA Test Configuration Tables	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1857	-	Rel-12	F	RP-150912	R5-151195	approved	Corrections to CSI Reference Measurement Channel	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1858	1	Rel-12	F	RP-150912	R5-152002	approved	Corrections to Reference Measurement Channel	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1859	1	Rel-12	F	RP-150910	R5-151897	approved	Introduction of TC 6.3.5A.1.2 Power Control Absolute Power Tolerance for CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1860	1	Rel-12	F	RP-150910	R5-151899	approved	Introduction of TC 6.3.5A.1.3 Power Control Absolute Power Tolerance for CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest

Samsung Exhibit 1025, Page 1959 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	1861	1	Rel-12	F	RP-150910	R5-151901	approved	Introduction of TC 6.3.5A.2.3 Power Control Relative Power Tolerance for CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1862	1	Rel-12	F	RP-150910	R5-151902	approved	Introduction of TC 6.3.5A.2.2 Power Control Relative Power Tolerance for CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1863	1	Rel-12	F	RP-150910	R5-151903	approved	Introduction of TC 6.7A.2 Transmit intermodulation for CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1871	-	Rel-12	F	RP-150907	R5-151213	approved	Updating Annex A relevant for the introduced of eDL MIMO enhancement Tests	12.5.0	12.6.0	R5	LTE_eDL_MIMO_enh-UEConTest
36.521-1	1872	-	Rel-12	F	RP-150907	R5-151214	approved	Updating Annex B Beam steering approach for eDL MIMO enhancement Tests	12.5.0	12.6.0	R5	LTE_eDL_MIMO_enh-UEConTest
36.521-1	1873	-	Rel-12	F	RP-150907	R5-151215	approved	Updating Annex I relevant for the introduced of eDL MIMO enhancement Tests	12.5.0	12.6.0	R5	LTE_eDL_MIMO_enh-UEConTest
36.521-1	1874	-	Rel-12	F	RP-150912	R5-151231	approved	CoMP TCs applicability update section 8	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1875	1	Rel-12	F	RP-150912	R5-151802	approved	CoMP TCs applicability update section 9	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1876	-	Rel-12	F	RP-150912	R5-151237	approved	Update of CoMP TCs 9.2.4.1_F and 9.2.4.2_F	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1877	-	Rel-12	F	RP-150912	R5-151238	approved	Update of CoMP TCs in sections 9.3.6.1_F and 9.3.6.2_F	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1878	1	Rel-12	F	RP-150912	R5-151884	approved	New TCs: FDD PMI Reporting with 4Tx enhanced codebook - PUSCH 1-2 (Multiple PMI) for eDL-MIMO Enhancement	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1879	1	Rel-12	F	RP-150912	R5-151885	approved	New TCs: TDD PMI Reporting with 4Tx enhanced codebook - PUSCH 1-2 (Multiple PMI) for eDL-MIMO Enhancement	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1882	1	Rel-12	F	RP-150910	R5-152020	approved	New CA 2UL Tx test case 6.2.2A.2	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1883	1	Rel-12	F	RP-150910	R5-151900	approved	New CA 2UL Tx test case 6.2.2A.3	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1884	-	Rel-12	F	RP-150912	R5-151256	approved	Update of CoMP TCs in section 8	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1885	-	Rel-12	F	RP-150912	R5-151257	approved	Update of CoMP TCs 9.5.5.1_F.1 and 9.5.5.2_F.1	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1886	1	Rel-12	F	RP-150900	R5-151921	approved	Updates of minimum requirement for reference sensitivity for CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1887	1	Rel-12	F	RP-150900	R5-151922	approved	Addition of test points and test requirements for 3DL inter-band CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1888	1	Rel-12	F	RP-150900	R5-151931	approved	Update of Maximum input level for CA (3DL CA without UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1889	1	Rel-12	F	RP-150900	R5-152038	approved	Introduction of ACS Test Case for 3DL CA without UL CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1891	1	Rel-12	F	RP-150889	R5-151807	approved	Correction of UL RB Allocation in Interband DL CA Testcases	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1893	1	Rel-12	F	RP-150889	R5-151944	approved	Merge of TDD CQI Reporting under AWGN conditions – PUCCH 1-0 for CA cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1895	2	Rel-12	F	RP-150889	R5-152135	approved	Merge of TDD sustained data rate CA test cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1896	1	Rel-12	F	RP-150889	R5-152027	approved	Update Reference Channel and Minimum test time for TDD CA power imbalance demodulation test	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1897	1	Rel-12	F	RP-150889	R5-152028	approved	Update TDD CA BW combination to power imbalance test	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1898	1	Rel-12	F	RP-150899	R5-151808	approved	Correction of CA_25A-25A wrong allocation in Chapter 7 Table 7.3A.4.4.1-1	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1900	1	Rel-12	F	RP-150900	R5-152032	approved	Addition of Multiple 3DL CA Combinations to Chapter 7 Delta RIB and REFSENS Exceptions Tables	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1901	1	Rel-12	F	RP-150905	R5-151891	approved	Addition of band 32 to clause 5 in 36.521-1	12.5.0	12.6.0	R5	LTE_UTRA_SDL_BandL-UEConTest

Samsung Exhibit 1025, Page 1960 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	1902	-	Rel-12	F	RP-150905	R5-151329	approved	Addition of band 32 to clause 6 in 36.521-1	12.5.0	12.6.0	R5	LTE_UTRA_SDL_BandL-UEConTest
36.521-1	1903	1	Rel-12	F	RP-150889	R5-151811	approved	Correction of UEs category for TDD sustained data rate performance	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1904	1	Rel-12	F	RP-150883	R5-151805	approved	Clarification to spurious emission requirement for the edge of spurious domain	12.5.0	12.6.0	R5	TEI8_Test
36.521-1	1906	1	Rel-12	F	RP-150889	R5-152033	approved	Clarification of the power of interferer with deltaRIBc	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1908	1	Rel-12	F	RP-150900	R5-152031	approved	Update of TC8.2.1.1.1_A.2:FDD PDSCH Single Antenna Performance for 3DL CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1909	1	Rel-12	F	RP-150900	R5-151854	approved	Addition of new TC FDD PDSCH 2x2 Open Loop Performance for 3DL CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1910	1	Rel-12	F	RP-150900	R5-151855	approved	Addition of new TC FDD PDSCH 4x2 Closed Loop Performance for 3DL CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1911	1	Rel-12	F	RP-150900	R5-152003	approved	Update of DL RMCs for PDSCH performance requirements	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1912	-	Rel-12	F	RP-150912	R5-151366	approved	Removal of double table 7.6.1B.5-2	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1913	-	Rel-12	F	RP-150889	R5-151367	approved	Corrections to UL CA Test Cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1914	1	Rel-12	F	RP-150912	R5-151809	approved	Updates for interferer placement in non-contiguous CA	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1915	-	Rel-12	F	RP-150889	R5-151369	approved	Editorial corrections to TC 6.6.1	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1916	1	Rel-12	F	RP-150883	R5-151813	approved	Clean up of PDSCH performance test cases	12.5.0	12.6.0	R5	TEI8_Test
36.521-1	1918	1	Rel-12	F	RP-150883	R5-151928	approved	Correction to CQI reference measurement channels	12.5.0	12.6.0	R5	TEI8_Test
36.521-1	1922	1	Rel-12	F	RP-150912	R5-152025	approved	Corrections to spurious emission band co-existence limit tables in clause 6	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1923	2	Rel-12	F	RP-150900	R5-152043	approved	Addition and aligment of all Rel-12 CA configurations in Section 5	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1924	1	Rel-12	F	RP-150889	R5-151814	approved	Clean up of eDL-MIMO test cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1925	1	Rel-12	F	RP-150899	R5-151815	approved	Clean up of TM9 interference model test cases	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1926	1	Rel-12	F	RP-150889	R5-151816	approved	Correction to eICIC performance test cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1927	1	Rel-12	F	RP-150899	R5-151817	approved	Correction to CQI and RI reporting test in feICIC	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1928	1	Rel-12	F	RP-150899	R5-151818	approved	Correction to PDSCH demodulation test in feICIC	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1930	1	Rel-12	F	RP-150899	R5-151820	approved	Clean up on PHICH demodulation test in feICIC	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1932	1	Rel-12	F	RP-150889	R5-151821	approved	Correction of PMI test cases in the section 9.4.1 and 9.4.2	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1935	1	Rel-12	F	RP-150900	R5-151948	approved	Introduction of TC 7.6.1A.5 In-band blocking for CA (3DL CA without UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1936	1	Rel-12	F	RP-150900	R5-151945	approved	Introduction of TC 7.6.2A.5 Out-of-band blocking for CA (3DL CA without UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1937	1	Rel-12	F	RP-150900	R5-151947	approved	Introduction of TC 7.7A.5 Spurious response for CA (3DL CA without UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1938	1	Rel-12	F	RP-150900	R5-152017	approved	Introduction of test case 7.8.1A.5 Wideband intermodulation for CA (3DL CA without UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1939	2	Rel-12	F	RP-150889	R5-152133	approved	NS value for intra-band contiguous CA configurations not allowed A-MPR	12.5.0	12.6.0	R5	TEI10_Test

Samsung Exhibit 1025, Page 1961 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	1940	-	Rel-12	F	RP-150905	R5-151425	approved	Addition of Band 32 in Receiver test cases	12.5.0	12.6.0	R5	LTE_UTRA_SDL_BandL-UEConTest
36.521-1	1941	1	Rel-12	F	RP-150909	R5-151894	approved	Addition of test case 6.2.2E - UE Maximum Output Power for UE category 0	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.521-1	1942	1	Rel-12	F	RP-150909	R5-152018	approved	Addition of test case 7.3E - Reference sensitivity level for UE category 0	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.521-1	1943	1	Rel-12	F	RP-150909	R5-151895	approved	Introduction of UE category 0 in section 4 of 36.521-1	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.521-1	1944	1	Rel-12	F	RP-150910	R5-152021	approved	Introduction of test case Maximum Power Reduction (MPR) for CA (inter-band DL CA and UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1945	1	Rel-12	F	RP-150910	R5-152022	approved	Introduction of test case Maximum Power Reduction (MPR) for CA (intra-band non-contiguous DL CA and UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1946	1	Rel-12	F	RP-150883	R5-151930	approved	Update two band and three band information in test case 7.3	12.5.0	12.6.0	R5	TEI8_Test
36.521-1	1947	1	Rel-12	F	RP-150889	R5-152004	approved	Addition of CA capability, applicability changes and core spec updates to Section 8 36.521-1 TDD TM1 CA test cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1948	1	Rel-12	F	RP-150889	R5-152005	approved	Addition of CA capability, applicability changes and core spec updates to Section 8 36.521-1 TDD TM3 CA test cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1949	1	Rel-12	F	RP-150889	R5-152006	approved	Addition of CA capability, applicability changes and core spec updates to Section 8 36.521-1 TDD TM4 CA test cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1950	1	Rel-12	F	RP-150900	R5-151932	approved	Introduction of TDD FDD CA with TDD as Pcell for PDSCH Single Antenna Port Performance	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1951	1	Rel-12	F	RP-150900	R5-151933	approved	Introduction of TDD FDD CA with FDD as Pcell for PDSCH Single Antenna Port Performance	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1952	1	Rel-12	F	RP-150889	R5-151812	approved	Updates to 36.521-1 Annnex F and G	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1953	1	Rel-12	F	RP-150899	R5-152001	approved	Correction to 9.3.1.3.1_E.1 FDD CQI Reporting test	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1954	1	Rel-12	F	RP-150883	R5-151896	approved	Update of SNR definition in clause 8.1.1	12.5.0	12.6.0	R5	TEI8_Test
36.521-1	1955	-	Rel-12	F	RP-150909	R5-151487	approved	Introduction of new test case 8.9.1.1.1 MTC	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.521-1	1956	1	Rel-12	F	RP-150900	R5-151934	approved	Introduction to test case 9.6.1.1_A.2: FDD CQI Reporting under AWGN conditions – PUCCH 1-0 (3DL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1957	1	Rel-12	F	RP-150900	R5-151935	approved	Introduction to test case 9.6.1.2_A.2: TDD CQI Reporting under AWGN conditions – PUCCH 1-0 (3DL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1958	1	Rel-12	F	RP-150910	R5-151940	approved	Introduction to test case 6.3.3A.3: UE Transmit OFF power for CA (intra-band non-contiguous DL CA and UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1959	1	Rel-12	F	RP-150910	R5-151941	approved	Introduction to test case 6.3.4A.1.3: General ON/OFF time mask for CA (intra-band non-contiguous DL CA and UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1960	1	Rel-12	F	RP-150910	R5-151942	approved	Introduction to test case 6.6.1A.3: UE Occupied bandwidth for CA (intra-band non-contiguous DL CA and UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1961	1	Rel-12	F	RP-150910	R5-151943	approved	Introduction to test case 6.6.2.1A.3: Spectrum Emission Mask for CA (intra-band non-contiguous DL CA and UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-1	1962	-	Rel-12	F	RP-150889	R5-151515	approved	Correction to test case 6.3.3A.1: UE Transmit OFF power for CA (intra-band contiguous DL CA and UL CA)	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1963	-	Rel-12	F	RP-150912	R5-151561	approved	Update to TX test case 6.6.3.3 Additional spurious emissions	12.5.0	12.6.0	R5	TEI12_Test

Samsung Exhibit 1025, Page 1962 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-1	1965	1	Rel-12	F	RP-150900	R5-151936	approved	Addition of CA capability and applicability for 3 DL CCs in Chapter 8	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1966	1	Rel-12	F	RP-150912	R5-151822	approved	Removal of the correlation matrix of HST propagation conditions	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1967	1	Rel-12	F	RP-150900	R5-151856	approved	Introduction of TC TDD PDSCH Closed Loop Multi Layer Spatial Multiplexing 4X2 for CA (3DL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1968	1	Rel-12	F	RP-150900	R5-151857	approved	Introduction of TC TDD PDSCH Open Loop Spatial Multiplexing 2X2 for CA (3DL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1969	1	Rel-12	F	RP-150900	R5-151858	approved	New CA band combination CA_1A-41A and CA_26A-41A - Updates of 6.2.5.3 Delta TIB	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1970	1	Rel-12	F	RP-150900	R5-151859	approved	New CA band combination CA_1A-41A and CA_26A-41A - Updates of 7.3.3 Delta RIB	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1971	1	Rel-12	F	RP-150900	R5-151937	approved	New CA band combination CA_1A-41A and CA_26A-41A - Updates of 7.3A Refsens	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1972	1	Rel-12	F	RP-150900	R5-151938	approved	New CA band combination CA_1A-18A-28A - Updates of 7.3.3 Delta RIB and 7.3A Refsens	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1974	1	Rel-12	F	RP-150912	R5-152007	approved	Editorial correction to 8.2.1.1.1_A.1 and 8.2.1.3.1_A.1	12.5.0	12.6.0	R5	TEI12_Test
36.521-1	1976	-	Rel-12	F	RP-150889	R5-151591	approved	36.521-1: CA Soft buffering corrections	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1977	1	Rel-12	F	RP-150899	R5-151926	approved	Update of 7.6.1A.1	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1978	-	Rel-12	F	RP-150909	R5-151616	approved	Introduction of new test case 9.7.1.1 MTC	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.521-1	1979	1	Rel-12	F	RP-150899	R5-151825	approved	Updates to CoMP test cases 9.5.5.x	12.5.0	12.6.0	R5	TEI11_Test
36.521-1	1980	-	Rel-12	F	RP-150889	R5-151639	approved	Test points correction in test case 7.3A.2 for CA_23B in 36.521-1	12.5.0	12.6.0	R5	TEI10_Test
36.521-1	1981	2	Rel-12	F	RP-150886	R5-152136	approved	36.521-1: DL Sustained Data Rate clarifications	12.5.0	12.6.0	R5	TEI9_Test
36.521-1	1983	1	Rel-12	F	RP-150900	R5-151946	approved	Introduction of TC 7.6.3A.5 Narrow-band blocking for CA (3DL CA without UL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-1	1984	-	Rel-12	F	RP-150899	R5-152128	approved	Update CA_3C in TC 7.6.1A.2	12.5.0	12.6.0	R5	TEI11_Test
36.521-2	0243	1	Rel-12	F	RP-150900	R5-152029	approved	Introduction of Band Selection Concept and new 3DL CA Combinations to 36.521-2	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0245	-	Rel-12	F	RP-150886	R5-151156	approved	Correction of applicability conditions for RRM test case 5.3.5 and 5.3.6	12.5.0	12.6.0	R5	TEI9_Test
36.521-2	0246	-	Rel-12	F	RP-150890	R5-151164	approved	CA RF: Correction to condition description	12.5.0	12.6.0	R5	TEI10_Test
36.521-2	0248	1	Rel-12	F	RP-150905	R5-151892	approved	Addition of frequency E-UTRA band 32	12.5.0	12.6.0	R5	LTE_UTRA_SDL_BandL-UEConTest
36.521-2	0250	2	Rel-12	F	RP-150886	R5-151826	approved	Addition and correction of applicability for TDD sustained data rate performance	12.5.0	12.6.0	R5	TEI9_Test
36.521-2	0251	1	Rel-12	F	RP-150910	R5-152023	approved	Update of CA Physical Layer Baseline Implementation Capabilities for Rel-12 CA 2UL configurations	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-2	0253	1	Rel-12	F	RP-150890	R5-152009	approved	Addition of applicability for newly added 20MHz+20MHz and 20MHz+10MHz CA RRM test cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-2	0254	1	Rel-12	F	RP-150890	R5-151827	approved	Update applicabilities of merged TDD CA cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-2	0255	1	Rel-12	F	RP-150912	R5-152036	approved	Addition of applicability for newly introduced RSRP accuracy RRM test cases	12.5.0	12.6.0	R5	TEI12_Test

Samsung Exhibit 1025, Page 1963 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-2	0256	1	Rel-12	F	RP-150912	R5-152037	approved	Addition of applicability for newly added FDD CA RSRP accuracy RRM test cases	12.5.0	12.6.0	R5	TEI12_Test
36.521-2	0258	2	Rel-12	F	RP-150890	R5-151828	approved	Correction of applicability for TDD sustained data rate performance	12.5.0	12.6.0	R5	TEI10_Test
36.521-2	0259	1	Rel-12	F	RP-150900	R5-151949	approved	Applicability update of FDD-TDD RSRP accuracy test cases for FDD-TDD CA.	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0260	1	Rel-12	F	RP-150909	R5-152019	approved	Addition of UE category 0 ICS and test cases	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.521-2	0261	-	Rel-12	F	RP-150890	R5-151461	approved	Updates to 36.521-2 regarding merging of TDD CA test cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-2	0262	-	Rel-12	F	RP-150912	R5-151463	approved	Addition of applicability of TD-LTE to UTRA TDD periodic measurements	12.5.0	12.6.0	R5	TEI12_Test
36.521-2	0263	-	Rel-12	F	RP-150900	R5-151509	approved	Introduction of applicability for test cases 9.6.1.1-A.2 and 9.6.1.2-A.2: FDD/TDD CQI Reporting under AWGN conditions – PUCCH 1-0 (3DL CA)	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-2	0264	1	Rel-12	F	RP-150910	R5-152016	approved	Introduction to applicability for 2UL CA RF test cases (Tx and Rx)	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-2	0268	1	Rel-12	F	RP-150890	R5-151829	approved	Correction to PICS items referenced in C32b and C33b applicability conditions.	12.5.0	12.6.0	R5	TEI10_Test
36.521-2	0270	-	Rel-12	F	RP-150899	R5-152129	approved	CoMP TCs applicability update	12.5.0	12.6.0	R5	TEI11_Test
36.521-3	1105	1	Rel-12	F	RP-150890	R5-151830	approved	RRM: Consideration of unsent measurement reports in recently added test cases	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1107	-	Rel-12	F	RP-150890	R5-151126	approved	RRM: Corrections to message configuration of TCs 9.3.2 and 9.4.2	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1108	-	Rel-12	F	RP-150886	R5-151127	approved	RRM: Corrections to test procedures of TCs 9.3.x and 9.4.x	12.5.0	12.6.0	R5	TEI9_Test
36.521-3	1109	-	Rel-12	F	RP-150890	R5-151128	approved	CA RRM: Corrections to TC 9.1.24.2	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1110	1	Rel-12	F	RP-150890	R5-152130	approved	CA RRM: Corrections to cell configuration mapping table	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1111	-	Rel-12	F	RP-150890	R5-151133	approved	Uncertainties and Test tolerances for Test cases 9.9.1.1 and 9.9.2.1	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1112	-	Rel-12	F	RP-150890	R5-151135	approved	Uncertainties and Test tolerances for Test cases 9.9.1.2 and 9.9.2.2	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1113	1	Rel-12	F	RP-150883	R5-151831	approved	Test Tolerances for 8.3.1+8.3.2+8.14.1+8.14.2 inter-frequency event triggered reporting under fading propagation conditions	12.5.0	12.6.0	R5	TEI8_Test
36.521-3	1115	1	Rel-12	F	RP-150883	R5-151832	approved	Test Tolerances for 8.4.1+8.4.2+8.15.1+8.15.2 inter-frequency event triggered reporting under fading propagation conditions	12.5.0	12.6.0	R5	TEI8_Test
36.521-3	1117	1	Rel-12	F	RP-150883	R5-151833	approved	Test Tolerances for 9.2.4A.1 Absolute Accuracy RSRQ	12.5.0	12.6.0	R5	TEI8_Test
36.521-3	1119	1	Rel-12	F	RP-150883	R5-151834	approved	Test Tolerances for 9.2.4A.2 Relative Accuracy RSRQ	12.5.0	12.6.0	R5	TEI8_Test
36.521-3	1121	1	Rel-12	F	RP-150883	R5-151835	approved	Uncertainties to Annex F for above 3GHz RRM test cases	12.5.0	12.6.0	R5	TEI8_Test
36.521-3	1122	-	Rel-12	F	RP-150899	R5-151197	approved	Corrections to CPICH Ec/No to CPICH Ec/Io in EUTRA FDD to UTRA FDD HO	12.5.0	12.6.0	R5	TEI11_Test
36.521-3	1123	1	Rel-12	F	RP-150912	R5-151864	approved	Corrections to RRM test cases for Core Alignment	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1126	2	Rel-12	F	RP-150883	R5-152015	approved	Corrections to Derivation of Test Requirements for above 3GHz RRM test cases	12.5.0	12.6.0	R5	TEI8_Test
36.521-3	1127	1	Rel-12	F	RP-150886	R5-151838	approved	Update Test Tolerances and Test requirements for TS 36.521-3 Test cases 4.2.3, 4.2.4, 4.2.5, 4.2.6	12.5.0	12.6.0	R5	TEI9_Test

Samsung Exhibit 1025, Page 1964 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-3	1128	1	Rel-12	F	RP-150912	R5-151844	approved	Uncertainties and Test Tolerances for Rel-12 Improved RSRP accuracy	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1129	-	Rel-12	F	RP-150886	R5-151277	approved	Correction to RRM test case 8.2.4	12.5.0	12.6.0	R5	TEI9_Test
36.521-3	1130	-	Rel-12	F	RP-150883	R5-151278	approved	Correction to RRM test case 8.11.4	12.5.0	12.6.0	R5	TEI8_Test
36.521-3	1132	1	Rel-12	F	RP-150890	R5-151866	approved	New TC: E-UTRAN TDD-TDD Inter-frequency event triggered reporting under fading propagation conditions in synchronous cells for 20 MHz +10 MHz bandwidth	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1133	1	Rel-12	F	RP-150890	R5-151867	approved	New TC: E-UTRAN TDD to UTRAN TDD cell search under fading propagation conditions for 20 MHz + 20 MHz bandwidth	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1134	1	Rel-12	F	RP-150890	R5-151868	approved	New TC: E-UTRAN TDD to UTRAN TDD cell search under fading propagation conditions for 20 MHz + 10 MHz bandwidth	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1135	1	Rel-12	F	RP-150912	R5-151869	approved	Cell configuration mapping for Rel 12 and forward RSRP relative accuracy RRM cases	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1136	1	Rel-12	F	RP-150912	R5-151870	approved	Cell configuration mapping for Rel 12 and forward FDD absolute RSRP accuracy RRM cases	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1137	1	Rel-12	F	RP-150912	R5-151871	approved	New TCs: R12 RSRP accuracy in eICIC	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1138	1	Rel-12	F	RP-150912	R5-151872	approved	New TCs: R12 RSRP accuracy in FeICIC	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1139	1	Rel-12	F	RP-150912	R5-151873	approved	New TCs: RSRP absolute accuracy for FDD E-UTRA CA	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1140	1	Rel-12	F	RP-150912	R5-151874	approved	New TCs: R12 inter frequency relative accuracy of RSRP	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1141	1	Rel-12	F	RP-150912	R5-151875	approved	Update of R12 CA RSRP measurement accuracy test cases	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1142	1	Rel-12	F	RP-150912	R5-151876	approved	Update of R12 RSRP inter frequency measurement accuracy test cases	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1143	1	Rel-12	F	RP-150912	R5-151877	approved	Update of R12 RSRP intra frequency measurement accuracy test cases	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1144	1	Rel-12	F	RP-150883	R5-151878	approved	Update test applicabilities for R8 inter frequency relative accuracy of RSRP	12.5.0	12.6.0	R5	TEI8_Test
36.521-3	1145	1	Rel-12	F	RP-150886	R5-151879	approved	Update test applicabilities for R9 inter frequency relative accuracy of RSRP	12.5.0	12.6.0	R5	TEI9_Test
36.521-3	1146	1	Rel-12	F	RP-150890	R5-151880	approved	Update test applicabilities of R10 RSRP measurement accuracy	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1147	1	Rel-12	F	RP-150899	R5-151882	approved	Update test applicabilities of R11 RSRP measurement accuracy	12.5.0	12.6.0	R5	TEI11_Test
36.521-3	1148	1	Rel-12	F	RP-150890	R5-151883	approved	Update FDD CA RSRP Accuracy requirements	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1149	1	Rel-12	F	RP-150899	R5-151905	approved	Correction of allowed CQI report delays in sCell Activation Tests	12.5.0	12.6.0	R5	TEI11_Test
36.521-3	1150	-	Rel-12	F	RP-150905	R5-151330	approved	Addition of band 32 to TS36.521-3	12.5.0	12.6.0	R5	LTE_UTRA_SDL_BandL-UEConTest
36.521-3	1151	1	Rel-12	F	RP-150899	R5-152010	approved	Correction to RLM test in feICIC	12.5.0	12.6.0	R5	TEI11_Test
36.521-3	1152	1	Rel-12	F	RP-150900	R5-151939	approved	Addition of FDD-TDD RSRP accuracy test cases for FDD-TDD CA.	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1153	1	Rel-12	F	RP-150890	R5-151915	approved	Correction to test case 9.2.10.1 of 36.521-3	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1154	1	Rel-12	F	RP-150912	R5-151906	approved	Correction to feICIC Radio link monitoring test cases	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1155	-	Rel-12	F	RP-150912	R5-151464	approved	Correction to applicability of TD-LTE to UTRA TDD periodic measurements	12.5.0	12.6.0	R5	TEI12_Test

Samsung Exhibit 1025, Page 1965 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.521-3	1156	1	Rel-12	F	RP-150899	R5-152131	approved	Correction to Event Triggered Reporting test in feICIC	12.5.0	12.6.0	R5	TEI11_Test
36.521-3	1157	2	Rel-12	F	RP-150890	R5-152134	approved	Clarification of 2DL CA RRM inter-frequency tests with smaller channels bandwidth	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1158	-	Rel-12	F	RP-150890	R5-151485	approved	Update of eICIC meas pattern for PCell, TC 8.2.5	12.5.0	12.6.0	R5	TEI10_Test
36.521-3	1159	1	Rel-12	F	RP-150912	R5-151846	approved	Update Uncerts and Test Tols for TCs 8.11.1+8.11.2 for frequencies above 3GHz 36.521-3 CR	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1160	1	Rel-12	F	RP-150912	R5-151848	approved	Update Uncerts and Test Tols for TC 8.11.3 for frequencies above 3GHz 36.521-3 CR	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1161	1	Rel-12	F	RP-150912	R5-151850	approved	Update Uncerts and Test Tols for TC 8.11.4 for frequencies above 3GHz 36.521-3 CR	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1162	-	Rel-12	F	RP-150912	R5-151542	approved	Uncerts and Test Tols for TC 8.16.21 36.521-3 CR	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1163	-	Rel-12	F	RP-150912	R5-151544	approved	Uncerts and Test Tols for TC 8.16.22 36.521-3 CR	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1164	-	Rel-12	F	RP-150912	R5-151546	approved	Uncerts and Test Tols for TCs 9.1.24.1 36.521-3 CR	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1165	-	Rel-12	F	RP-150912	R5-151548	approved	Uncerts and Test Tols for TCs 9.1.24.1_1 36.521-3 CR	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1166	-	Rel-12	F	RP-150912	R5-151550	approved	Uncerts and Test Tols for TC 9.1.24.2 36.521-3 CR	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1167	-	Rel-12	F	RP-150912	R5-151552	approved	Uncerts and Test Tols for TC 9.2.27.1 36.521-3 CR	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1168	-	Rel-12	F	RP-150912	R5-151554	approved	Uncerts and Test Tols for TC 9.2.27.2 36.521-3 CR	12.5.0	12.6.0	R5	TEI12_Test
36.521-3	1169	1	Rel-12	F	RP-150900	R5-151923	approved	Addition of new RRM TC 8.16.23 E-UTRAN TDD-FDD CA Event Triggered Reporting Under Deactivated SCell in Non-DRX with PCell in FDD	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1170	1	Rel-12	F	RP-150900	R5-151924	approved	Addition of new RRM TC 8.16.24 E-UTRAN TDD-FDD CA Event Triggered Reporting Under Deactivated SCell in Non-DRX with PCell in TDD	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1171	1	Rel-12	F	RP-150900	R5-151861	approved	Addition of new RRM TC 8.16.25 E-UTRAN TDD-FDD CA Event Triggered Reporting on Deactivated SCell with PCell interruption in Non-DRX with PCell in FDD	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1172	1	Rel-12	F	RP-150900	R5-151862	approved	Addition of new RRM TC 8.16.26 E-UTRAN TDD-FDD CA Event Triggered Reporting on Deactivated SCell with PCell interruption in Non-DRX with PCell in TDD	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1173	1	Rel-12	F	RP-150900	R5-151925	approved	Applicability for newly added TDD-FDD CA RRM test cases	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.521-3	1174	1	Rel-12	F	RP-150910	R5-151904	approved	Correction to the titles of 2UL CA RRM test cases	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.521-3	1175	1	Rel-12	F	RP-150899	R5-151916	approved	Correction to FeICIC measurement performance test cases and Annex H.3	12.5.0	12.6.0	R5	TEI11_Test
36.521-3	1177	-	Rel-12	F	RP-150886	R5-151917	approved	Update Test Tolerances and Test requirements for TS 36.521-3 Test case 9.1.5.1	12.5.0	12.6.0	R5	TEI9_Test
36.521-3	1178	-	Rel-12	F	RP-150886	R5-151918	approved	Update Test Tolerances and Test requirements for TS 36.521-3 Test case 9.1.5.2	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	2917	1	Rel-12	F	RP-150885	R5-151746	approved	Correction to RRC test case 8.1.2.1	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2918	1	Rel-12	F	RP-150885	R5-151747	approved	Editorial correction in RRC test case 8.1.2.3	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2919	1	Rel-12	F	RP-150885	R5-151766	approved	Correction to NAS test case 10.4.1	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2920	1	Rel-12	F	RP-150885	R5-151749	approved	Upgrade of TC 8.5.4.1 to Rel-12 ASN.1 baseline	12.5.0	12.6.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1966 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-1	2921	-	Rel-12	F	RP-150885	R5-151110	approved	Correction to test case 6.2.2.8	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2924	1	Rel-12	F	RP-150885	R5-152070	approved	Correction to EUTRA Idle Mode test case 6.1.1.8 and 6.1.1.9	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2925	-	Rel-12	F	RP-150885	R5-151142	approved	Update to IRAT PLMN selection test case 6.2.1.4	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2926	1	Rel-12	F	RP-150885	R5-151773	approved	Correction to Multi-layer test case 13.1.3	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2927	1	Rel-12	F	RP-150899	R5-151779	approved	Correction to eMBMS test case 17.4.7	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2928	1	Rel-12	F	RP-150887	R5-151780	approved	Correction to eMBMS test case 17.2.4	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	2929	-	Rel-12	F	RP-150885	R5-151146	approved	Correction to EMM test case 9.2.3.3.1 and 9.2.3.3.4	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2930	-	Rel-12	F	RP-150887	R5-151148	approved	Update to EUTRAN measurement test case 8.3.1.12a	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	2931	1	Rel-12	F	RP-150899	R5-151774	approved	Corrections to rSRVCC test cases	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2932	2	Rel-12	F	RP-150885	R5-151739	approved	Correction of idle mode test case 6.1.1.2a	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2934	1	Rel-12	F	RP-150909	R5-151973	approved	New idle mode test case 6.1.2.2b for Low Cost MTC	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.523-1	2935	-	Rel-12	F	RP-150909	R5-151175	approved	New MAC test case 7.1.1.1a for Low Cost MTC	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.523-1	2937	1	Rel-12	F	RP-150908	R5-152060	approved	Addition of new D2D test case for Successful Announce Request Procedure/Direct discovery	12.5.0	12.6.0	R5	LTE_D2D_Prox-UEConTest
36.523-1	2938	1	Rel-12	F	RP-150909	R5-151972	approved	Addition of new test case TC 8.5.4.4 - UE Capability Transfer/ Success/ UE Cat 0/ UE Paging Info	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.523-1	2939	1	Rel-12	F	RP-150885	R5-151758	approved	Correction in EMM test cases 9.2.3.1.15 and 9.2.3.1.15a	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2940	1	Rel-12	F	RP-150888	R5-151751	approved	Update of eICIC test case 8.3.1.20	12.5.0	12.6.0	R5	TEI10_Test
36.523-1	2941	1	Rel-12	F	RP-150888	R5-151752	approved	Update of eICIC test case 8.3.1.21	12.5.0	12.6.0	R5	TEI10_Test
36.523-1	2942	1	Rel-12	F	RP-150888	R5-151753	approved	Update of eICIC test case 8.3.1.28	12.5.0	12.6.0	R5	TEI10_Test
36.523-1	2943	1	Rel-12	F	RP-150885	R5-151759	approved	Update of EMM information procedure test case 9.1.5.1	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2944	1	Rel-12	F	RP-150885	R5-151743	approved	Correction of DL SPS test case 7.1.3.2	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2945	1	Rel-12	F	RP-150885	R5-151744	approved	Correction of UL SPS test case 7.1.4.2	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2946	-	Rel-12	F	RP-150899	R5-151349	approved	Corrections to eMDT test case 8.6.6.6	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2947	1	Rel-12	F	RP-150887	R5-151748	approved	Add pre-test steps to check the band capability of UE in MFBI protocol test cases	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	2948	1	Rel-12	F	RP-150903	R5-151999	approved	Addition of new test case TC 8.4.8.3 - WLAN Offload/ Offload Success/ EUTRA RRC_CONNECTED to/from WLAN (Qqualmeas, BeaconRSSI)	12.5.0	12.6.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	2949	-	Rel-12	F	RP-150888	R5-151381	approved	Corrections to MDT test case 8.6.3.1	12.5.0	12.6.0	R5	TEI10_Test
36.523-1	2951	-	Rel-12	F	RP-150888	R5-151383	approved	Correction to MDT test case 8.6.5.3	12.5.0	12.6.0	R5	TEI10_Test
36.523-1	2952	1	Rel-12	F	RP-150899	R5-152105	approved	Introduction of New TC 8.2.4.24.1 - CA / RRC connection reconfiguration / SCell Addition / Success /RRC Processing Delay/Intra-Band Contiguous CA	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2953	-	Rel-12	F	RP-150909	R5-151413	approved	Update of DL-SCH transport block size selection test case 7.1.7.1.1 for UE Cat 0	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.523-1	2954	-	Rel-12	F	RP-150909	R5-151414	approved	Update of DL-SCH transport block size selection test case 7.1.7.1.2 for UE Cat 0	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest

Samsung Exhibit 1025, Page 1967 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-1	2955	-	Rel-12	F	RP-150909	R5-151415	approved	Update of DL-SCH transport block size selection test case 7.1.7.1.3 for UE Cat 0	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.523-1	2956	-	Rel-12	F	RP-150909	R5-151416	approved	Update of DL-SCH transport block size selection test case 7.1.7.1.4 for UE Cat 0	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.523-1	2957	-	Rel-12	F	RP-150909	R5-151417	approved	Update of UL-SCH transport block size selection test case 7.1.7.2.1 for UE Cat 0	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.523-1	2958	1	Rel-12	F	RP-150903	R5-152053	approved	Add test case 8.4.8.1 for WLAN Offload	12.5.0	12.6.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	2959	-	Rel-12	F	RP-150887	R5-151471	approved	Correction to LTE-GERAN SRVCC test case 13.4.3.41	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	2960	-	Rel-12	F	RP-150885	R5-151472	approved	Correction to EMM test case 9.2.2.1.3	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2961	-	Rel-12	F	RP-150888	R5-151473	approved	Correction to test cases 8.6.7.1, 8.6.7.2 and 8.6.7.3	12.5.0	12.6.0	R5	TEI10_Test
36.523-1	2962	-	Rel-12	F	RP-150885	R5-151474	approved	Correction to Measurements for self optimized networks test case 8.3.3.x	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2963	-	Rel-12	F	RP-150887	R5-151475	approved	Correction to test case 8.3.4.1	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	2964	1	Rel-12	F	RP-150885	R5-151740	approved	Corrections for use of EFloci field in USIM configurations for Idle Mode test cases	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2968	1	Rel-12	F	RP-150885	R5-151761	approved	Update of TC 9.2.1.1.1a	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2969	-	Rel-12	F	RP-150885	R5-151493	approved	Update of Section 9's text for call to generic procedure 6.4.2.5 of 36.508 to reflect what the generic procedure does	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2970	-	Rel-12	F	RP-150887	R5-151494	approved	Update of TC 8.1.2.11	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	2971	1	Rel-12	F	RP-150885	R5-151760	approved	Editorial changes to 9.1.3.3	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2972	1	Rel-12	F	RP-150885	R5-151775	approved	Editorial changes to WI-086 EUTRA<>UTRAN SRVCC Testcase 13.4.3.2	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2973	1	Rel-12	F	RP-150885	R5-151762	approved	Correction to WI-82 EUTRA EMM Testcases for IMS capable UE	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	2974	1	Rel-12	F	RP-150899	R5-151781	approved	Correction to eMBMS-SC-CA test case 17.4.10.1	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2975	1	Rel-12	F	RP-150899	R5-151782	approved	Correction to eMBMS-SC-CA test case 17.4.11.1	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2976	1	Rel-8	F	RP-150885	R5-151986	approved	Correction to TS 36.523-1 Rel-8 pointer	8.6.0	8.7.0	R5	TEI8_Test
36.523-1	2977	-	Rel-12	F	RP-150902	R5-151532	approved	Addition of new TC 7.1.4.24 Correct HARQ process handling / TTI bundling without resource allocation restriction	12.5.0	12.6.0	R5	Cov_Enh_LTE-UEConTest
36.523-1	2978	2	Rel-12	F	RP-150900	R5-152142	approved	Addition of new TC 7.1.2.11.3 CA / Maintenance of uplink time alignment / Multiple TA / TDD-FDD CA	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-1	2979	2	Rel-12	F	RP-150900	R5-152143	approved	Addition of new test case of FDD-TDD CA / Correct HARQ process handling / Dynamic case / FDD PCell and TDD Scell	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-1	2980	2	Rel-12	F	RP-150900	R5-152144	approved	Addition of new test case of FDD-TDD CA / Correct HARQ process handling / Dynamic case / TDD PCell and FDD Scell	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-1	2981	1	Rel-12	F	RP-150900	R5-152098	approved	Addition of new test case of FDD-TDD CA / Correct HARQ process handling / PUSCH / FDD PCell and TDD Scell	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-1	2982	1	Rel-12	F	RP-150900	R5-152099	approved	Addition of new test case of FDD-TDD CA / Correct HARQ process handling / PUSCH / TDD PCell and FDD Scell	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-1	2983	1	Rel-12	F	RP-150887	R5-151741	approved	Correction to remark of message content of TC 6.2.3.34	12.5.0	12.6.0	R5	TEI9_Test

Samsung Exhibit 1025, Page 1968 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-1	2985	1	Rel-12	F	RP-150899	R5-151756	approved	Correction to eMDT test case 8.6.11.1 – RACH optimization	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2986	1	Rel-12	F	RP-150911	R5-152062	approved	Addition of new SCM TC 13.5.1	12.5.0	12.6.0	R5	SCM_LTE-UEConTest
36.523-1	2987	1	Rel-12	F	RP-150899	R5-152072	approved	Correction to SIMTC test case 9.2.3.1.8b	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2988	1	Rel-12	F	RP-150899	R5-152073	approved	Correction to SIMTC test case 9.2.1.1.27a	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2989	1	Rel-12	F	RP-150899	R5-152077	approved	Correction to SIMTC test case 8.1.1.7	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2990	1	Rel-12	F	RP-150899	R5-152082	approved	Correction to SIMTC test cases 10.5.1a and 10.5.1b	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2991	1	Rel-12	F	RP-150887	R5-151768	approved	New TC 11.2.12 LIMITED-SERVICE / Inter-system mobility / E-UTRA to GSM CS / SRVCC Emergency Call Handover to GERAN	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	2992	1	Rel-12	F	RP-150903	R5-152054	approved	New test case 6.5.3 WLAN Offload / Cell Selection / EUTRA RRC_Idle to/from WLAN (Qqualmeas, BackhaulRateUlWLAN)	12.5.0	12.6.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	2993	1	Rel-12	F	RP-150899	R5-151776	approved	Updates to 13.4.3.36	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2994	1	Rel-12	F	RP-150899	R5-152083	approved	Updates to 13.4.3.37	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2995	1	Rel-12	F	RP-150899	R5-152084	approved	Updates to 13.4.3.38	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2996	1	Rel-12	F	RP-150899	R5-151777	approved	Updates to references to annex C.39 for rSRVCC test cases	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	2998	1	Rel-12	F	RP-150902	R5-151989	approved	New test case “Correct HARQ process handling / TTI bundling with enhanced HARQ pattern”	12.5.0	12.6.0	R5	Cov_Enh_LTE-UEConTest
36.523-1	2999	1	Rel-12	F	RP-150885	R5-152075	approved	New test case “cell reselection / MFBI/UE does not support multiBandInfoList”	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	3000	1	Rel-12	F	RP-150888	R5-152078	approved	Correction to MDT test cases 8.6.4.4	12.5.0	12.6.0	R5	TEI10_Test
36.523-1	3001	-	Rel-12	F	RP-150912	R5-151636	approved	Corrections for bSRVCC test cases 13.4.3.22 and 13.4.3.23	12.5.0	12.6.0	R5	TEI12_Test
36.523-1	3002	1	Rel-12	F	RP-150903	R5-152055	approved	Addition of Test Case - WLAN Offload / Cell Selection / EUTRA RRC_Idle to/from WLAN (Qrxlevmeas, BeaconRSSI) - 3GPP/WLAN Work Plan	12.5.0	12.6.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	3003	1	Rel-12	F	RP-150903	R5-152056	approved	Addition of Test Case - WLAN Offload / Offload Success / EUTRA RRC_Connected to/from WLAN (Qrxlevmeas , ChannelUtilizationWLAN) - 3GPP/WLAN Work Plan	12.5.0	12.6.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-1	3004	1	Rel-12	F	RP-150887	R5-151778	approved	Correction to GCF WI-159 Pre-registration at 1xRTT testcase 13.4.4.2	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	3005	1	Rel-12	F	RP-150885	R5-151763	approved	Correction to WI-82 EUTRA EMM Testcase 9.2.1.2.2 for IMS capable UE	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	3006	1	Rel-12	F	RP-150885	R5-151764	approved	Correction to WI-82 EUTRA EMM Testcase 9.3.1.12a for IMS capable UE	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	3007	1	Rel-12	F	RP-150885	R5-151742	approved	Update of WI-087 Inter-RAT Cell Reselection test case 6.2.3.17	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	3008	1	Rel-12	F	RP-150885	R5-152108	approved	Update of EMM Test Case 9.1.5.1	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	3009	1	Rel-12	F	RP-150885	R5-152076	approved	Correction to Idle Mode test cases 6.1.1.1a and 6.1.1.4a	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	3010	2	Rel-12	F	RP-150887	R5-152138	approved	Correction to IMS Emergency Call test case 11.2.6	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	3012	2	Rel-12	F	RP-150887	R5-152139	approved	Correction to IMS Emergency Call test case 11.2.7	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	3014	1	Rel-12	F	RP-150885	R5-151767	approved	Correction to WI-103 EPS Testcase 10.4.2 for IMS capable UE	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	3015	1	Rel-12	F	RP-150899	R5-151765	approved	Correction to Test Case 9.2.1.2.4	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	3016	1	Rel-12	F	RP-150899	R5-151745	approved	Correction to EUTRA MAC test case 7.1.3.13a	12.5.0	12.6.0	R5	TEI11_Test

Samsung Exhibit 1025, Page 1969 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-1	3017	1	Rel-12	F	RP-150885	R5-151750	approved	Correction to EUTRA RRC test case 8.5.4.1	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	3018	1	Rel-12	F	RP-150887	R5-151771	approved	Correction to IMS Emergency Call test case 11.2.5	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	3020	1	Rel-9	F	RP-150887	R5-151987	approved	Correction to TS 36.523-1 Rel-9 pointer	9.9.0	9.10.0	R5	TEI9_Test
36.523-1	3021	1	Rel-12	F	RP-150887	R5-151772	approved	Correction to IMS Emergency Call test case 11.2.3	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	3022	1	Rel-12	F	RP-150899	R5-152107	approved	Correction to LTE-UTRA FE-FACH test cases 6.2.4.x	12.5.0	12.6.0	R5	TEI11_Test
36.523-1	3023	2	Rel-12	F	RP-150885	R5-152148	approved	Correction to ESM test case 10.2.1	12.5.0	12.6.0	R5	TEI8_Test
36.523-1	3025	1	Rel-12	F	RP-150887	R5-151754	approved	Update of SI acquisition measurement test cases 8.3.4.x	12.5.0	12.6.0	R5	TEI9_Test
36.523-1	3026	1	Rel-12	F	RP-150911	R5-152063	approved	Addition of a new TC for SCM, 13.5.2 MTSI MO video call / SCM / 0% access probability skip for MTSI MO video call	12.5.0	12.6.0	R5	SCM_LTE-UEConTest
36.523-1	3027	-	Rel-10	F	RP-150888	R5-151783	approved	Correction to TS 36.523-1 Rel-10 pointer	10.3.1	10.4.0	R5	TEI10_Test
36.523-1	3028	-	Rel-11	F	RP-150899	R5-151784	approved	Correction to TS 36.523-1 Rel-11 pointer	11.6.0	11.7.0	R5	TEI11_Test
36.523-1	3029	1	Rel-12	F	RP-150899	R5-152145	approved	Correction to Test Case 13.4.3.39	12.5.0	12.6.0	R5	TEI11_Test
36.523-2	0715	-	Rel-12	F	RP-150888	R5-151130	approved	CA: Corrections to CA capability tables	12.5.0	12.6.0	R5	TEI10_Test
36.523-2	0716	1	Rel-12	F	RP-150887	R5-151239	approved	Update to the applicability of Intra/inter-frequencySI acquisition Home eNB test cases	12.5.0	12.6.0	R5	TEI9_Test
36.523-2	0717	-	Rel-12	F	RP-150899	R5-151147	approved	Correction to Applicability for eMDT test cases 8.6.9.3	12.5.0	12.6.0	R5	TEI11_Test
36.523-2	0718	-	Rel-12	F	RP-150899	R5-151169	approved	Correction to C113dT in the applicability of test conditions	12.5.0	12.6.0	R5	TEI11_Test
36.523-2	0719	-	Rel-12	F	RP-150888	R5-151170	approved	Editorial correction in the applicability of test conditions	12.5.0	12.6.0	R5	TEI10_Test
36.523-2	0720	1	Rel-12	F	RP-150909	R5-151974	approved	Applicability of New Low Cost MTC protocol test cases	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.523-2	0721	1	Rel-12	F	RP-150908	R5-152061	approved	Addition of new D2D test case 19.2.1 - Successful Announce Request Procedure/Direct Discovery	12.5.0	12.6.0	R5	LTE_D2D_Prox-UEConTest
36.523-2	0723	-	Rel-12	F	RP-150885	R5-151240	approved	Update VoLTE definition in A.4.5	12.5.0	12.6.0	R5	TEI8_Test
36.523-2	0724	-	Rel-12	F	RP-150910	R5-151255	approved	Update of CA Physical Layer Baseline Implementation Capabilities for Rel-12 CA 2UL configurations	12.5.0	12.6.0	R5	LTE_CA_Rel12_2UL-UEConTest
36.523-2	0726	1	Rel-12	F	RP-150900	R5-151793	approved	Addition of 3DL CA Configurations to 36.523-2	12.5.0	12.6.0	R5	LTE_CA_Rel12_3DL-UEConTest
36.523-2	0727	1	Rel-12	F	RP-150905	R5-151966	approved	Addition of frequency for E-UTRA band 32	12.5.0	12.6.0	R5	LTE_UTRA_SDL_BandL-UEConTest
36.523-2	0728	1	Rel-12	F	RP-150885	R5-152086	approved	Applicability Update of EMM information procedure test case 9.1.5.1	12.5.0	12.6.0	R5	TEI8_Test
36.523-2	0729	1	Rel-12	F	RP-150888	R5-151785	approved	Update of eICIC test case 8.3.1.21 title	12.5.0	12.6.0	R5	TEI10_Test
36.523-2	0730	1	Rel-12	F	RP-150888	R5-151786	approved	Update of eICIC test case 8.3.1.28 title	12.5.0	12.6.0	R5	TEI10_Test
36.523-2	0732	-	Rel-12	F	RP-150909	R5-151394	approved	Implementation Capability statement for Half-Duplex operation Type B for UE Cat 0	12.5.0	12.6.0	R5	LC_MTC_LTE-UEConTest
36.523-2	0733	1	Rel-12	F	RP-150888	R5-152106	approved	Add Applicability for New TC 8.2.4.24.1 - CA / RRC connection reconfiguration / SCell Addition / Success /RRC Processing Delay/Intra-Band Contiguous CA	12.5.0	12.6.0	R5	TEI10_Test
36.523-2	0735	1	Rel-12	F	RP-150887	R5-152113	approved	Addition of applicability for newly added TC “SRVCC Emergency Call Handover to GERAN”	12.5.0	12.6.0	R5	TEI9_Test
36.523-2	0736	1	Rel-12	F	RP-150887	R5-152089	approved	Addition of applicability for newly added TC “cell reselection / MFBI/UE does not support multiBandInfoList”	12.5.0	12.6.0	R5	TEI9_Test

Samsung Exhibit 1025, Page 1970 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-2	0739	1	Rel-12	F	RP-150902	R5-152087	approved	Addition of applicability for LTE Coverage Enhancements	12.5.0	12.6.0	R5	Cov_Enh_LTE-UEConTest
36.523-2	0740	1	Rel-12	F	RP-150911	R5-152064	approved	Addition of new applicability for SCM TCs	12.5.0	12.6.0	R5	SCM_LTE-UEConTest
36.523-2	0743	1	Rel-12	F	RP-150887	R5-151787	approved	Applicability correction to test case 13.4.3.41	12.5.0	12.6.0	R5	TEI9_Test
36.523-2	0745	1	Rel-12	F	RP-150903	R5-152057	approved	Applicability of New 3GPP/WLAN Offload Test Cases	12.5.0	12.6.0	R5	UTRA_LTE_WLAN_interw-UEConTest
36.523-2	0749	1	Rel-12	F	RP-150887	R5-151788	approved	Correction to IMS Emergency Call test cases 11.2.8	12.5.0	12.6.0	R5	TEI9_Test
36.523-2	0751	1	Rel-12	F	RP-150885	R5-151789	approved	Editorial correction to C32 in 36.523-2	12.5.0	12.6.0	R5	TEI8_Test
36.523-2	0752	1	Rel-12	F	RP-150885	R5-151790	approved	Editorial correction to C216F and C216T in 36.523-2	12.5.0	12.6.0	R5	TEI8_Test
36.523-2	0754	-	Rel-12	F	RP-150911	R5-151731	approved	Applicability of a new TC 13.5.2 (Smart Congestion Mitigation)	12.5.0	12.6.0	R5	SCM_LTE-UEConTest
36.523-2	0755	1	Rel-12	F	RP-150899	R5-152146	approved	Correction to applicability statement of rSRVCC test case 13.4.3.39	12.5.0	12.6.0	R5	TEI11_Test
36.523-3	2626	1	Rel-12	F	RP-150885	R5-151792	approved	Routine maintenance for TS 36.523-3	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2627	-	Rel-12	F	RP-150905	R5-151103	approved	Band 32 - Guidance on LTE test execution	12.1.0	12.2.0	R5	LTE_UTRA_SDL_BandL-UEConTest
36.523-3	2628	-	Rel-12	F	RP-150887	R5-151150	approved	Update execution guidelines for MFBI test case 6.1.2.20	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2629	-	Rel-12	F	RP-150888	R5-151677	approved	Update execution guidelines for CA test case 8.2.4.21.2	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2631	-	Rel-12	F	RP-150895	-	approved	CR to 36.523-3: Add new verified and e-mail agreed TTCN test cases in the TC lists in 36.523-3 (prose), Annex A	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2632	-	Rel-12	B	RP-150896	R5s150064	approved	Addition of EUTRA DRX Testcase 7.1.6.4	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2633	-	Rel-12	B	RP-150896	R5s150068	approved	LTE_TDD:Addition of EUTRA DRX Testcase 7.1.6.4	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2634	-	Rel-12	B	RP-150896	R5s150072	approved	Addition of PTCRB RFT-119 EUTRA Idle Mode test case 6.1.1.8	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2635	-	Rel-12	F	RP-150896	R5s150075	approved	Corrections for eMBMS_SC test case 17.4.7	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2636	-	Rel-12	B	RP-150896	R5s150094	approved	Addition of PTCRB RFT-119 EUTRA Idle Mode test case 6.1.1.9	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2637	1	Rel-12	B	RP-151040	-	approved	LTE_TDD: Addition of Rel-11 LTE_CA_enh test case 8.2.4.21.3	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2637	-	Rel-12	B	RP-150896	R5s150124	revised	LTE_TDD: Addition of Rel-11 LTE_CA_enh test case 8.2.4.21.3	12.0.0		R5	TEI11_Test
36.523-3	2638	1	Rel-12	B	RP-151040	-	approved	LTE_TDD: Addition of Rel-11 LTE_CA_enh test case 8.2.4.23.3	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2638	-	Rel-12	B	RP-150896	R5s150126	revised	LTE_TDD: Addition of Rel-11 LTE_CA_enh test case 8.2.4.23.3	12.0.0		R5	TEI11_Test
36.523-3	2639	1	Rel-12	B	RP-151040	-	approved	LTE_TDD: Addition of LTE-A Carrier Aggregation test case 8.2.2.3.3	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2639	-	Rel-12	B	RP-150896	R5s150128	revised	LTE_TDD: Addition of LTE-A Carrier Aggregation test case 8.2.2.3.3	12.0.0		R5	TEI11_Test
36.523-3	2640	1	Rel-12	B	RP-151040	-	approved	LTE_TDD: Addition of EUTRA PLMN Selection Testcase 6.1.1.8	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2640	-	Rel-12	B	RP-150896	R5s150130	revised	LTE_TDD: Addition of EUTRA PLMN Selection Testcase 6.1.1.8	12.0.0		R5	TEI8_Test
36.523-3	2641	-	Rel-12	F	RP-150896	R5s150139	approved	Correction of Rel-8 EUTRA Idle Mode LTE<>GERAN test cases 6.2.3.26, 6.2.3.28 and 6.2.3.29	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2642	-	Rel-12	B	RP-150896	R5s150140	approved	LTE_TDD : Addition of GCF WI-097 LTE-GERAN test case 6.2.3.26	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2643	-	Rel-12	F	RP-150896	R5s150142	approved	Correction to IMS Emergency Call test cases 11.2.2, 11.2.3 and 8.1.2.12	12.1.0	12.2.0	R5	TEI9_Test

Samsung Exhibit 1025, Page 1971 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2644	-	Rel-12	B	RP-150896	R5s150143	approved	LTE_TDD : Addition of GCF WI-097 LTE-GERAN test case 6.2.3.28	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2645	-	Rel-12	B	RP-150896	R5s150145	approved	LTE_TDD : Addition of GCF WI-097 LTE-GERAN test case 6.2.3.29	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2646	-	Rel-12	B	RP-150896	R5s150149	approved	LTE_TDD: Addition of EUTRA RRC Connection Establishment of Emergency Call test case 8.1.2.11	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2647	-	Rel-12	B	RP-150896	R5s150151	approved	LTE_TDD: Addition of EUTRA RRC Connection Establishment of Emergency Call test case 8.1.2.12	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2648	-	Rel-12	F	RP-150896	R5s150159	approved	Correction to WI 082 EUTRA Testcase 9.1.2.4 and 9.1.2.5 with IMS enabled	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2649	-	Rel-12	F	RP-150896	R5s150162	approved	Correction for GCF WI-086 EMM test cases 9.2.3.3.1 and 9.2.3.3.4	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2650	-	Rel-12	F	RP-150896	R5s150164	approved	Correction of function f_UT_GetEmergencyNumbers	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2651	-	Rel-12	F	RP-150896	R5s150166	approved	Correction to EUTRA EMM Testcases with IMS enabled	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2652	-	Rel-12	F	RP-150896	R5s150169	approved	Correction to GCF WI-086 EUTRA EPC Testcase 9.2.1.2.1c with Ipv6	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2653	-	Rel-12	F	RP-150896	R5s150170	approved	Correction of GCF WI-086 EUTRA EMM Testcase 9.2.1.2.1b with Ipv6	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2654	-	Rel-12	F	RP-150896	R5s150171	approved	Correction of LTE-A EUTRA eMDT Testcases 8.6.4.10	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2655	-	Rel-12	F	RP-150896	R5s150172	approved	Correction of GCF WI-103 EUTRA EMM test case 10.4.2	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2656	-	Rel-12	B	RP-150896	R5s150173	approved	Addition of Rel-11 LTE_CA_enh test case 8.2.4.19.3	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2657	-	Rel-12	F	RP-150896	R5s150176	approved	Correction for GCF WI-082 EMM test case 9.3.1.6	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2658	-	Rel-12	B	RP-150896	R5s150177	approved	Addition of GCF WI-154 IMS Emergency Call test case 11.2.6	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2659	-	Rel-12	B	RP-150896	R5s150182	approved	LTE_TDD: Addition of EUTRA Idle Mode RPLMN Selection Testcase 6.1.1.9	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2660	-	Rel-12	F	RP-150896	R5s150185	approved	Corrections to GCF WI-164 eMBMS test case 17.2.4	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2661	-	Rel-12	F	RP-150896	R5s150186	approved	Correction to GCF WI-091 EUTRA MAC Testcase 7.1.3.2	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2662	-	Rel-12	F	RP-150896	R5s150187	approved	Correction to GCF WI-092 EUTRA MAC Testcase 7.1.4.2	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2663	-	Rel-12	F	RP-150896	R5s150188	approved	Correction of LTE-A Carrier Aggregation test cases 8.2.4.23.x	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2664	-	Rel-12	F	RP-150896	R5s150189	approved	Correction to GCF WI-082 EUTRA EMM test case 9.2.3.1.9a	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2665	-	Rel-12	F	RP-150896	R5s150190	approved	Correction to GCF WI-082 EUTRA EMM test case 9.2.2.1.1	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2666	-	Rel-12	F	RP-150896	R5s150191	approved	Correction to RFT-119 EUTRA Idle Mode test case 6.1.1.8	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2667	-	Rel-12	F	RP-150896	R5s150192	approved	Correction to EUTRA Idle Mode test case 6.1.1.9	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2668	-	Rel-12	F	RP-150896	R5s150194	approved	Correction to GCF WI-081 EUTRA RRC Testcase 8.5.4.1	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2669	-	Rel-12	B	RP-150896	R5s150198	approved	Addition of Rel-11 LTE-A eMDT test case 8.6.9.2	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2670	-	Rel-12	B	RP-150896	R5s150200	approved	LTE_TDD: Addition of Rel-11 LTE-A eMDT test case 8.6.9.2	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2671	-	Rel-12	F	RP-150896	R5s150204	approved	Correction for multilayer GCF WI-087 SRVCC test cases 13.4.3.4, 13.4.3.5 and 13.4.3.6	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2672	-	Rel-12	F	RP-150896	R5s150206	approved	Correction of GCF WI-87 EUTRA<>GERAN Testcase 6.2.3.24	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2673	-	Rel-12	F	RP-150896	R5s150207	approved	Correction of GCF WI-87 EUTRA<>GERAN Testcase 6.2.3.29	12.1.0	12.2.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1972 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2674	-	Rel-12	F	RP-150896	R5s150209	approved	Correction for GCF WI-086 EMM test case 9.2.1.2.9	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2675	-	Rel-12	F	RP-150896	R5s150210	approved	Correction for GCF WI-086 Multi-layer test case 13.1.3	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2676	-	Rel-12	F	RP-150896	R5s150211	approved	Correction for GCF WI-086 EMM test case 9.2.3.2.11	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2677	-	Rel-12	F	RP-150896	R5s150212	approved	Correction for GCF WI-082 EMM test case 9.2.3.1.15	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2678	-	Rel-12	F	RP-150896	R5s150214	approved	Correction for multilayer Rel-12 bSRVCC test case 13.4.3.20	12.1.0	12.2.0	R5	TEI12_Test
36.523-3	2679	-	Rel-12	F	RP-150896	R5s150215	approved	Correction of LTE-A Carrier Aggregation test case 8.2.4.18.3	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2680	-	Rel-12	F	RP-150896	R5s150216	approved	Correction to EUTRA EMM Testcases with IMS enabled	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2681	-	Rel-12	F	RP-150896	R5s150217	approved	Correction to GCF WI-081 EUTRA UE Capability Audit Testcase 8.5.4.1	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2682	-	Rel-12	F	RP-150896	R5s150219	approved	Correction in selection expression for test case 8.3.4.1, 8.3.4.2 and 8.3.4.3	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2683	-	Rel-12	F	RP-150896	R5s150220	approved	Correction to IMS Emergency Call test case 11.2.8	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2684	-	Rel-12	F	RP-150896	R5s150221	approved	Correction for GCF WI-087 LTE IRAT PLMN selection test case 6.2.1.4	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2685	-	Rel-12	B	RP-150896	R5s150223	approved	Addition of LTE-GERAN SRVCC test case 13.4.3.41	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2686	-	Rel-12	B	RP-150896	R5s150225	approved	LTE-TDD : Addition of LTE-GERAN SRVCC test case 13.4.3.41	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2687	-	Rel-12	F	RP-150896	R5s150227	approved	Correction to function f_ESM_EvaluateAPN	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2688	-	Rel-12	F	RP-150896	R5s150229	approved	Correction of f_EUTRA_508RRC_AddModRel_Scell_Common	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2689	-	Rel-12	F	RP-150896	R5s150230	approved	Correction to GCF WI-178 LTE-A eMBMS-SC test case 17.4.3a	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2690	-	Rel-12	F	RP-150896	R5s150231	approved	Correction to EUTRA EMM Testcases 9.2.1.1.25, 9.2.1.2.2 with IMS enabled	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2691	-	Rel-12	F	RP-150896	R5s150232	approved	Correction to MDT test case 8.6.6.4	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2692	-	Rel-12	F	RP-150896	R5s150233	approved	Correction to the test execution guidelines for Rel-10 LTE-A CA test case 8.2.4.19.2	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2693	-	Rel-12	F	RP-150896	R5s150234	approved	Corrections for Rel-11 eMDT test cases	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2694	-	Rel-12	F	RP-150896	R5s150235	approved	Corrections for Rel-11 eMDT test case 8.6.6.6	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2695	-	Rel-12	F	RP-150896	R5s150238	approved	Correction to IMS Emergency call test case 11.2.6	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2696	-	Rel-12	F	RP-150896	R5s150239	approved	Correction to IMS Emergency call test case 11.2.3	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2697	-	Rel-12	F	RP-150896	R5s150249	approved	Correction for LTE<>GERAN SRVCC test cases 13.4.3.3, 13.4.3.21, 13.4.3.24, 13.4.3.25 and 13.4.3.27	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2698	-	Rel-12	F	RP-150896	R5s150251	approved	Correction to cs_108_UE_CapabilityEnq_TDD	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2699	-	Rel-12	B	RP-150896	R5s150252	approved	LTE_TDD: Addition of GCF WI-191 LTE-A SSC-TDD test case 7.1.3.12a	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2700	-	Rel-12	B	RP-150896	R5s150254	approved	LTE_TDD: Addition of GCF WI-191 LTE-A SSC-TDD test case 7.1.3.13a	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2701	-	Rel-12	F	RP-150896	R5s150256	approved	Correction to EUTRA EMM Testcases 9.3.1.12a, 9.2.3.1.13, 9.2.3.1.14, 9.2.3.2.10, 9.3.1.7 and 9.3.1.7a with IMS enabled	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2702	-	Rel-12	F	RP-150896	R5s150257	approved	Correction to ESM test case 10.4.2	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2703	-	Rel-12	F	RP-150896	R5s150261	approved	Correction to GCF WI-81 EUTRA RRC test case 8.5.4.1	12.1.0	12.2.0	R5	TEI8_Test

Samsung Exhibit 1025, Page 1973 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2704	-	Rel-12	F	RP-150896	R5s150262	approved	Corrections to EUTRAN<>GERAN Idle Mode test case 6.2.3.28	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2705	-	Rel-12	F	RP-150896	R5s150263	approved	Correction for LTE-A CA test cases 8.2.4.16.x	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2706	-	Rel-12	F	RP-150896	R5s150268	approved	Corrections for GCF WI-154 IMS Emergency Call test case 11.2.4	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2707	-	Rel-12	F	RP-150896	R5s150272	approved	Correction for GCF WI-087 EMM test case 9.2.3.1.6 in EUTRA<>GERAN path	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2708	-	Rel-12	F	RP-150896	R5s150277	approved	Correction to IMS Emergency Call test case 11.2.5	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2709	-	Rel-12	F	RP-150896	R5s150278	approved	Correction to EUTRA RRC test case 8.5.4.1	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2710	-	Rel-12	B	RP-150896	R5s150285	approved	Addition of LTE-A eMBMS-SC-CA test case 17.4.10.1	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2711	-	Rel-12	B	RP-150896	R5s150287	approved	Addition of LTE-A eMBMS-SC-CA test case 17.4.10.2	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2712	-	Rel-12	B	RP-150896	R5s150291	approved	LTE_TDD: Addition of LTE-A Carrier Aggregation test case 8.2.4.20.3	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2713	-	Rel-12	F	RP-150896	R5s150293	approved	Correction to GCF WI-151 LTE Interband test cases against IMS UE	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2714	-	Rel-12	F	RP-150896	R5s150294	approved	Correction to GCF WI-154 LTE Emergency call test case 11.2.5	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2715	-	Rel-12	B	RP-150896	R5s150297	approved	LTE_TDD: Addition of Rel-11 LTE_CA_enh test case 8.2.4.17.3	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2716	-	Rel-12	B	RP-150896	R5s150300	approved	Addition of GCF WI-209 LTE-UTRA FE-FACH test case 6.2.4.1	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2717	-	Rel-12	B	RP-150896	R5s150302	approved	Addition of GCF WI-209 LTE-UTRA FE-FACH test case 6.2.4.2	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2718	-	Rel-12	B	RP-150896	R5s150304	approved	Addition of GCF WI-209 LTE-UTRA FE-FACH test case 6.2.4.3	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2719	-	Rel-12	B	RP-150896	R5s150306	approved	Addition of GCF WI-209 LTE-UTRA FE-FACH test case 6.2.4.4	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2720	-	Rel-12	B	RP-150896	R5s150310	approved	LTE_TDD: Addition of Rel-10 CA test case 7.1.3.11.2	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2721	-	Rel-12	B	RP-150896	R5s150312	approved	LTE_TDD: Addition of Rel-11 CA test case 8.2.4.19.3	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2722	-	Rel-12	B	RP-150896	R5s150314	approved	Addition of Rel-11 eMBMS_SC_CA test case 17.4.9.2	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2723	-	Rel-12	B	RP-150896	R5s150315	approved	LTE_TDD: Addition of Rel-10 CA test case 8.2.4.23.2	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2724	-	Rel-12	B	RP-150896	R5s150319	approved	Addition of Rel-11 eMBMS_SC_CA test case 17.4.9.1	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2725	-	Rel-12	F	RP-150896	R5s150320	approved	Corrections to Switch-Off/Detach procedures in context of IMS-enabled UE	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2726	-	Rel-12	F	RP-150896	R5s150322	approved	Correction to EUTRA test case 7.1.4.6	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2727	-	Rel-12	B	RP-150896	R5s150324	approved	Addition of GCF WI-180 EUTRA<>C2K Inter-RAT test Case 8.6.7.3	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2728	-	Rel-12	F	RP-150896	R5s150326	approved	Correction of GCF WI-87 EUTRA<>GERAN Testcase 6.2.3.26	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2729	-	Rel-12	F	RP-150896	R5s150329	approved	Rel-12 baseline upgrade for LTE Test Suites	12.1.0	12.2.0	R5	TEI12_Test
36.523-3	2730	-	Rel-12	B	RP-150896	R5s150332	approved	Addition of GCF WI-209 LTE-UTRA FE-FACH test case 6.2.4.6	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2731	-	Rel-12	B	RP-150896	R5s150334	approved	Addition of GCF WI-209 LTE-UTRA FE-FACH test case 6.2.4.5	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2732	-	Rel-12	F	RP-150896	R5s150338	approved	Dynamic DRB configuration at the SS	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2733	-	Rel-12	F	RP-150896	R5s150340	approved	Correction of GCF WI-154 IMS Emergency call Testcase 11.2.4	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2734	-	Rel-12	B	RP-150896	R5s150347	approved	Addition of LTE-A eMBMS-SC-CA test case 17.4.11.1	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2735	-	Rel-12	B	RP-150896	R5s150349	approved	Addition of LTE-A eMBMS-SC-CA test case 17.4.11.2	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2736	-	Rel-12	F	RP-150896	R5s150351	approved	Correction of GCF WI-177 Test Case 8.6.6.1	12.1.0	12.2.0	R5	TEI10_Test

Samsung Exhibit 1025, Page 1974 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2737	-	Rel-12	F	RP-150896	R5s150354	approved	Correction of Test Cases 8.2.2.3.X	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2738	-	Rel-12	F	RP-150896	R5s150355	approved	Correction of Test Cases 7.1.3.11.X	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2739	-	Rel-12	F	RP-150896	R5s150356	approved	Correction of Test Cases 8.2.4.17.x	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2740	-	Rel-12	B	RP-150896	R5s150362	approved	Addition of LTE-A (Rel-11) CoMP test case 7.1.10.1	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2741	-	Rel-12	B	RP-150896	R5s150364	approved	Addition of LTE-A (Rel-11) CoMP test case 7.1.10.2	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2742	-	Rel-12	F	RP-150896	R5s150369	approved	Correction to GCF WI-086 EUTRA Idle mode test case 6.3.7	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2743	-	Rel-12	F	RP-150896	R5s150370	approved	Correction to GCF WI-082 EMM test case 9.3.1.18	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2744	-	Rel-12	F	RP-150896	R5s150375	approved	Correction to DRB configuration handling in ATS_15wk18	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2745	-	Rel-12	B	RP-150896	R5s150377	approved	LTE_TDD : Addition of GCF WI-183 LTE-UTRA MDT test case 8.6.5.1	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2746	-	Rel-12	F	RP-150896	R5s150381	approved	Correction of GCF WI-162 EUTRA CA Testcase 7.1.3.11.x	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2747	-	Rel-12	F	RP-150896	R5s150384	approved	Correction to GCF WI-159 Pre-registration at 1xRTT testcase 13.4.4.2	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2748	-	Rel-12	B	RP-150896	R5s150385	approved	LTE_TDD: Addition of LTE-TDD / UTRA-FDD FE-FACH test case 6.2.4.1	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2749	-	Rel-12	B	RP-150896	R5s150387	approved	LTE_TDD: Addition of LTE-TDD / UTRA-FDD FE-FACH test case 6.2.4.2	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2750	-	Rel-12	B	RP-150896	R5s150389	approved	LTE_TDD: Addition of LTE-TDD / UTRA-FDD FE-FACH test case 6.2.4.3	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2751	-	Rel-12	B	RP-150896	R5s150391	approved	LTE_TDD: Addition of LTE-TDD / UTRA-FDD FE-FACH test case 6.2.4.4	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2752	-	Rel-12	B	RP-150896	R5s150393	approved	LTE_TDD: Addition of LTE-TDD / UTRA-FDD FE-FACH test case 6.2.4.5	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2753	-	Rel-12	B	RP-150896	R5s150395	approved	LTE_TDD: Addition of LTE-TDD / UTRA-FDD FE-FACH test case 6.2.4.6	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2754	-	Rel-12	F	RP-150896	R5s150397	approved	Corrrection to EUTRA MAC test case 7.1.2.6	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2755	-	Rel-12	F	RP-150896	R5s150398	approved	Correction to GCF WI-081 RRC test case 8.5.4.1	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2756	-	Rel-12	F	RP-150896	R5s150399	approved	Update Guard timer for EMM Test cases 9.2.1.2.9, 9.2.3.2.11, 9.2.3.1.15 and 9.2.3.1.15a	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2757	-	Rel-12	F	RP-150896	R5s150400	approved	Correction to EUTRA EMM test case 9.1.3.3	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2758	-	Rel-12	F	RP-150896	R5s150401	approved	Correction to GCF WI-082 EUTRA ESM Test cases 10.4.1	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2759	-	Rel-12	F	RP-150896	R5s150402	approved	Correction to GCF WI-082 EUTRA EMM test case 9.2.1.1.21	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2760	-	Rel-12	F	RP-150896	R5s150403	approved	Correction to GCF Wi-082 EUTRA EMM test case 9.2.1.1.22	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2761	-	Rel-12	F	RP-150896	R5s150406	approved	Correction to LTE-A CA test cases 8.2.4.16.x	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2762	-	Rel-12	F	RP-150896	R5s150407	approved	Correction of GCF WI 81 EUTRA MAC test case 7.1.2.8	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2763	-	Rel-12	F	RP-150896	R5s150408	approved	Correction to GCF WI-086 EUTRA EMM Test Case 9.2.3.3.5a	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2764	-	Rel-12	F	RP-150896	R5s150409	approved	Correction to GCF WI-082 Test cases 9.2.1.1.1a and 9.2.1.1.1b	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2765	-	Rel-12	F	RP-150896	R5s150410	approved	Correction to GCF WI-154 EUTRA Emergency testcase 8.1.2.11	12.1.0	12.2.0	R5	TEI9_Test

Samsung Exhibit 1025, Page 1975 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.523-3	2766	-	Rel-12	F	RP-150896	R5s150411	approved	Correction to LTE with Pre-registration on 1xRTT test cases 13.4.4.1 and 13.4.4.2	12.1.0	12.2.0	R5	TEI9_Test
36.523-3	2767	-	Rel-12	F	RP-150896	R5s150413	approved	Correction of GCF WI 81 EUTRA MAC test case 7.1.3.9	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2768	-	Rel-12	F	RP-150896	R5s150415	approved	Correction of GCF WI-87 EUTRA<>GERAN Testcases 6.2.3.23, 6.2.3.24, 6.2.3.27,6.2.3.29	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2769	-	Rel-12	F	RP-150896	R5s150416	approved	Correction of GCF WI-172 EUTRA<>GERAN aSRVCC test case 13.4.3.30	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2770	-	Rel-12	F	RP-150896	R5s150417	approved	Correction to GCF WI-082 EUTRA Testcase 9.1.5.1	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2771	-	Rel-12	F	RP-150896	R5s150422	approved	Correction of EUTRA-GERAN GCF WI-087 test cases 13.1.7, 13.1.10, 6.2.3.19	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2772	-	Rel-12	B	RP-150896	R5s150423	approved	LTE_TDD: Addition of LTE-A (Rel-11) CoMP test case 7.1.10.1	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2773	-	Rel-12	B	RP-150896	R5s150425	approved	LTE_TDD: Addition of LTE-A (Rel-11) CoMP test case 7.1.10.2	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2774	-	Rel-12	F	RP-150896	R5s150427	approved	Correction of GCF WI-082 EUTRA EMM test case 9.3.1.16	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2775	-	Rel-12	F	RP-150896	R5s150429	approved	Correction of EUTRA test cases 9.2.1.1.20, 9.2.3.2.17, 9.2.3.1.25	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2776	-	Rel-12	F	RP-150896	R5s150430	approved	Correction to Multiple PDN for handling non-IMS APN	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2777	-	Rel-12	B	RP-150896	R5s150431	approved	LTE_TDD: Addition of LTE-A eMBMS-SC-CA test case 17.4.11.1	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2778	-	Rel-12	B	RP-150896	R5s150433	approved	LTE_TDD: Addition of LTE-A eMBMS-SC-CA test case 17.4.11.2	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2779	-	Rel-12	F	RP-150896	R5s150436	approved	Correction to GCF WI-082 EMM test cases 9.2.1.1.20, 9.2.3.1.25 and 9.2.3.2.17	12.1.0	12.2.0	R5	TEI8_Test
36.523-3	2780	-	Rel-12	F	RP-150896	R5s150438	approved	Correction to Bandwidth initialisation of CA Testcases	12.1.0	12.2.0	R5	TEI10_Test
36.523-3	2781	-	Rel-12	B	RP-150896	R5s150442	approved	LTE_TDD: Addition of LTE-A eMBMS-SC-CA test case 17.4.10.1	12.1.0	12.2.0	R5	TEI11_Test
36.523-3	2782	-	Rel-12	B	RP-150896	R5s150444	approved	LTE_TDD: Addition of LTE-A eMBMS-SC-CA test case 17.4.10.2	12.1.0	12.2.0	R5	TEI11_Test
36.852-12	0001	-	Rel-12	F	RP-150971	R4-151762	approved	Removal of results for CA_7-22 to be handled in later release	12.0.0	12.1.0	R4	LTE_CA_B7_B22-Core
36.852-12	0002	-	Rel-12	F	RP-150970	R4-152735	approved	Removal of CA_3-38 to be handled in later release	12.0.0	12.1.0	R4	LTE_CA_B3_B38-Core
36.853-12	0004	-	Rel-12	D	RP-150958	R4-151610	approved	Addition of DTIB,C and DRIB,C for LTE_CA_B1_B3_B26	12.1.0	12.2.0	R4	LTE_CA_B1_B3_B26-Core
36.853-12	0005	-	Rel-12	F	RP-150973	R4-151654	approved	Clean-up of 3 Band Carrier Aggregation (3DL 1UL) of CA_B41-B42-B42	12.7.0	12.8.0	R4	LTE_CA_B41_B42_B42-Core
36.853-12	0006	-	Rel-12	F	RP-150958	R4-153364	approved	Addition of missing band combinations in the Scope clause	12.0.0	12.1.0	R4	LTE_CA_B2_B2_B13-Core, LTE_CA_B2_B4_B4-Core, LTE_CA_B2_B12_B12-Core, LTE_CA_B1_B3_B26-Core, LTE_CA_B1_B19_B21-Core, LTE_CA_B2_B2_B5-Core, LTE_CA_B2_B5_B13-Core, LTE_CA_B4_B4_B5-Core, LTE_CA_B4_B5_B13-Core, LTE_CA_B4_B4_B12-Core, LTE_CA_B3_B3_B8-Core, LTE_CA_B41_B42_B42-Core
36.853-12	0007	-	Rel-12	F	RP-150958	R4-153368	approved	Addition of 3 Band Carrier Aggregation (3DL/1UL) of Band 1, Band 18 and Band 28	12.0.0	12.1.0	R4	LTE_CA_B1_B18_B28-Core

Samsung Exhibit 1025, Page 1976 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.873	0004	-	Rel-12	F	RP-150938	R1-153640	approved	Proposal on convention for 2D antenna element numbering	12.1.0	12.2.0	R1	FS_LTE_3D_channel
36.903	0178	-	Rel-12	F	RP-150886	R5-151078	approved	Update Test Tolerance Analyses for TS 37.571-1 Test Cases 9.1.3 and 9.1.4	12.5.0	12.6.0	R5	TEI9_Test
36.903	0179	-	Rel-12	F	RP-150886	R5-151079	approved	Update Test Tolerance Analyses for TS 37.571-1 Test Cases 9.2.4 and 9.2.5	12.5.0	12.6.0	R5	TEI9_Test
36.903	0180	-	Rel-12	F	RP-150888	R5-151080	approved	Update Test Tolerance Analyses for TS 37.571-1 Test Cases 10.3 and 10.4	12.5.0	12.6.0	R5	TEI10_Test
36.903	0181	-	Rel-12	F	RP-150888	R5-151081	approved	Update Test Tolerance Analyses for TS 37.571-1 Test Cases 10.3A and 10.4A	12.5.0	12.6.0	R5	TEI10_Test
36.903	0182	-	Rel-12	F	RP-150888	R5-151082	approved	Add Test Tolerance Analysis for TS 37.571-1 Test Case 10.2D	12.5.0	12.6.0	R5	TEI10_Test
36.903	0183	-	Rel-12	F	RP-150888	R5-151084	approved	Add Test Tolerance Analysis for TS 37.571-1 Test Case 10.4D	12.5.0	12.6.0	R5	TEI10_Test
36.903	0184	-	Rel-12	F	RP-150888	R5-151132	approved	Add Test Tolerance analysis for TS 36.521-3 Test cases 9.9.1.1 and 9.9.2.1	12.5.0	12.6.0	R5	TEI10_Test
36.903	0185	-	Rel-12	F	RP-150888	R5-151134	approved	Add Test Tolerance analysis for TS 36.521-3 Test cases 9.9.1.2 and 9.9.2.2	12.5.0	12.6.0	R5	TEI10_Test
36.903	0186	-	Rel-12	F	RP-150883	R5-151263	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 8.3.1+8.3.2+8.14.1+8.14.2	12.5.0	12.6.0	R5	TEI8_Test
36.903	0187	-	Rel-12	F	RP-150883	R5-151264	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 8.4.1+8.4.2+8.15.1+8.15.2	12.5.0	12.6.0	R5	TEI8_Test
36.903	0188	-	Rel-12	F	RP-150883	R5-151265	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 9.2.4A.1	12.5.0	12.6.0	R5	TEI8_Test
36.903	0189	-	Rel-12	F	RP-150883	R5-151266	approved	Update Test Tolerance Analysis for TS 36.521-3 TC 9.2.4A.2	12.5.0	12.6.0	R5	TEI8_Test
36.903	0190	1	Rel-12	F	RP-150886	R5-151837	approved	Update Test Tolerances and Test requirements for TS 36.521-3 Test cases 4.2.3, 4.2.4, 4.2.5, 4.2.6	12.5.0	12.6.0	R5	TEI9_Test
36.903	0191	1	Rel-12	F	RP-150886	R5-151839	approved	Update Test Tolerance analyses for TS 36.521-3 Test case 9.1.5.1	12.5.0	12.6.0	R5	TEI9_Test
36.903	0192	1	Rel-12	F	RP-150886	R5-151841	approved	Update Test Tolerances and Test requirements for TS 36.521-3 Test case 9.1.5.2	12.5.0	12.6.0	R5	TEI9_Test
36.903	0194	1	Rel-12	F	RP-150912	R5-151843	approved	Add Test Tolerance analysis for Rel-12 Improved RSRP accuracy Test cases	12.5.0	12.6.0	R5	TEI12_Test
36.903	0195	1	Rel-12	F	RP-150912	R5-151845	approved	Update Test Tolerance analysis for TCs 8.11.1+8.11.2 for frequencies above 3GHz 36.903 CR	12.5.0	12.6.0	R5	TEI12_Test
36.903	0196	1	Rel-12	F	RP-150912	R5-151847	approved	Update Test Tolerance analysis for TC 8.11.3 for frequencies above 3GHz 36.903 CR	12.5.0	12.6.0	R5	TEI12_Test
36.903	0197	1	Rel-12	F	RP-150912	R5-151849	approved	Update Test Tolerance analysis for TC 8.11.4 for frequencies above 3GHz 36.903 CR	12.5.0	12.6.0	R5	TEI12_Test
36.903	0198	-	Rel-12	F	RP-150912	R5-151541	approved	Add Test Tolerance analysis for TC 8.16.21 36.903 CR	12.5.0	12.6.0	R5	TEI12_Test
36.903	0199	-	Rel-12	F	RP-150912	R5-151543	approved	Add Test Tolerance analysis for TC 8.16.22 36.903 CR	12.5.0	12.6.0	R5	TEI12_Test
36.903	0200	-	Rel-12	F	RP-150912	R5-151545	approved	Add Test Tolerance analysis for TCs 9.1.24.1 36.903 CR	12.5.0	12.6.0	R5	TEI12_Test
36.903	0201	-	Rel-12	F	RP-150912	R5-151547	approved	Add Test Tolerance analysis for TCs 9.1.24.1_1 36.903 CR	12.5.0	12.6.0	R5	TEI12_Test
36.903	0202	-	Rel-12	F	RP-150912	R5-151549	approved	Add Test Tolerance analysis for TC 9.1.24.2 36.903 CR	12.5.0	12.6.0	R5	TEI12_Test
36.903	0203	1	Rel-12	F	RP-150912	R5-151851	approved	Add Test Tolerance analysis for TC 9.2.27.1 36.903 CR	12.5.0	12.6.0	R5	TEI12_Test

Samsung Exhibit 1025, Page 1977 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
36.903	0204	-	Rel-12	F	RP-150912	R5-151553	approved	Add Test Tolerance analysis for TC 9.2.27.2 36.903 CR	12.5.0	12.6.0	R5	TEI12_Test
36.978	0001	1	Rel-13	F	RP-150914	R5-152112	withdrawn	Addition of UE requirements for RSAP and RSARP	13.0.0		R5	FS_LTE_MIMO_OTA_ATF
37.104	0254	1	Rel-11	F	RP-150955	R4-152428	approved	Clarification of parameter P for emission requirements	11.11.0	11.12.0	R4	TEI11
37.104	0255	-	Rel-12	A	RP-150955	R4-151288	approved	Clarification of parameter P for emission requirements	12.7.0	12.8.0	R4	TEI11
37.104	0258	1	Rel-11	F	RP-150955	R4-153718	approved	Some corrections related to RF bandwidth edge	11.11.0	11.12.0	R4	TEI11
37.104	0259	-	Rel-12	A	RP-150955	R4-152680	approved	Some corrections related to RF bandwidth edge	12.7.0	12.8.0	R4	TEI11
37.141	0391	1	Rel-11	F	RP-150955	R4-152429	approved	Clarification of parameter P for emission requirements	11.11.0	11.12.0	R4	TEI11
37.141	0392	-	Rel-12	A	RP-150955	R4-151290	approved	Clarification of parameter P for emission requirements	12.7.0	12.8.0	R4	TEI11
37.141	0393	-	Rel-12	F	RP-150953	R4-151373	approved	The applicability of TC4d and TC4e	12.7.0	12.8.0	R4	RInImp9-Rfmulti
37.141	0400	1	Rel-13	F	RP-150953	R4-152467	approved	New capability set for excluding GSM/EDGE single-RAT operation	12.7.0	13.0.0	R4	RInImp9-RFmulti
37.141	0401	1	Rel-11	F	RP-150955	R4-153719	approved	Some corrections related to RF bandwidth edge	11.11.0	11.12.0	R4	TEI11
37.141	0402	-	Rel-12	A	RP-150955	R4-152682	approved	Some corrections related to RF bandwidth edge	12.7.0	12.8.0	R4	TEI11
37.571-1	0127	1	Rel-12	F	RP-150912	R5-152014	approved	Add TDD to A-GNSS testing	12.2.0	12.3.0	R5	TEI12_Test
37.571-1	0128	-	Rel-12	F	RP-150912	R5-151070	approved	Delete "FFS" from ECID test conditions	12.2.0	12.3.0	R5	TEI12_Test
37.571-1	0129	-	Rel-12	F	RP-150888	R5-151083	approved	Uncertainties and Test Tolerances for RSTD test case 10.2D	12.2.0	12.3.0	R5	TEI10_Test
37.571-1	0130	-	Rel-12	F	RP-150888	R5-151085	approved	Uncertainties and Test Tolerances for RSTD test case 10.4D	12.2.0	12.3.0	R5	TEI10_Test
37.571-1	0131	-	Rel-12	F	RP-150912	R5-151086	approved	RSTD accuracy changes for Rel-12	12.2.0	12.3.0	R5	TEI12_Test
37.571-1	0132	-	Rel-12	F	RP-150888	R5-151088	approved	Formatting error in Parameter Sensitivity Coarse Tables	12.2.0	12.3.0	R5	TEI10_Test
37.571-1	0133	-	Rel-12	F	RP-150888	R5-151089	approved	Incorrect Expected RSTD value in Table 9.2.5.4.1-1	12.2.0	12.3.0	R5	TEI10_Test
37.571-1	0134	1	Rel-12	F	RP-150912	R5-151912	approved	LPP responseTime update and correction	12.2.0	12.3.0	R5	TEI12_Test
37.571-1	0135	-	Rel-12	F	RP-150883	R5-151162	approved	Correction of the TPR of Absolute GNSS signal level for Dynamic Range	12.2.0	12.3.0	R5	TEI8_Test
37.571-1	0136	-	Rel-12	F	RP-150905	R5-151331	approved	Addition of band 32 to 37.571-1	12.2.0	12.3.0	R5	LTE_UTRA_SDL_BandL-UEConTest
37.571-1	0137	-	Rel-12	F	RP-150899	R5-151335	approved	Corrections to message contents for feICIC TCs in 37.571-1	12.2.0	12.3.0	R5	TEI11_Test
37.571-1	0138	1	Rel-12	F	RP-150888	R5-151913	approved	Introduction of new test case 8.1.3 to 37.571-1	12.2.0	12.3.0	R5	TEI10_Test
37.571-1	0139	1	Rel-12	F	RP-150888	R5-151914	approved	Introduction of new test case 8.1.4 to 37.571-1	12.2.0	12.3.0	R5	TEI10_Test
37.571-2	0052	2	Rel-12	F	RP-150912	R5-152149	approved	Addition of "early fix" to A-GNSS tests	12.1.0	12.2.0	R5	TEI12_Test
37.571-2	0053	1	Rel-12	F	RP-150888	R5-151981	approved	Correction of prs-ConfigurationIndex for TDD	12.1.0	12.2.0	R5	TEI10_Test
37.571-2	0054	-	Rel-12	F	RP-150886	R5-151109	approved	IMS settings for LTE Positioning test cases	12.1.0	12.2.0	R5	TEI9_Test
37.571-2	0055	1	Rel-12	F	RP-150912	R5-151982	approved	LPP updates and corrections	12.1.0	12.2.0	R5	TEI12_Test
37.571-2	0056	1	Rel-12	F	RP-150881	R5-151983	approved	Update of default GNSS Assistance Data Elements	12.1.0	12.2.0	R5	TEI_Test
37.571-2	0057	1	Rel-12	F	RP-150886	R5-151984	approved	Correction to EUTRA UE Positioning test case 7.3.3.1	12.1.0	12.2.0	R5	TEI9_Test
37.571-2	0058	1	Rel-12	F	RP-150886	R5-152147	approved	Correction to EUTRA UE Positioning test cases covering the UE-assisted case	12.1.0	12.2.0	R5	TEI9_Test
37.571-3	0031	1	Rel-12	F	RP-150912	R5-152034	approved	Change Galileo Release Applicability	12.2.0	12.3.0	R5	TEI12_Test
37.571-3	0033	1	Rel-12	F	RP-150912	R5-151985	approved	Change Galileo Release Applicability	12.2.0	12.3.0	R5	TEI12_Test
37.571-3	0034	-	Rel-12	F	RP-150912	R5-151087	approved	RSTD accuracy changes for Rel-12	12.2.0	12.3.0	R5	TEI12_Test

Samsung Exhibit 1025, Page 1978 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Spec	CR	Rev	Phase	Cat	Plenary doc	WG doc	TSG status	Subject	CR written to	Resulting vers	WG	Workitem
37.571-3	0035	-	Rel-12	F	RP-150886	R5-151090	approved	Missing applicability of test case executions in Table 4-3 for E-UTRA pc_eTDD tests	12.2.0	12.3.0	R5	TEI9_Test
37.571-4	0050	-	Rel-12	F	RP-150897	-	approved	CR to 37.571-4: Add new verified and e-mail agreed TTCN test cases in the TC lists in 37.571-4 (prose), Annex A	12.0.0	12.1.0	R5	TEI11_Test
37.571-4	0051	-	Rel-12	B	RP-150898	R5s150013	approved	Addition of UTRAN UE Positioning test case 6.2.3.2.4s	12.0.0	12.1.0	R5	TEI8_Test
37.571-4	0052	-	Rel-12	F	RP-150898	R5s150222	approved	Correction to POS ATS in TTCN-3 delivery 15wk10	12.0.0	12.1.0	R5	TEI9_Test
37.571-4	0053	-	Rel-12	F	RP-150898	R5s150331	approved	Rel-12 baseline upgrade for POS Test Suite	12.0.0	12.1.0	R5	TEI12_Test
37.571-4	0054	-	Rel-12	F	RP-150898	R5s150343	approved	Corrections to UTRAN UE Positioning functions	12.0.0	12.1.0	R5	TEI8_Test
37.571-4	0055	-	Rel-12	F	RP-150898	R5s150344	approved	Correction to LTE UE Positioning test cases 7.3.5.1.5s and 7.5.1	12.0.0	12.1.0	R5	TEI9_Test
37.571-4	0056	-	Rel-12	F	RP-150898	R5s150345	approved	Correction to GLONASS LPP test cases	12.0.0	12.1.0	R5	TEI9_Test
37.571-4	0057	-	Rel-12	F	RP-150898	R5s150353	approved	Improvement of function f_POS_CheckGnssSupportList	12.0.0	12.1.0	R5	TEI9_Test
37.571-4	0058	-	Rel-12	B	RP-150898	R5s150404	approved	Addition of GCF WI-166 EUTRA UE Positioning test case 7.3.3.1	12.0.0	12.1.0	R5	TEI9_Test
37.571-4	0059	-	Rel-12	F	RP-150898	R5s150439	approved	Correction to selection of Assistance Data for sub-test 4	12.0.0	12.1.0	R5	TEI12_Test
37.571-5	0113	-	Rel-12	F	RP-150912	R5-151069	approved	Add TDD to A-GNSS Assistance Data	12.1.0	12.2.0	R5	TEI12_Test
37.571-5	0114	-	Rel-12	F	RP-150886	R5-151091	approved	Missing RSTD new tests for 10.2D and 10.4D	12.1.0	12.2.0	R5	TEI9_Test
37.571-5	0117	1	Rel-12	F	RP-150901	R5-151910	approved	Corrections to the Ionospheric Model of BDS	12.1.0	12.2.0	R5	LCS_BDS-UEConTest
37.977	0011	-	Rel-13	F	RP-150966	R4-151902	approved	Change of TDD eNodeB emulator settings for MIMO OTA test	12.1.0	13.0.0	R4	UTRA_LTE_MIMO_OTA-Core
37.977	0012	1	Rel-13	B	RP-150966	R4-152463	approved	Addition of the ATF to the two-stage method description	12.1.0	13.0.0	R4	UTRA_LTE_MIMO_OTA-Core
37.977	0015	-	Rel-13	F	RP-150966	R4-153404	approved	Addition of the ATF to the two-stage method description	12.1.0	13.0.0	R4	UTRA_LTE_MIMO_OTA-Core

Samsung Exhibit 1025, Page 1979 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

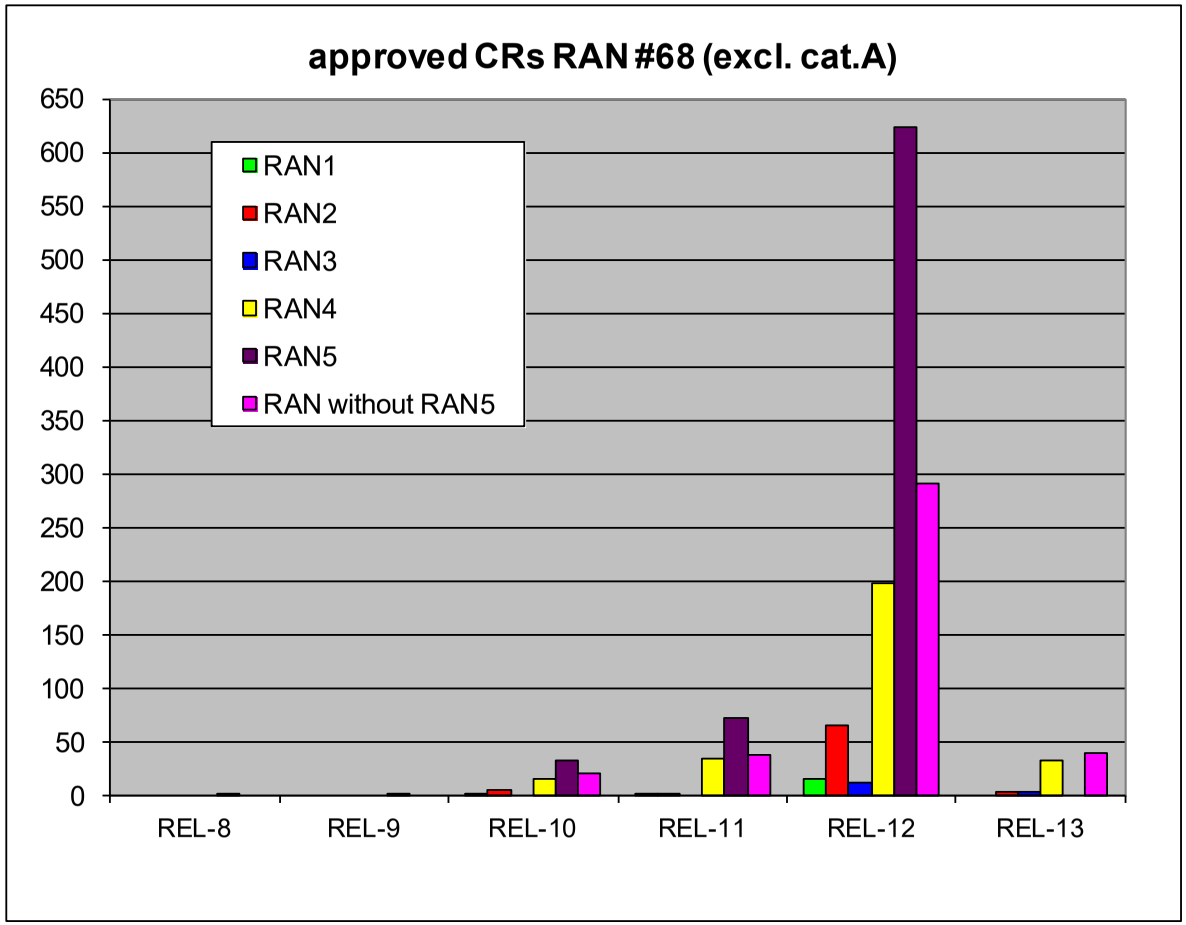


Fig. E-1: Approved CRs (excluding category A CRs) of RAN #68 per WG and release

Samsung Exhibit 1025, Page 1980 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

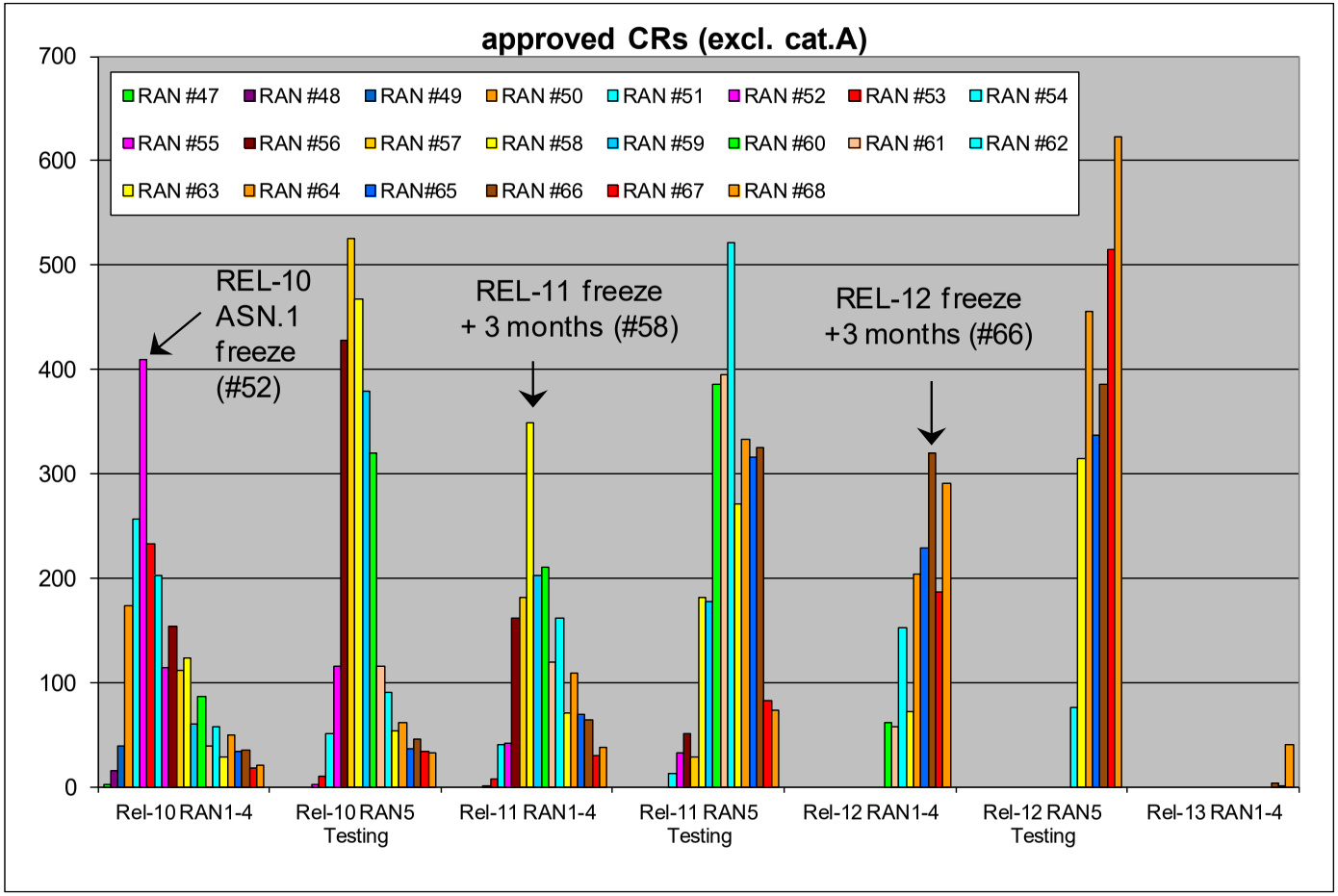


Fig. E-2: Approved CRs (<u>excluding</u> category A CRs) of previous RAN meetings per release
<u>REL freeze</u>: REL-8: RAN #42, REL-9: RAN #46, REL-10: RAN #51, REL-11: RAN #57, REL-12: RAN #65
<u>ASN.1 freeze</u>: REL-8: RAN #43 (713 CRs), REL-9: RAN #47 (355 CRs), REL-10: RAN #52 (apart from Un), REL-11: RAN #59, REL-12: RAN #67

Samsung Exhibit 1025, Page 1981 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

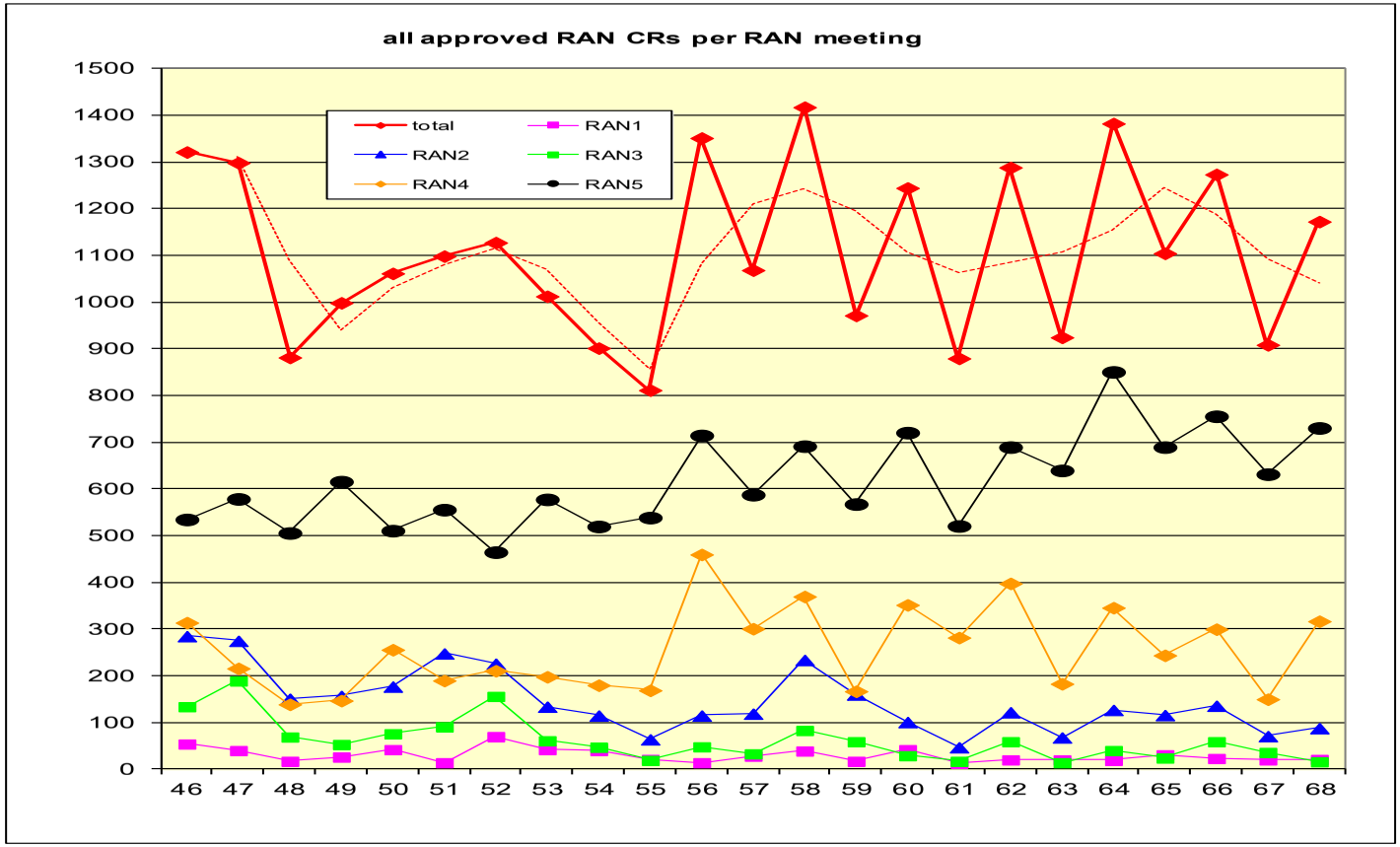


Fig. E-3: Approved CRs (all releases <u>including</u> category A CRs) per RAN WG and per RAN meeting
REL freeze: REL-8: RAN #42, REL-9: RAN #46, REL-10: RAN #51, REL-11: RAN #57, REL-12: RAN #65
ASN.1 freeze: REL-8: RAN #43, REL-9: RAN #47, REL-10: RAN #52 (apart from Un), REL-11: RAN #59, REL-12: RAN #67

Samsung Exhibit 1025, Page 1982 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex F:
Summary of RAN work items (WI) and study items (SI)

An overview of recent RAN work items and study items (starting from REL-9 and including the new WIs & SIs approved at this meeting) is attached to this report.

This overview is used as input for the 3GPP workplan which lists all 3GPP work and study items.

status after RAN #68:

REL-7:		
REL-7 stage 1 freeze:	Sep.05	TSG #29
REL-7 stage 2 freeze:	Sep. 06	TSG #33
REL-7 freeze:	March 07	TSG #35
REL-7 ASN.1 freeze:	March 08	TSG #39
REL-8:	7 quarters	
REL-8 stage 1 freeze:	Dec.07	TSG #38
REL-8 stage 2 freeze:	June 08	TSG #40
REL-8 freeze:	Dec.08	TSG #42
REL-8 ASN.1 freeze:	March 09	TSG #43
REL-9:	4 quarters	
REL-9 stage 1 freeze:	Dec.08	TSG #42
REL-9 stage 2 freeze:	June 09	TSG #44
REL-9 freeze:	Dec.09	TSG #46
REL-9 ASN.1 freeze:	March 10	TSG #47
REL-10:	5 quarters	
REL-10 stage 1 freeze:	March 10	TSG #47
REL-10 stage 2 freeze:	Sep.10	TSG #49
REL-10 freeze:	March 11	TSG #51
REL-10 ASN.1 freeze:	June 11	TSG #52 (apart from Un for Relays: frozen in Sep.11 at TSG #53)
REL-11:	6 quarters	
REL-11 stage 1 freeze:	Sep.11	TSG #53
REL-11 stage 2 freeze:	March 12	TSG #55
REL-11 freeze:	Sep.12	TSG #57
REL-11 ASN.1 freeze:	March 13	TSG #59

Samsung Exhibit 1025, Page 1983 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

REL-12:	8 quarters	
REL-12 stage 1 freeze:	March 13	TSG #59
REL-12 stage 2 freeze:	Dec.13	TSG #62
REL-12 freeze:	Sep.14	TSG #65
REL-12 ASN.1 freeze:	March 15	TSG #67
REL-13:	5 quarters	
REL-13 stage 1 freeze:	Sep.14	TSG #65
REL-13 stage 2 freeze:	June 15	TSG #68
REL-13 freeze:	Dec.15	TSG #70 (planned)
REL-13 ASN.1 freeze:	March 16	TSG #71 (planned)
REL-14:	? quarters	
REL-14 stage 1 freeze:	>=March 16	>=TSG #71 (tentative)

Samsung Exhibit 1025, Page 1984 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

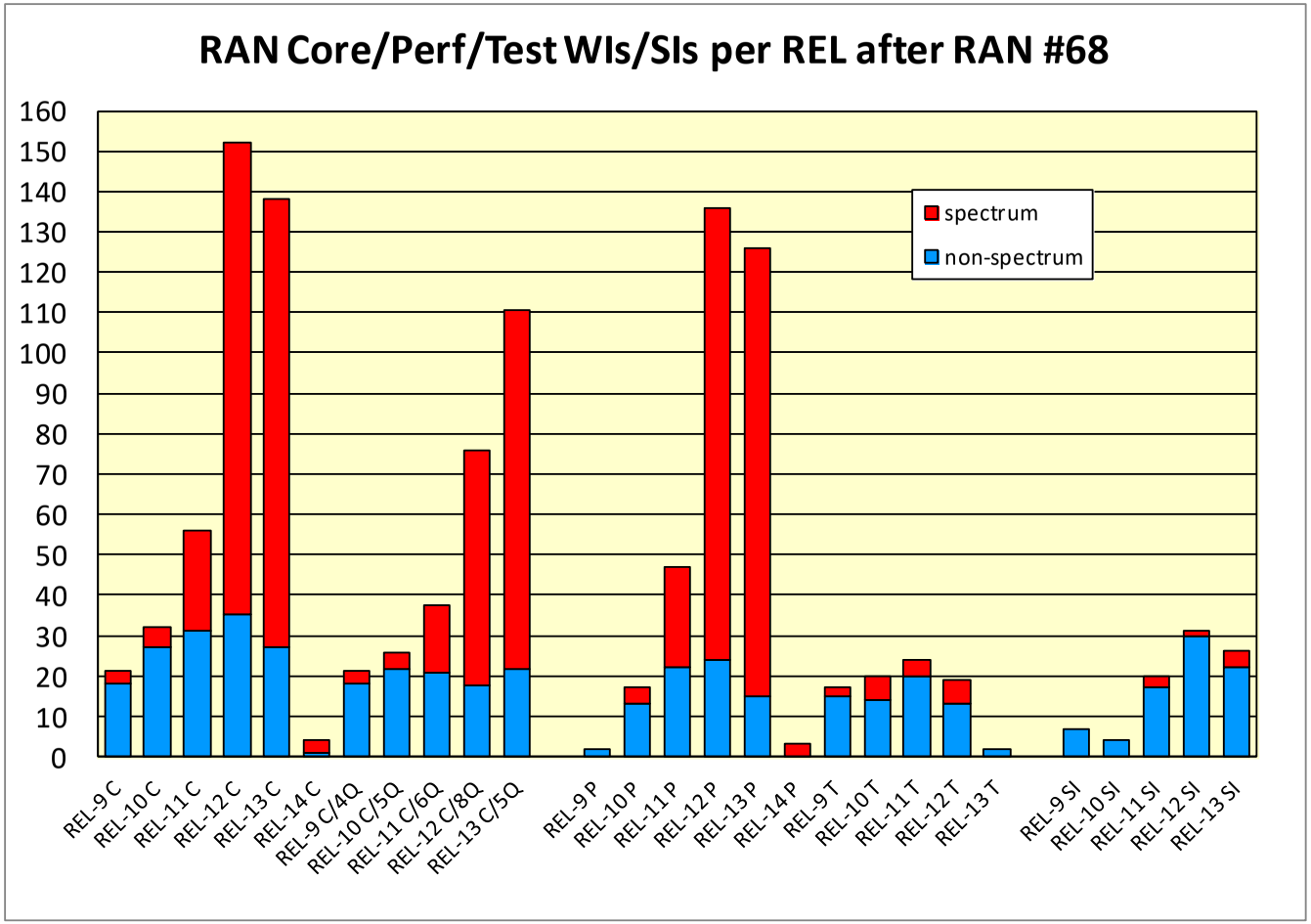


Fig. F-1: Statistics of all approved RAN WIs/SIs of REL-9/10//11/12/13 (status: after RAN #68) split into spectrum and non-spectrum related topics (<u>including</u> already completed WIs/SIs)

Samsung Exhibit 1025, Page 1985 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

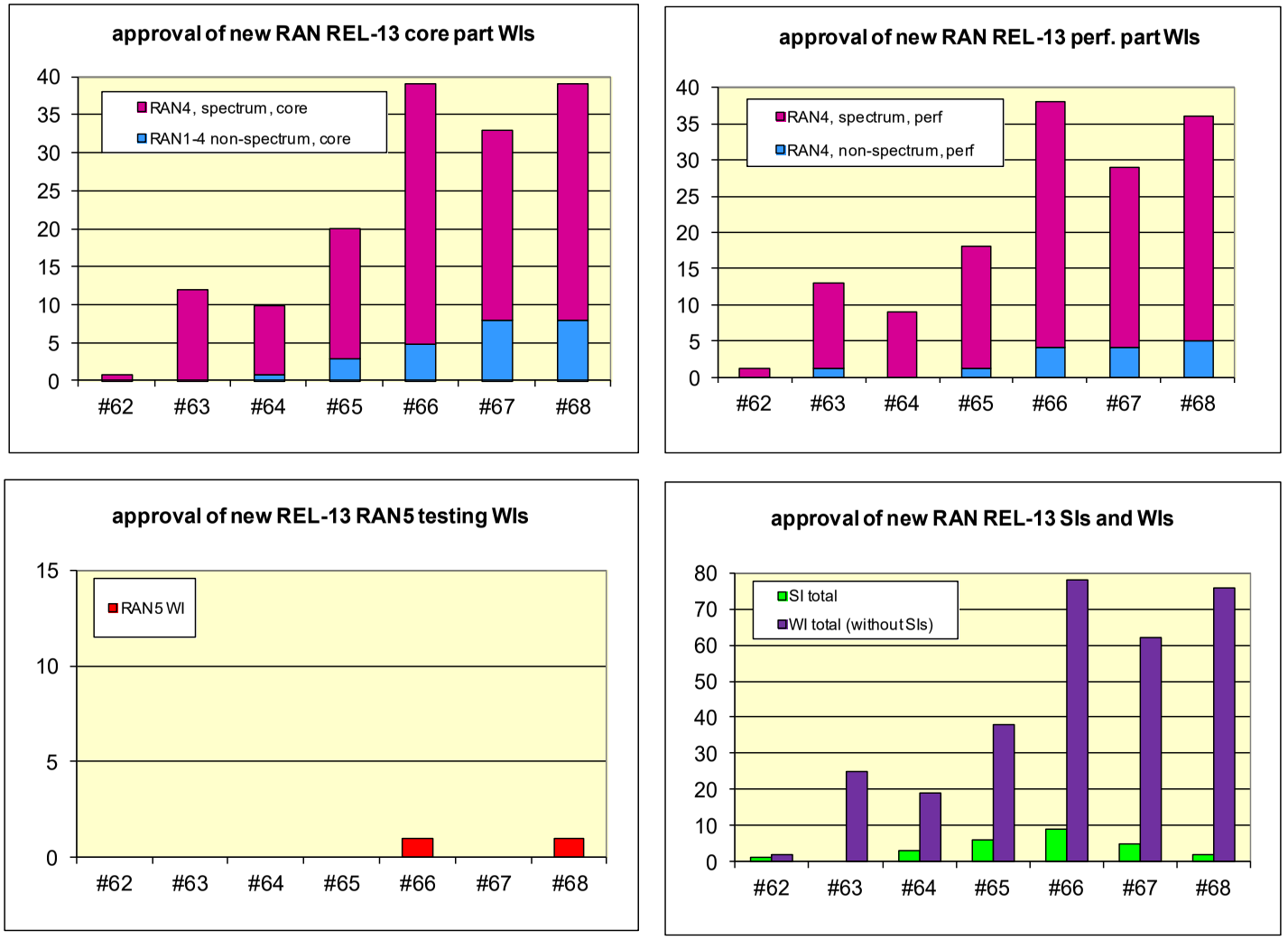


Fig. F-2: Overview of <u>new</u> REL-13 WIs and SIs per RAN meeting (REL-12 freeze: RAN #65, REL-13 freeze: planned for RAN #70) (including WIs shifted from REL-12 to REL-13)

Samsung Exhibit 1025, Page 1986 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex G:
Actions decided by RAN #68

No Actions allocated.

Samsung Exhibit 1025, Page 1987 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex H:
Agenda item 12.4.4: Report of ad hoc on REL-13 Study on possible additional configuration for LTE TDD

The SI FS_LTE_TDD_add_config is led by RAN and due to a large number of inputs to this topic, it was handled during RAN #68 in several ad hoc sessions chaired by Balazs Bertenyi (Nokia Networks) who provided the report RP-1540983.
For convenience the report of RP-150983 is copied into this Annex H (with the modification that only Tdocs handled in this ad hoc are shown here).
Note: P-CR = pseudo CR = Text Proposal (they can not be "noted").

Actions

- Approve this report (RP-150983)
- Endorse the new version of the TR implementing the approved P-CRs in RP-150984.

Highlights

Significant progress was made in the following areas:
- *Co-existence* simulations were reviewed and captured in the TR along with observations derived.
Approved P-CR in RP-151055 (Source: NEC) in RP-151054 (Source: NTT Docomo).
- Two sets of *performance evaluation* simulations were reviewed and captured in the TR along with observations derived. Approved P-CRs in RP-151056 (Source: CATT) and RP-150996 (Source: NTT Docomo)
- Potential *mitigation solutions* for the co-existence issues were reviewed and agreements captured in RP-151057 (Source: Ericsson) and RP-151058 (Source: NTT Docomo) that were approved.
- Clarification on intra-operator synchronization aspects were approved in RP-151051 (Source: Qualcomm).

As next steps for TSG-RAN#69 it is expected that the focus will be on the following areas:
(1) Comparison of the new TDD configurations and FDD SDL;
(2) Compiling the Summary and Conclusions for the TR;
(3) Address licensed/unlicensed spectrum band aspects where appropriate;
(4) Complete the TR.

Detailed notes [of the ad hoc]

NOTE: The documents of this agenda item were handled in separate RAN ad hoc sessions.
The report of this ad hoc is provided in RP-150983 (only Tdocs handled in the ad hoc are shown here).

1) Co-existence aspects:

RP-150737 Consideration of unsynchronized operation for TD-LTE NTT DOCOMO, INC. TP 36.825 REL-13 FS_LTE_TDD_add_config
Tdoc aims to share potential impact of unsynchronized operation for TD-LTE in terms of spectrum efficiency; esp. discussed: impact on guard band and power back off to protect terminals to avoid experiencing severe interference from the adjacent operators' TD-LTE
discussion: Observation 2 & 3 are specific to 3.5 GHz band.
conclusion: Revised to RP-150987

RP-150987 Consideration of unsynchronized operation for TD-LTE NTT DOCOMO, INC. TP 36.825 REL-13 FS_LTE_TDD_add_config
Tdoc aims to share potential impact of unsynchronized operation for TD-LTE in terms of spectrum efficiency; esp. discussed: impact on guard band and power back off to protect terminals to avoid experiencing severe interference from the adjacent operators' TD-LTE
conclusion: Revised to RP-150993

RP-150993 Consideration of unsynchronized operation for TD-LTE NTT DOCOMO, INC. TP 36.825 REL-13 FS_LTE_TDD_add_config
Tdoc aims to share potential impact of unsynchronized operation for TD-LTE in terms of spectrum efficiency; esp. discussed: impact on guard band and power back off to protect terminals to avoid experiencing severe interference from the adjacent operators' TD-LTE

Samsung Exhibit 1025, Page 1988 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

discussion: Reduce the text, focus on 4 conclusions and just add a reference to teh RAN4 specs.
conclusion: Revised to RP-151054

RP-151054 Consideration of unsynchronized operation for TD-LTE NTT DOCOMO, INC. TP 36.825 REL-13 FS_LTE_TDD_add_config
Tdoc aims to share potential impact of unsynchronized operation for TD-LTE in terms of spectrum efficiency; esp. discussed: impact on guard band and power back off to protect terminals to avoid experiencing severe interference from the adjacent operators' TD-LTE
conclusion: TP is Approved.

RP-150605 Coexistence evaluation results for intra-band adjacent LTE TDD operations using different TDD UL/DL configurations NEC Disc REL-13 FS_LTE_TDD_add_config
conclusion: revised in RP-150950

RP-150950 Coexistence evaluation results for intra-band adjacent LTE TDD operations using different TDD UL/DL configurations NEC Disc REL-13 FS_LTE_TDD_add_config
conclusion: Noted. Parts to be included in RP-150988

RP-150988 P-CR on co-existence simulations NEC TP REL-13 FS_LTE_TDD_add_config
discussion: This P-CR collects the agreeable parts and summary of all co-existence simulation input documents
conclusion: revised in RP-150994

RP-150994 P-CR on co-existence simulations NEC TP REL-13 FS_LTE_TDD_add_config
discussion: This P-CR collects the agreeable parts and summary of all co-existence simulation input documents
conclusion: Revised to RP-151053

RP-151053 P-CR on co-existence simulations NEC TP REL-13 FS_LTE_TDD_add_config
discussion: This P-CR collects the agreeable parts and summary of all co-existence simulation input documents
conclusion: Revised to RP-151055

RP-151055 P-CR on co-existence simulations NEC TP REL-13 FS_LTE_TDD_add_config
discussion: This P-CR collects the agreeable parts and summary of all co-existence simulation input documents
conclusion: Approved.

RP-150693 Coexistence Simulation Results with Adjacent Standalone TDD Operations Ericsson Disc REL-13 FS_LTE_TDD_add_config
discussion: Co-existence simulations to be captured in RP-150988. It was commented that uplink throughput degradation numbers would be nice to see in detail. Coudl be provided for the next meeting.
conclusion: Revised to RP-150998 to update the figure adding the missing curve.

RP-150998 Coexistence Simulation Results with Adjacent Standalone TDD Operations Ericsson Disc REL-13 FS_LTE_TDD_add_config
discussion: Co-existence simulations to be captured in RP-150988. It was commented that uplink throughput degradation numbers would be nice to see in detail. Could be provided for the next meeting.
conclusion: Noted.

RP-150699 Co-existence evaluations for possible additional TDD configuration(s) Huawei, HiSilicon Disc REL-13 FS_LTE_TDD_add_config
discussion: Co-existence simulations to be captured in RP-150988
conclusion: Noted.

RP-150741 Coexistence simulation results for additional LTE TDD configuration ZTE Disc REL-13 FS_LTE_TDD_add_config
was also by mistake uploaded as RP-150598;
conclusion: revised in RP-150978

RP-150978 Coexistence simulation results for additional LTE TDD configuration ZTE Disc REL-13 FS_LTE_TDD_add_config
discussion: Co-existence simulations to be captured in RP-150988
conclusion: Noted.

RP-150654 Co-existence evaluation results for FS_LTE_TDD_add_config CATT Disc REL-13 FS_LTE_TDD_add_config

Samsung Exhibit 1025, Page 1989 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: revised in RP-150927

RP-150927 Co-existence evaluation results for FS_LTE_TDD_add_config CATT Disc REL-13 FS_LTE_TDD_add_config
discussion: Co-existence simulations to be captured in RP-150988
conclusion: Noted.

RP-150742 Deterministic analysis for additional LTE TDD configuration ZTE Disc REL-13 FS_LTE_TDD_add_config
was also by mistake uploaded as RP-150599
discussion: Co-existence simulations to be captured in RP-150988
conclusion: Noted.

RP-150877 10:0:0 Deterministic Coexistance calculations Sprint Disc REL-13 FS_LTE_TDD_add_config
conclusion: withdrawn

2) Performance Evaluation Set 2 (see TR 36.825 clause 6.1):

RP-150608 Performance evaluation set 2 results for possible additional TDD configuration(s) NEC Disc REL-13 FS_LTE_TDD_add_config
discussion: Performance evaluation results to be included in RP-150989. Author was asked to doublecheck the numbers on the DL gain.
conclusion: Noted.

RP-150655 Performance set 2 evaluation results for FS_LTE_TDD_add_config CATT Disc REL-13 FS_LTE_TDD_add_config
conclusion: revised in RP-150928

RP-150928 Performance set 2 evaluation results for FS_LTE_TDD_add_config CATT Disc REL-13 FS_LTE_TDD_add_config
discussion: Performance evaluation results to be included in RP-150989
conclusion: Noted.

RP-150694 Performance Evaluation of Possible Additional LTE TDD Configurations-Set 2 Ericsson Disc REL-13 FS_LTE_TDD_add_config
discussion: Performance evaluation results to be included in RP-150989
conclusion: Noted.

RP-150776 Simulation results on co-existence evaluation for possible additional TDD configuration LG Electronics Disc REL-13 FS_LTE_TDD_add_config
discussion: Co-existence evaluation results to be included in RP-150988. Performance evaluation results to be included in RP-150989. Document to be considered for the solutions discussions as well.
conclusion: Noted.

RP-150989 P-CR on Performance set 2 evaluation results for FS_LTE_TDD_add_config CATT TP REL-13 FS_LTE_TDD_add_config
discussion: Synthesis and summary of agreeable parts of all performance simulation input documents.
conclusion:Revised to RP-150995.

RP-150995 P-CR on Performance set 2 evaluation results for FS_LTE_TDD_add_config CATT TP REL-13 FS_LTE_TDD_add_config
discussion: Synthesis and summary of agreeable parts of all performance simulation input documents.
conclusion:Revised to RP-151056

RP-151056 P-CR on Performance set 2 evaluation results for FS_LTE_TDD_add_config CATT TP REL-13 FS_LTE_TDD_add_config
discussion: Synthesis and summary of agreeable parts of all performance simulation input documents.
conclusion:Approved.

3) Performance Evaluation Set 1 (see TR 36.825 clause 6.1):

RP-150607 Performance evaluation set 1 results for possible additional TDD configuration(s) NEC Disc REL-13 FS_LTE_TDD_add_config
discussion: Performance evaluation results to be included in RP-150990

Samsung Exhibit 1025, Page 1990 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: Noted.

RP-150665 Simulation results of performance evaluation set 1 CATR Disc REL-13 FS_LTE_TDD_add_config
discussion: Performance evaluation results on Table 2 to be included in RP-150990. Scell configuration should be clarified.
conclusion: Noted.

RP-150698 Performance evaluation set 1 for possible additional TDD configuration(s) Huawei, HiSilicon Disc REL-13 FS_LTE_TDD_add_config
conclusion: revised in RP-150952
RP-150952 Performance evaluation set 1 for possible additional TDD configuration(s) Huawei, HiSilicon Disc REL-13 FS_LTE_TDD_add_config
discussion: Performance evaluation results to be included in RP-150990. Clarification needed on CRS model and Lambda calculation.
conclusion: Noted.

RP-150740 TDD Set 1 Simulation results for different configurations ZTE Disc REL-13 FS_LTE_TDD_add_config
was also by mistake uploaded as RP-150597
discussion: Performance evaluation results to be included in RP-150990. Clarification needed on CRS model and cell selection criteria
conclusion: Noted.

RP-150752 Preliminary performance evaluation for DL-only TDD NTT DOCOMO, INC. Disc REL-13 FS_LTE_TDD_add_config
conclusion: Revised in RP-150986.
RP-150986 Preliminary performance evaluation for DL-only TDD NTT DOCOMO, INC. Disc REL-13 FS_LTE_TDD_add_config
Discussion: Performance evaluation results to be included in RP-150990. Clarification needed on CRS model and cell selection criteria and small cell configuration
Conclusion: Noted.

RP-150990 P-CR on Performance evaluation for DL-only TDD NTT DOCOMO, INC. TP REL-13 FS_LTE_TDD_add_config
Discussion: This P-CR captures all the Performance Evaluation Set1 results
Conclusion: Revised to RP-150996
RP-150996 P-CR on Performance evaluation for DL-only TDD NTT DOCOMO, INC. TP REL-13 FS_LTE_TDD_add_config
Discussion: This P-CR captures all the Performance Evaluation Set1 results
Conclusion: Approved.

4) Solutions to mitigate issues with deploying new TDD configuration

RP-150696 Potential solutions to mitigate the drawbacks of deploying additional TDD configuration Ericsson Disc REL-13 FS_LTE_TDD_add_config
Discussion: Agreed to capture the semi-stastis solution → RP-150991. Clarify what can be derived from PSS/SSS measurements, and whether these are sufficient to decide on allowing the new configuration.
Conclusion: Noted.

RP-150991 P-CR on Potential solutions to mitigate the drawbacks of deploying additional TDD configuration Ericsson TP REL-13 FS_LTE_TDD_add_config
Discussion: This P-CR captures initial description of solutions based on PSS/SSS measurement.
Conclusion: Revised to RP-150997
RP-150997 P-CR on Potential solutions to mitigate the drawbacks of deploying additional TDD configuration Ericsson TP REL-13 FS_LTE_TDD_add_config
Discussion: This P-CR captures initial description of solutions based on PSS/SSS measurement.
Conclusion: Revised to RP-151050
RP-151050 P-CR on Potential solutions to mitigate the drawbacks of deploying additional TDD configuration Ericsson TP REL-13 FS_LTE_TDD_add_config
Discussion: This P-CR captures initial description of solutions based on PSS/SSS measurement.
Conclusion: Revised to RP-151052

Samsung Exhibit 1025, Page 1991 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

RP-151052 P-CR on Potential solutions to mitigate the drawbacks of deploying additional TDD configuration Ericsson TP REL-13 FS_LTE_TDD_add_config
Discussion: This P-CR captures initial description of solutions based on PSS/SSS measurement.
Conclusion: Revised to RP-151057

RP-151057 P-CR on Potential solutions to mitigate the drawbacks of deploying additional TDD configuration Ericsson TP REL-13 FS_LTE_TDD_add_config
Discussion: This P-CR captures initial description of solutions based on PSS/SSS measurement.
Conclusion: Approved.

RP-150828 Co-existence Considerations for Additional Configuration for LTE TDD Nokia Networks Disc REL-13 FS_LTE_TDD_add_config
discussion: To be captured in RP-150991. Clarify that normal TDD configs always take priority in case collision is detected.
conclusion: Noted.

RP-150738 Solutions to mitigate raised concerns on DL only configuration NTT DOCOMO, INC. TP 36.825 REL-13 FS_LTE_TDD_add_config
Tdoc aims to give some solution to mitigate raised concerns in previous meetings
conclusion: Revised to RP-150992

RP-150992 Solutions to mitigate raised concerns on DL only configuration NTT DOCOMO, INC. TP 36.825 REL-13 FS_LTE_TDD_add_config
Tdoc aims to give some solution to mitigate raised concerns in previous meetings
conclusion: Revised to RP-150999

RP-150999 Solutions to mitigate raised concerns on DL only configuration NTT DOCOMO, INC. TP 36.825 REL-13 FS_LTE_TDD_add_config
Tdoc aims to give some solution to mitigate raised concerns in previous meetings
conclusion: Revised to RP-151058.

RP-151058 Solutions to mitigate raised concerns on DL only configuration NTT DOCOMO, INC. TP 36.825 REL-13 FS_LTE_TDD_add_config
Tdoc aims to give some solution to mitigate raised concerns in previous meetings
conclusion: TP is approved.

5) Other aspects:

RP-150766 Intra-operator synchronization aspects Qualcomm TP 36.825 REL-13 FS_LTE_TDD_add_config
discussion: Clarify that the text aplies to both existing and new TDD configuration.
conclusion: Revised to RP-151051

RP-151051 Intra-operator synchronization aspects Qualcomm TP 36.825 REL-13 FS_LTE_TDD_add_config
conclusion: Approved.

RP-150663 Views on the eco-system impact of possible additional TDD configuration(s) CATR Disc REL-13 FS_LTE_TDD_add_config
wrong AI 12.4.5 in Tdoc request
conclusion: withdrawn

RP-150664 Views on the eco-system impact of possible additional TDD configuration(s) CATR Disc REL-13 FS_LTE_TDD_add_config
discussion: Attempt to add text on mandatory testing for both new and old configurations into RP-150999.
conclusion: Noted.

RP-150867 Benefits/drawbacks and ecosystem aspects on possible configuration for TD-LTE Vodafone, NTT DOCOMO TP 36.825 REL-13 FS_LTE_TDD_add_config
Considerations on additional TDD configuration
discussion: Dynamics of comparison is changing considerably based on results reviewed at this meeting. Author is asked to bring back a revised comparison table for the next meeting accordingly.
conclusion: Noted.

RP-150804 Text Proposal for Frequency Bands in TR 36.825 CMCC TP 36.825 REL-13 FS_LTE_TDD_add_config

Samsung Exhibit 1025, Page 1992 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

conclusion: ~~Noted.~~Rejected

RP-150825 Text proposal TR 36.825: Frequency bands Orange TP 36.825 REL-13 FS_LTE_TDD_add_config
re-submission of document RP-150463 proposed in RAN#67
conclusion: ~~Noted.~~Rejected

Samsung Exhibit 1025, Page 1993 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Annex I:
History

Document history		
Date	**TSG RAN Tdoc**	**Subject**
14.06.2015	-	Skeleton report for RAN #68 provided before the meeting.
18.06.2015	-	Draft report of RAN #68 provided directly after RAN #68
03.08.2015	RP-151121	Draft report of RAN #68 v1.0 provided as input to RAN #69

In case of comments/questions/corrections please contact:

Author: **Dr. Joern Krause (3GPP TSG RAN MCC Support)**

ETSI Mobile Competence Centre (MCC)
Tel. +33-492-94 4261
email: Joern.Krause@etsi.org

Samsung Exhibit 1025, Page 1994 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614

Appendix 47

3GPP_TSG_RAN Archives
August 2015, Week 1

3GPP_TSG_RAN@LIST.ETSI.ORG

Options: Use Monospaced Font
Show Text Part by Default
Show All Mail Headers

Message: [<< First] [< Prev] [Next >] [Last >>]
Topic: [<< First] [< Prev] [Next >] [Last >>]
Author: [<< First] [< Prev] [Next >] [Last >>]

Subject: latest version of RAN #68 report
From: Joern Krause <[log in to unmask]>
Reply To: Joern Krause <[log in to unmask]>
Date: Mon, 3 Aug 2015 17:33:21 +0000
Content-Type: multipart/mixed
Parts/Attachments: text/plain (343 bytes) , text/html (2610 bytes) , RP-151121.zip (2 MB)

Dear all,
Please find attached the latest version of the draft report of RAN #68 held in Malmoe in June 2015 including Tdoc/CR list, participants list, statistics etc.
In case you detect any problems/discrepancies, please send me an email before Sep.15.
Thanks.
BR
Joern

Joern Krause, ETSI MCC
[log in to unmask]

ATOM RSS1 RSS2

Samsung Exhibit 1025, Page 1996 of 1996
Samsung Electronics Co., Ltd. v. Asus Technology Licensing Inc.
IPR2024-00614