

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AT&T MOBILITY LLC, AT&T SERVICES INC., ERICSSON INC., NOKIA OF
AMERICA CORPORATION, T-MOBILE USA, INC.
Petitioners,

v.

DAINGEAN TECHNOLOGIES LTD.,
Patent Owner.

Case No. IPR2024-00644
U.S. Patent No. 11,134,400

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 11,134,400**

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LIST OF EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No. 11,134,400 (“’400 Patent”)
1002	Prosecution History of U.S. Patent No. 11,134,400 (“’400 File History”)
1003	Declaration of Mark Mahon, Ph.D. (“Mahon Declaration”)
1004	Curriculum Vitae of Mark Mahon, Ph.D.
1005	Ericsson, “SRBs needed for direct RRC from SN,” 3GPP TSG-RAN WG2 #97bis, Spokane, USA (April 2017) (“R2-1702708”)
1006	Screenshot of https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_97bis
1007	Screenshot of https://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_97bis/Docs
1008	Dahlman et al., 4G, LTE-ADVANCED PRO AND THE ROAD TO 5G (3 rd ed. 2016) (“Dahlman”)
1009	3GPP TS 36.331 V13.0.0 (Jan. 2016) (“TS 36.331”)

AT&T Mobility LLC, AT&T Services Inc., Ericsson Inc., Nokia of America Corporation, and T-Mobile USA, Inc. (collectively, “Petitioners”) petition for *Inter Partes* Review (“IPR”) of claims 5, 7 and 8 (the “Challenged Claims”) of U.S. Patent No. 11,134,400 (“the ’400 Patent”) (Ex-1001), which, according to PTO records, is assigned to Daingean Technologies Ltd. (“Daingean” or “Patent Owner”). For the reasons set forth below, the Challenged Claims should be found unpatentable and canceled.

I. MANDATORY NOTICES UNDER 37 C.F.R. § 42.8

Real Parties-in-Interest: Petitioners identify the following as the real parties-in-interest: AT&T Corp, AT&T Mobility LLC, AT&T Mobility II LLC, AT&T Services Inc., Ericsson Inc., Nokia of America Corporation, and T-Mobile USA, Inc. No other parties have directed, funded, or controlled the filing of this petition.

Related Matters: The ’400 Patent was asserted in *Daingean Tech. Ltd. v. AT&T Inc. et al.*, 2:23-cv-00123-JRG (E.D. Tex. Mar. 24, 2023) and *Daingean Tech. Ltd. v. T-Mobile USA, Inc.*, 2:23-cv-00347-JRG (E.D. Tex. July 24, 2023) but has been dismissed in both matters.

Counsel and Service Information:

Petitioners identify lead and backup counsel below. A Power of Attorney is filed concurrently herewith under 37 C.F.R. § 42.10(b). Petitioners consent to email service at: ATT_Daingean@mckoolsmith.com.

Lead Counsel	Backup Counsel
Matthew T. Cameron Reg. No. 74,179 mcameron@McKoolSmith.com MCKOOL SMITH P.C. 303 Colorado Street, Suite 2100 Austin, TX 78701 Telephone: 512.692.8700 Facsimile: 512.692.8744	Nicholas Mathews Reg. No. 66,067 nmathews@McKoolSmith.com MCKOOL SMITH P.C. 300 Crescent Court, Suite 1500 Dallas, TX 75201 Telephone: 214.978.4241 Facsimile: 214.978.4044

A copy of this entire Petition, including all Exhibits and a Power of Attorney, is being served by FEDERAL EXPRESS, costs prepaid, to the address of the attorney or agent of record for Patent Owner: FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP, 901 NEW YORK AVENUE, NW, WASHINGTON, DC 20001-4413.

II. FEES

The Office is authorized to charge the fee in 37 C.F.R. § 42.15(a) to Deposit Account No. DA-505723 and any additional fees that are due.

III. REQUIREMENTS FOR IPR

A. Grounds for Standing

Petitioners certify that the '400 Patent is available for IPR and Petitioners are not barred or estopped from requesting IPR on the grounds identified herein.

B. Challenge and Relief Requested

Petitioners request IPR of claims 5, 7, and 8 of the '400 Patent on the following grounds:

Ground	Claims	Basis
1	5, 7, and 8	§ 102 and/or § 103 – R2-1702708

IV. INTRODUCTION

The Challenged Claims are directed to systems and methods concerning the transmission of uplink communications—*i.e.*, communications from user equipment or “UE” to a base station—in wireless networks that support dual-connectivity. In such a configuration, the user equipment transmits data to two base stations at the same time: a Master Cell Group (“MCG”) of a master base station and a Secondary Cell Group (“SCG”) of a secondary base station. If it is imperative for the UE’s transmission to be successfully decoded by the network on the first attempt, the UE can transmit the same data to both base stations via duplicate transmissions. This

redundancy increases the likelihood that at least one of the base station will be able to decode the UE's transmission.

Patent Owner admits these elements were known in the art. For example, the '400 Patent acknowledges that the organization responsible for the technical specifications underpinning fifth generation ("5G") wireless standards, the Third-Generation Partnership Project ("3GPP"), agreed to use duplicated uplink transmissions to help meet the reliability requirements of 5G networks. Ex-1001 at 1:26-29. In fact, the '400 Patent concedes that, in pre-existing dual-connectivity communications systems, 3GPP agreed "to use a Master Cell Group (MCG) duplicated Signaling Radio Bearer (SRB)" and that it was further agreed to "configured the MCG duplicated SRB via Radio Resource Control ("RRC") signaling of the master base station." *Id.* at 1:26-47.

What Patent Owner neglected to disclose in the '400 Patent is that the claimed solution to "problems related to [the] occurrence of an SCG failure when RRC signaling configures, for an MCG duplicated SRB, uplink transmission to adopt an SCG in a dual-connectivity scenario supporting packet duplication" (*id.* at 1:48-52) was also known in the prior art. In fact, the purported invention was publically disclosed by Petitioner Ericsson in connection with the very 3GPP work Patent Owner references in the '400 Patent. As explained below, one of Ericsson's

published technical contributions, R2-1702708, discloses or, at the very least, renders obvious each and every element of the Challenged Claims.

V. BACKGROUND AND SUMMARY OF THE '400 PATENT

A. Dual-Connectivity

In modern wireless telecommunications networks, user equipment (“UE”) may be simultaneously connected to two or more wireless access nodes, such as a master node and a secondary node, to enhance network reliability and performance. As shown below, this configuration is referred to as dual connectivity.

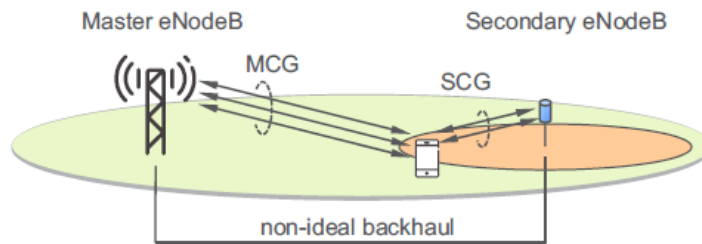


FIGURE 16.2

Dual connectivity.

Ex-1008 at 374; Ex-1003, ¶¶ 41-42.

In a dual-connectivity configuration, a master node implements a Master Cell Group (“MCG”) and serves as the anchor for the UE’s connection to the network. Ex-1003, ¶¶ 41-42. A secondary node implements a Secondary Cell Group (“SCG”) that is capable of sending and/or receiving messages from the UE at the same time as the MCG. Ex-1003, ¶ 42. Depending on the configuration, a communications system may include multiple MCGs and/or SCGs. *Id.*, ¶ 42.

In a dual-connected state, a UE may transmit different information to the MCG and SCG, which effectively increases the amount of data that can be communicated between the UE and the network. *Id.*, ¶ 42. Alternatively, a UE may transmit the same information to the MCG and SCG simultaneously, resulting in increased reliability. *Id.*, ¶ 42.

B. Types of Radio Bearers

The wireless communications channel between a UE and a base station is called a radio bearer. There are two main types of radio bearers: (1) data radio bearers or “DRBs” and (2) signaling radio bearers or “SRBs.” Ex-1003, ¶ 43. DRBs carry user data between the UE and the network. *Id.*, ¶ 44. By contrast, SRBs carry control signaling between the UE and the network. *Id.*, ¶ 45.

C. The Purported Invention Claimed in the ’400 Patent

The ’400 Patent is generally directed to methods and systems for “detecting an SCG failure[] and reconfiguring the MCG duplicated SRB to be used for uplink transmission via the MCG.” Ex-1001 at Abstract. As explained in the specification, the phrase “MCG duplicated SRB” refers to “an MCG split SRB configured with packet duplication,” which indicates that the MCG (*i.e.*, the master base station) contains the software entity responsible for de-duplicating packets received from the UE and duplicating packets to be sent to the UE. Ex-1001 at 6:48-50; Ex-1003, ¶ 65.

The alleged invention of the '400 Patent is directed to methods and systems comprising an MCG base station which communicates with UE over a first MCG duplicated SRB and a second MCG duplicated SRB. Ex-1001 at 17:9-21. The Challenged Claims require “receiving, from the UE, a report of an SCG failure; reconfiguring the first MCG duplicated SRB to receive uplink transmission via the MCG; and reconfiguring the second MCG duplicated SRB to receive uplink transmission via the MCG.” *Id.* In other words, the alleged invention is little more than a 2-step process that involves receiving an SCG failure report from UE and releasing the failed connection in subsequent uplink transmissions. Ex-1003, ¶ 51. The 2-step process of the Challenged Claims is illustrated in Figure 5 of the '400 Patent, which is reproduced below.

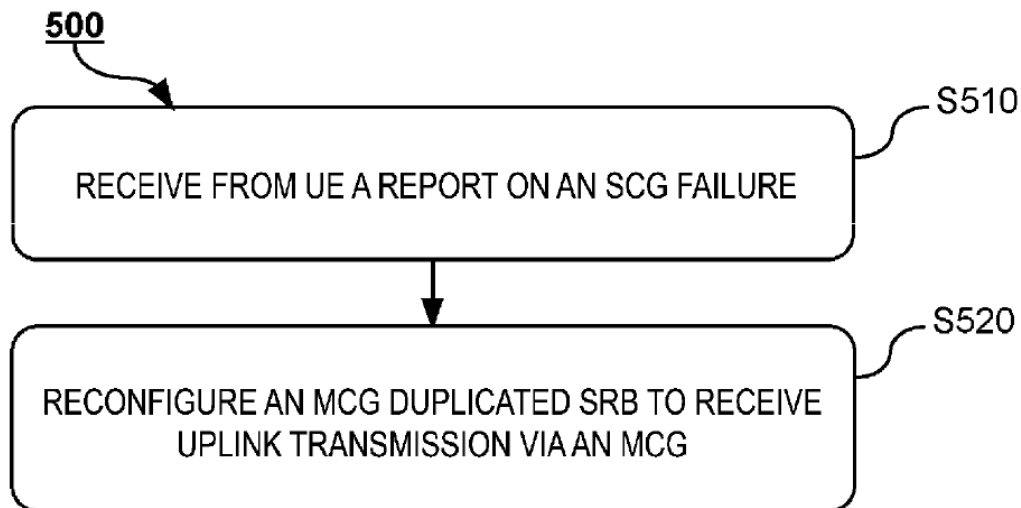


FIG. 5

Ex-1001 at Fig. 5; *see also id.* at 14:29-51.

The '400 Patent discloses that the master base station uses Radio Resource Control (“RRC”) signaling to configure or reconfigure MCG duplicated SRBs. *Id.* at 7:11-15. This RRC signaling may “carr[y] an indicator for indicating” the type of uplink transmission that the UE should use. *Id.* at 7:18-20. The “value” of the “indicator may be MCG, SCG, both, or duplicate.” *Id.* at 7:29-30. When the indicator value is MCG or SCG, the UE transmits uplink data to only one cell group: either the MCG or the SCG. *Id.* at 7:30-39. By contrast, when the indicator value is “both or duplicate, it indicates that the uplink transmission of the MCG duplicated SRB1 adopts the MCG and the SCG,” and the UE transmits “the same data of SRB1” to both cell groups at the same time. *Id.* at 7:39-8:3.

VI. CLAIM CONSTRUCTION

In IPR proceedings, a claim is construed “using the same claim construction standard that would be used to construe the claim in a civil action....” 37 C.F.R. § 42.100(b). The Board only construes the claims when necessary to resolve the underlying controversy. *Toyota Motor Corp. v. Cellport Systems, Inc.*, IPR2015-00633, Paper 11 at 16 (PTAB Aug. 14, 2015); *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999). Petitioners respectfully submit that no terms need to be construed to resolve the issues raised in this Petition because the prior art

discloses all limitations under the plain meaning as well as any plausible construction. Ex-1003, ¶ 52.

VII. LEVEL OF ORDINARY SKILL

A person of ordinary skill in the art at the time of the alleged invention of the '400 Patent ("POSITA"), which for purposes of this proceeding is on or around August 10, 2017, would have had a B.S. in Electrical Engineering or a related field with at least two years of experience designing, developing, and/or testing telecommunication systems. *Id.*, ¶¶ 35-36. A POSITA would also have familiarity with the wireless standards and well-known protocols for configuring/reconfiguring connections over the air interface used in such standards. *Id.*, ¶ 36. More education may supplement practical experience or *vice versa*. *Id.*

VIII. 35 U.S.C. §325(d) is Inapplicable

The asserted references were not in an IDS filed during the prosecution of the '400 Patent and the Examiner never identified them or used them to reject claims during prosecution. *See generally* Ex-1002. The Examiner also never considered the testimony of Petitioner's expert, Dr. Mahon (Ex-1003), regarding these references and the knowledge of a POSITA. The grounds for invalidity advanced in this Petition are not substantially the same as prior art or arguments the Office previously considered. 35 U.S.C. §325(d) is inapplicable to this case.

IX. PRIOR ART

A. Overview of R2-1702708

R2-1702708 is a 3GPP technical contribution submitted by Ericsson in connection with the 3GPP TSG-RAN WG2 #97bis meeting in Spokane, Washington on April 3-7, 2017. Ex-1005. This reference generally describes methods and systems for RRC signaling in “LTE-NR tight interworking scenarios where LTE is the MN [*i.e.*, master node] and NR is the SN [*i.e.*, secondary node].” *Id.* at 1. To support such “LTE-NR tight interworking” (*i.e.*, a dual-connectivity configuration that uses an LTE base station as the MN and an NR base station as the SN), R2-1702708 discloses that at least two SRBs, SRB1 and SRB2, can be “split for the sake of faster transmission or increased reliability (*i.e.* duplication).” *Id.* at 2. Figure 1 of R2-1702708 (copied below) depicts a UE transmitting these split SRBs to an LTE MN and an NR SN.

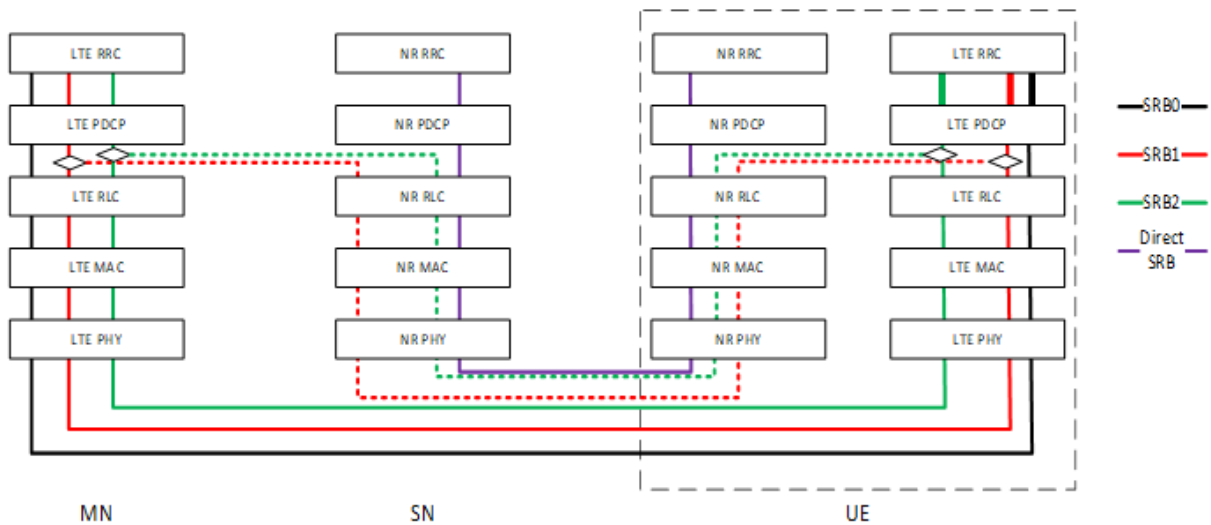


Figure 1: SRBs for LTE-NR tight interworking

Id. at 3.

As shown above, R2-1702708 teaches a first split SRB (“SRB1”) that links the UE to both an LTE MN and an NR SN. Ex-1005 at 3. These connections to the LTE MN and the NR SN are represented by a solid red line and a dotted red line, respectively. Ex-1003, ¶ 54. In a similar vein, R2-1702708 teaches a second split SRB (“SRB2”) that links the UE to both the LTE MN and the NR SN. Ex-1005 at 3. These connections to the LTE MN and the NR SN are represented by a solid green line and a dotted green line, respectively. Ex-1003, ¶ 54.

R2-1702708 further discloses that “if the UE experiences RLF [*i.e.*, radio link failure] on the SCG,” the UE transmits an “*SCGFailureInformation* message” to the MN. *Id.* at 1. As explained in R2-1702708, the MN responds to such messages by releasing and/or changing the SN to which the UE was connected when the radio

link failure occurred. *Id.* at 1; Ex-1003, ¶ 55. In other words, R2-1702708 teaches that the MN reconfigures one or more split SRBs (*i.e.*, SRB1 and/or SRB2) by instructing the UE to stop using the defective link(s) between the UE and the SN.

B. R2-1702708 Qualifies as Prior Art to the Challenged Claims

The earliest possible priority date of the '400 Patent is August 10, 2017. *See* Ex-1001 at Cover (claiming priority to a foreign patent application filed August 10, 2017). R2-1702708 was published on March 25, 2017 in advance of a 3GPP working group meeting that occurred in Spokane, Washington from April 3, 2017 to April 7, 2017. Ex-1003, ¶¶ 57-60; *see also* Ex-1005 at Cover (“Spokane, USA, 3rd – 7th April 2017”). Accordingly, R2-1702708 is prior art to the Challenged Claims under at least post-AIA § 102(a)(1) as a printed publication available to the public prior to August 10, 2017.

As explained in detail by Petitioners’ expert, Dr. Mark Mahon, R2-1702708 was publically accessible as of the date it was uploaded to 3GPP’s public file server (<https://www.3gpp.org/ftp/>). Ex-1003, ¶¶ 57-60. Indeed, at least one PTAB panel has found that this is true of all 3GPP documents:

TR 33.821 and TS 23.401, **like all 3GPP documents**, were generated with intent to distribute them to interested members of the telecommunications industry. **They were uploaded to 3GPP’s FTP server without restriction or expectation of confidentiality, and were indefinitely maintained there.** They have been available for downloading (copying) from the FTP server since being

uploaded, and can be shared with others without restriction. **Under such circumstances, the documents are publicly accessible.**

Samsung Electronics Co., Ltd. v. Huawei Technologies Co., Ltd., IPR2017-01487, Decision on Institution, 2018 WL 6519544, *5 (PTAB Dec. 10, 2018) (emphasis added).

In this case, Ericsson uploaded R2-1702708 to 3GPP's public file server on "2017/03/25 0:20." Ex-1003, ¶ 59 (citing Ex-1007, which a screenshot showing the upload date of R2-1702708). Since March 25, 2017, R2-1702708 has been available to interested members of the telecommunications industry and the general public without restriction. Ex-1003, ¶¶ 57-60. Thus, R2-1702708 qualifies as a prior-art "printed publication" to the '400 Patent under post-AIA 35 U.S.C. § 102(a)(1).

X. ASSERTED GROUNDS OF UNPATENTABILITY

A. Ground 1 – Claims 5, 7, and 8 of the '400 Patent Are Anticipated and/or Rendered Obvious By R2-1702708

1. Claim 5

- a. R2-1702708 discloses "A method for a base station, wherein the base station includes a Master Cell Group (MCG) base station and communicates with User Equipment (UE) over a first MCG duplicated Signaling Radio Bearer (SRB) and a second MCG duplicated SRB, and the first MCG duplicated SRB is associated with the MCG and a Secondary Cell Group (SCG) and configured to be used for uplink transmission via the SCG"**

R2-1702708 discloses a Master Cell Group ("MCG") base station that communicates with User Equipment ("UE") over a first MCG duplicated Signaling

Radio Bearer (“SRB”) and a second MCG duplicated SRB. The claimed configuration is depicted in Figure 1 of R2-1702708, which is reproduced below.

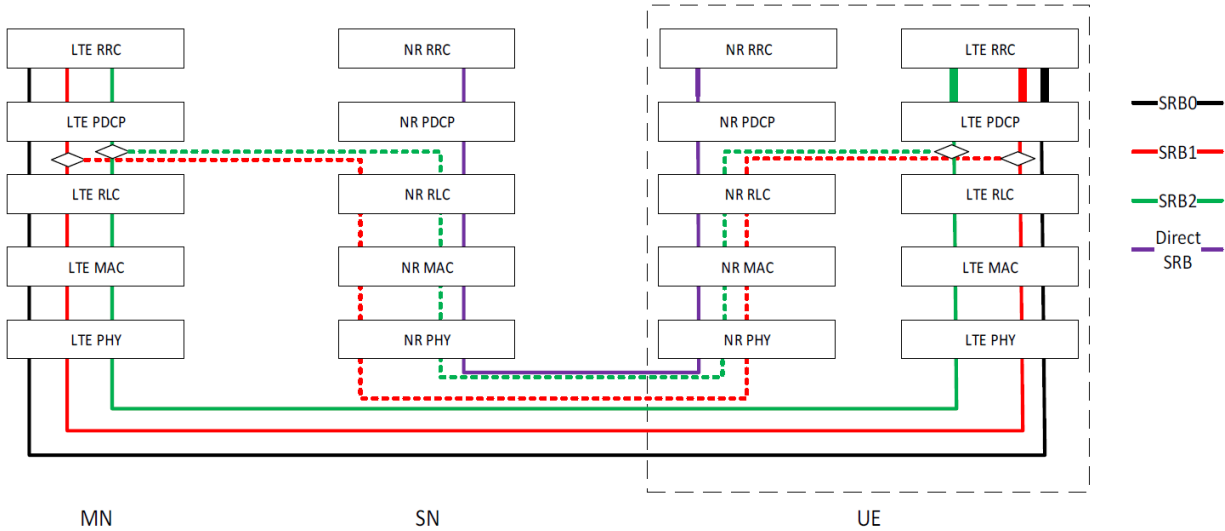


Figure 1: SRBs for LTE-NR tight interworking

Ex-1005 at 3. As shown above, the red line (labeled “SRB1”) is the claimed “first MCG duplicated SRB” and allows for communication between the MN (*i.e.*, the claimed “MCG base station”) and the UE. Ex-1003, ¶¶ 61-66. The green line (labeled “SRB2”) is the claimed “second MCG duplicated SRB,” which also allows for communication between the MN and UE. *Id.*

R2-1702708 also teaches that “the first MCG duplicated SRB is associated with the MCG and a Secondary Cell Group (SCG) and configured to be used for uplink transmission via the SCG.” Ex-1001 at Claim 5. As shown in the figure reproduced above, SRB1 is split between the MN and the SN and thus allows the network to receive uplink transmissions from the UE via both nodes. Ex-1005 at 2-

3; Ex-1003, ¶ 54. Likewise, SRB2 is split between the MN and the SN, and allows for uplink communication via both nodes. R2-1702708 teaches that these split SRBs can be used for duplicated uplink transmission to make the overall connection between the UE and the network more reliable. *See* Ex-1005 at 2 (“Also note that SRB1 and SRB2 between the MN and UE could be optionally split for the sake of faster transmission or increased reliability (i.e. duplication).”); *see also* Ex-1003, ¶¶ 42, 54, 63 (further explaining why split SRBs that are duplicated increase reliability, while split SRBs that are not duplicated enable faster transmission).

Thus, R2-1702708 discloses “[a] method for a base station, wherein the base station includes a Master Cell Group (MCG) base station and communicates with User Equipment (UE) over a first MCG duplicated Signaling Radio Bearer (SRB) and a second MCG duplicated SRB, and the first MCG duplicated SRB is associated with the MCG and a Secondary Cell Group (SCG) and configured to be used for uplink transmission via the SCG, the method comprising.” Ex-1001 at Claim 5.

b. R2-1702708 discloses “receiving, from the UE, a report of an SCG failure;”

R2-1702708 discloses receiving, from the UE, a report of an SCG failure. For example, R2-1702708 teaches “if the UE experiences RLF [radio link failure] on the SCG...an *SCGFailureInformation* message is transmitted to the MN and the MN can decide to release or/and change the SN based on [the received message].” Ex-

1005 at 1. As the name of this message implies, the *SCGFailureInformation* message is a report of an SCG failure that the MN receives from the UE. Ex-1003, ¶ 67.

Thus, R2-1702708 discloses “receiving, from the UE, a report of an SCG failure.” Ex-1001 at Claim 1.

c. R2-1702708 discloses or renders obvious “reconfiguring the first MCG duplicated SRB to receive uplink transmission via the MCG; and”

R2-1702708 discloses or renders obvious “reconfiguring the first MCG duplicated SRB to receive uplink transmission via the MCG.” Ex-1001 at Claim 5; Ex-1003, ¶¶ 68-72.

In the “Background” section of the ’400 Patent, Patent Owner admits that “configur[ing] the MCG duplicated SRB via Radio Resource Control (RRC) signaling of the master base station” was known in the prior art. Ex-1001 at 1:36-42. Patent Owner also admits “that in a dual-connectivity scenario, for the MCG duplicated SRB, whether uplink transmission is performed by adopting an MCG, a Secondary Cell Group (SCG), or both the MCG and the SCG in a duplicate transmission mode is configured via RRC signaling.” Ex-1001 at 1:42-47. These admissions are binding on Patent Owner in this proceeding, *see Qualcomm Inc. v. Apple Inc.*, 24 F.4th 1367, 1376 (Fed. Cir. 2022), and evidence that the claimed “reconfiguring” step was well known in the prior art.

Consistent with Patent Owner's admissions, R2-1702708 teaches that the network implements "SN RRC reconfigurations" by delivering "SN RRC messages" to the UE. Ex-1005 at 1. The network can deliver such messages to the UE directly via the SN or indirectly by "embed[ing] [them] within a MN RRC message." *Id.* at 1. In either case, the network reconfigures the first MCG duplicated SRB (*e.g.*, SRB1 disclosed in R2-1702708) to receive subsequent transmissions via the MCG. Ex-1003, ¶¶ 69-70.

To the extent Patent Owner alleges the admitted prior art and/or the express teachings of R2-1702708 do not disclose this limitation, it would have been obvious to a POSITA. *Id.* ¶¶ 71-72. As noted above, R2-1702708 discloses that the UE transmits an *SCGFailureInformation* message to the MN if the UE experiences radio link failure on the SCG. Ex-1005 at 1. Specifically, the *SCGFailureInformation* message informs the network that the UE-SCG link in a split SRB configuration has failed, while the UE-MCG link remains operational. Ex-1003, ¶ 71. Under these circumstances, it is pointless and wasteful for the UE to continue transmitting messages over the failed UE-SCG link. Ex-1003, ¶ 72. This is precisely why R2-1702708 discloses that in response to receiving the *SCGFailureInformation* message, "the MN can decide to *release* or/and change *the SN*" to address the failed connection between the UE and the SN. EX-1005 at 1 (emphasis added); Ex-1003, ¶ 72. As explained by Dr. Mahon, it would have been obvious to POSITA to use an

RRC reconfiguration message (such as those expressly taught in R2-1702708) “to release . . . the SN” when there is a radio link failure between the UE and the SN. Ex-1003, ¶¶ 71-72.

This is further illustrated by the following annotations to Figure 1 of R2-1702708. The figure labeled “Pre-SCG Failure for SRB1” shows SRB1 split between the MN/MCG and SN/SCG, while the figure labeled “Post-SCG Failure for SRB1” shows the configuration of SRB1 after the radio link to the SN/SCG has failed and the MN has made the decision to release the failed connection. Ex-1003, ¶70. As shown below, the natural result of the MN/MCG’s decision “to release” the failed SN/SCG is that subsequent transmissions of SRB1 are directed to the MN/MCG alone:

Figure 1: Pre-SCG Failure for SRB1

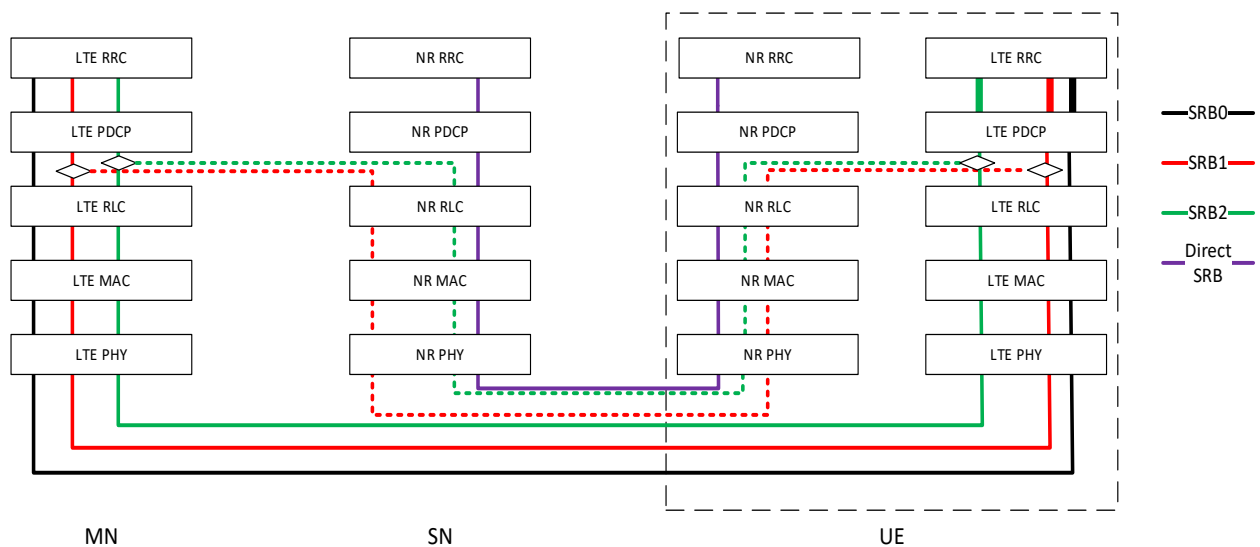
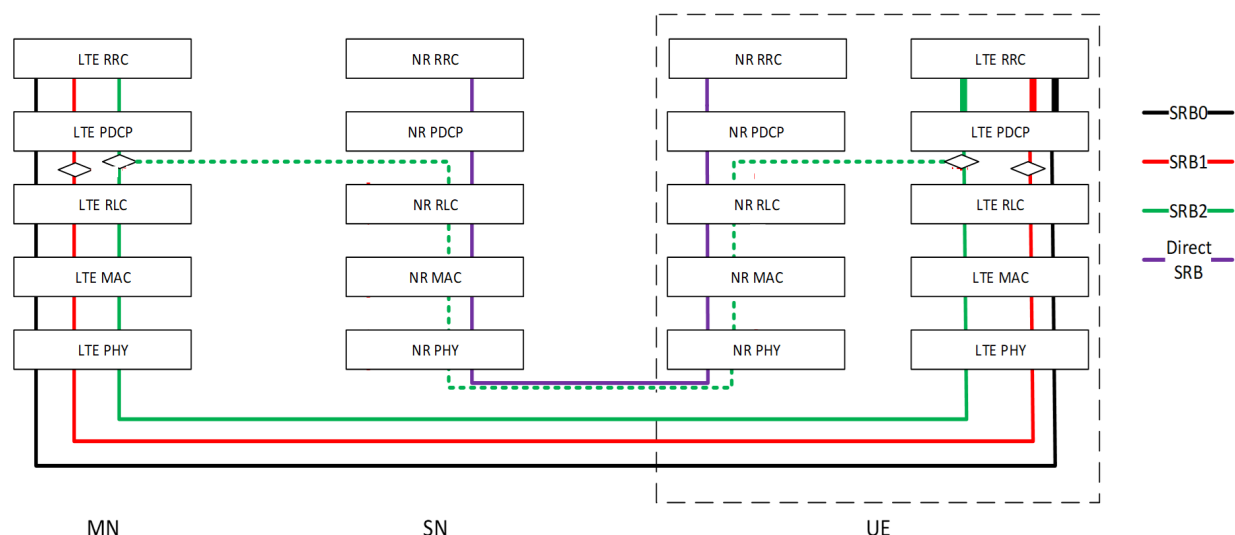


Figure 1: Post-SCG Failure for SRB1



Ex-1005 at 3 (annotations added to illustrate “releas[ing]” SRB1 between the UE and the SN/SCG); Ex-1003, ¶ 70.

As a result, the step of “reconfiguring the first MCG duplicated SRB to receive uplink transmission via the MCG” (Ex-1001 at Claim 5) is, at most, an obvious modification to R2-1702708 based on the ordinary common sense of a POSITA. *See Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361 (Fed. Cir. 2016) (“Hence, we do consider common sense, common wisdom, and common knowledge in analyzing obviousness.”); *see also Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1329 (Fed. Cir. 2009) (“We therefore hold that while an analysis of obviousness always depends on evidence that supports the required *Graham* factual findings, it also may include recourse to logic, judgment, and common sense available to the

person of ordinary skill that do not necessarily require explication in any reference or expert opinion.”).

Thus, R2-1702708 discloses or renders obvious “reconfiguring the first MCG duplicated SRB to receive uplink transmission via the MCG.” Ex-1001 at Claim 5.

d. R2-1702708 discloses “reconfiguring the second MCG duplicated SRB to receive uplink transmission via the MCG.”

R2-1702708 discloses or renders obvious “reconfiguring the second MCG duplicated SRB to receive uplink transmission via the MCG” for essentially the same reasons discussed above with respect to “reconfiguring the first MCG duplicated SRB.” *See supra* § X.A.1.c; Ex-1003, ¶ 73. The only difference is that the “second MCG duplicated SRB” disclosed in R2-1702708 is SRB2, while the “first MCG duplicated SRB” is SRB1. Ex-1005 at 1-2; Ex-1003, ¶ 73. If there is a failure in the link between the UE and the SN/SCG with respect to SRB2, R2-1702708 teaches or, at the very least, renders obvious the step of reconfiguring the connection such that subsequent uplink transmissions are received via the MN/MCG alone rather than both the MN/MCG and SN/SCG. Ex-1005 at 1; Ex-1003, ¶¶ 71-73.

Thus, R2-1702708 discloses or renders obvious “reconfiguring the second MCG duplicated SRB to receive uplink transmission via the MCG.” Ex-1001 at Claim 5.

2. Claim 7

- a. **R2-1702708 discloses or renders obvious “The method according to claim 5, further comprising: transmitting, to the UE, information instructing the UE whether to perform uplink transmission via the MCG when the SCG failure is detected.”**

As discussed above, R2-1702708 discloses or renders obvious Claim 5. *See supra* § X.A.1.

R2-1702708 further discloses or renders obvious “transmitting, to the UE, information instructing the UE whether to perform uplink transmission via the MCG when the SCG failure is detected.” Ex-1001 at Claim 7; Ex-1003, ¶¶ 74-77. As noted above, R2-1702708 teaches “if the UE experiences RLF [radio link failure] on the SCG...an *SCGFailureInformation* message is transmitted to the MN and *the MN can decide to release or/and change the SN* based on [the received message].” Ex-1005 at 1 (emphasis added). The MN’s decision to “release or/and change the SN” based on the *SCGFailureInformation* message is necessarily carried out by control information that the MN transmits to the UE that experienced the SCG radio link failure. Ex-1003, ¶ 76; *see also* Ex-1005 at 1 (disclosing that the MN reconfigures the SCG link using an “MN RRC message [that] is delivered with an embedded SN RRC message”). It is impossible for the MN to “release or/and change the SN” without transmitting such information to the UE. Ex-1003, ¶¶ 76-77. As a result, the step of “transmitting, to the UE, information instructing the UE whether to perform

uplink transmission via the MCG when the SCG failure is detected” (Ex-1001 at Claim 7) is, at the very least, inherently disclosed in R2-1702708.

Thus, R2-1702708 discloses or renders obvious “the method according to claim 5, further comprising: transmitting, to the UE, information instructing the UE whether to perform uplink transmission via the MCG when the SCG failure is detected.” Ex-1001 at Claim 7.

3. Claim 8

Claim 8 of the ’400 Patent recites:

A base station, wherein the base station includes a Master Cell Group (MCG) base station and communicates with User Equipment (UE) over a first MCG duplicated Signaling Radio Bearer (SRB) and a second MCG duplicated SRB, and the first MCG duplicated SRB is associated with the MCG and a Secondary Cell Group (SCG) and configured to be used for uplink transmission via the SCG, the base station comprising:

a memory storing instructions; and

a processor configured to execute the instructions to cause the base station to:

receive, from the UE, a report of an SCG failure;

reconfigure the first MCG duplicated SRB to receive uplink transmission via the MCG; and

reconfigure the second MCG duplicated SRB to receive uplink transmission via the MCG.

Claim 8 is anticipated and/or rendered obvious by R2-1702708 for the same reasons discussed with respect to Claim 5, *supra* § X.A.1. The only difference

between Claim 5 and Claim 8 is that Claim 8 requires a “memory storing instructions” and a “processor configured to execute” each of the claimed “receiv[ing],” “reconfigur[ing],” and “reconfigure[ing]” functions. Ex-1003, ¶¶ 78-79. The base station disclosed in R2-1702708 necessarily comprises “a memory storing instructions[] and a processor configured to execute the instructions” for performing the claimed functions. *Id.*; *see also Ciba–Geigy Corp. v. Alza Corp.*, No. 95-1046, 68 F.3d 487, 1995 WL 598380, at *2 (Fed. Cir. 1995) (explaining that extrinsic evidence “may be used to interpret the allegedly anticipating reference and [to] shed light on what it would have meant to [a PHOSITA].”). Specifically, the master node (MN) taught in R2-1702708 cannot “decide to release or/and change the SN [secondary node]” based on an SCGFailureInformation message without memory and at least one processor configured to carry out the necessary functions. *See* Ex-1005 at 1; *see also* Ex-1003, ¶¶ 78-79.

Thus, R2-1702708 anticipates and/or renders obvious Claim 8. Ex-1001 at Claim 8.

XI. CONCLUSION

For the reasons given above, Petitioners request institution of *inter partes* review of the '400 Patent to cancel the Challenged Claims based on the grounds specified in this petition.

Respectfully submitted,

Dated: March 27, 2024

By: Matthew T. Cameron /

Matthew T. Cameron
Reg. No. 74,179
Counsel for Petitioners

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 11,134,400 contains, as measured by the word processing system used to prepare this paper, 4,125 words. This word count does not include the items excluded by 37 C.F.R. § 42.24 as not counting towards the word limit.

Dated: March 27, 2024

By: Matthew T. Cameron /

Matthew T. Cameron
Reg. No. 74,179
Counsel for Petitioners

CERTIFICATE OF SERVICE

I hereby certify that on March 27, 2024, I caused a true and correct copy of the foregoing Petition for *Inter Partes* Review of U.S. Patent No. 11,134,400 and supporting exhibits was served on the following parties via Federal Express or Express Mail:

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP
901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

*

A courtesy copy was also sent via electronic mail to Patent Owner's litigation counsel listed below:

Demetrios Anaipakos

DTL-AAteam@atriallaw.com

Amir H. Alavi

Michael McBride

ALAVI & ANAIPAKOS PLLC

Michael Heim

DaingeanTT@hpcllp.com

Eric Enger

R. Allan Bullwinkel

Alden Harris

Blaine Larson

HEIM PAYNE & CHORUSH LLP

Andrea L. Fair

WARD, SMITH & HILL, PLLC

andrea@wsfirm.com

By: Matthew T. Cameron /

Matthew T. Cameron

Reg. No. 74,179

Counsel for Petitioners