

APPENDIX A

Invalidity of U.S. Patent No. 11,627,631 (“’631 Patent”) Obvious Combinations

1. Claim 1

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
1[pre]	A method for transmitting and receiving data, the method comprising:	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5. U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12.

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
		R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14. U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028]. U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].
1[a]	deciding, by a source base station (BS), whether to perform a handover;	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5. U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6.

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		U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14. U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028]. U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-0175].

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		U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].
1[b]	transmitting, from the source BS to a target BS, a handover request message when it is decided to perform the handover,	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5. U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13.

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		R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14. U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028]. U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-[0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].
1[c]	wherein the handover request message includes network slice information; and	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5. U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7.

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		U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14. U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028]. U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-[0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].

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1[d]	receiving, by the source BS from the target BS, a handover request confirmation message in response to the handover request message,	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5. U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14.

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		U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028]. U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].
1[e]	wherein, if one or more protocol data unit (PDU) sessions are associated with one or more network slices that are not supported by the target BS, the handover request confirmation message includes information for indicating a rejection of the one or more PDU sessions by the target BS.	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5. U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8.

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		U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14. U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028]. U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].

2. Claim 2

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Claim Language		Exemplary Citations to Disclosed Art
2	The method according to claim 1, further comprising: receiving, by the source BS from a user equipment (UE), a non-access stratum (NAS) message including network slice request information.	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5. U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14.

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		U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028]. U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].

3. Claim 3

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Claim Language		Exemplary Citations to Disclosed Art
3	The method according to claim 2, further comprising: receiving, by the source BS from a core network entity, the network slice information, wherein the network slice information is configured by the network slice request information.	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5.

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Claim Language		Exemplary Citations to Disclosed Art
		U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14. U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028].

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Claim Language		Exemplary Citations to Disclosed Art
		U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].

4. Claim 4

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Claim Language		Exemplary Citations to Disclosed Art
4	The method according to claim 2, wherein the NAS message including the network slice request information is included in a radio resource control (RRC) connection setup completion message.	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5. U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11.

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		R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14. U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028]. U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-[0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].

5. Claim 5

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Claim Language		Exemplary Citations to Disclosed Art
5	The method according to claim 3, wherein the network slice information is configured by the core network entity based on the network slice request information.	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5. U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14.

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
		U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028]. U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].

6. Claim 6

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
6	The method according to claim 5, wherein the transmission of the handover request message is performed through a direct interface associated with the target base station.	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5.

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Claim Language		Exemplary Citations to Disclosed Art
		U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9. U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14. U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028].

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
		U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].

7. Claim 7

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
7[pre]	A controller for transmitting and receiving data, the controller comprising:	<i>See</i> limitation 1[pre].
7[a]	a processor performs:	R3-173152 - Xn Based Mobility Across RA (“R3-173152”). <i>See</i> Exhibit A-1. U.S. Patent No. 10,966,222 (“Han 222”). <i>See</i> Exhibit A-2. U.S. Patent No. 11,765,635 (“Futaki 635”). <i>See</i> Exhibit A-3. 3GPP TR 38.801 V0.4.0 (2016-08) (“TR 38.801 V0.4.0”). <i>See</i> Exhibit A-4. U.S. Patent No. 11,356,854 (“Futaki 854”). <i>See</i> Exhibit A-5. U.S. Patent No. 10,893,455 (“Zee”). <i>See</i> Exhibit A-6. U.S. Patent No. 11,240,724 (“Han 724”). <i>See</i> Exhibit A-7. U.S. Patent Pub. No. 2011/0274087 (“Liang”). <i>See</i> Exhibit A-8. U.S. Patent Pub. No. 2019/0349803 (“Byun”). <i>See</i> Exhibit A-9.

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
		U.S. Patent Pub. No. 2014/0135007 (“Yu”). <i>See</i> Exhibit A-10. R3-171116 Connected Mode Mobility with Slicing (“R3-171116”). <i>See</i> Exhibit A-11. R3-171029 - NW Slice Availability Handling Approaches During Mobility (“R3-171029”). <i>See</i> Exhibit A-12. R3-170065 - Selection RAN Part Network Slice During UE Mobility (“R3-170065”). <i>See</i> Exhibit A-13. R3-173614 - Discussion on Slice Mobility Issue (“R3-173614”). <i>See</i> Exhibit A-14. U.S. Patent No. 9,681,355 (“Cho”) at Fig. 8, Fig. 11, Fig. 14, 6:62-7:3, 7:4-8, 10:31-40. U.S. Patent No. 10,952,275 (“Zhang”) at Fig. 1, Fig. 3, 3:14-29, 3:49-55, 7:3-19, 7:40-53. U.S. Patent No. 11,076,434 (“Sivavakeesar”) at Fig. 11, Fig. 12, 25:22-48, 25:49-63. U.S. Patent Pub. No. 2007/0293254 (“Jiang”) at Fig. 1, Fig. 2, Fig. 3, [0022]-[0023], [0027]-[0028]. U.S. Patent Pub. No. 2009/0252070 (“Connors”) at Fig. 2, Fig. 9, [0172]-0175]. U.S. Patent Pub. No. 2014/0086177 (“Adjakple”) at Fig. 1B, [0072], [0160], [0188], [0209], [0311].
7[b]	to decide whether to perform a handover,	<i>See</i> limitation 1[a].

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Claim Language		Exemplary Citations to Disclosed Art
7[c]	to transmit a handover request message when it is decided to perform the handover,	<i>See</i> limitation 1[b].
7[d]	wherein the handover request message includes network slice information; and	<i>See</i> limitation 1[c].
7[e]	to receive a handover request confirmation message in response to the handover request message,	<i>See</i> limitation 1[d].
7[f]	wherein, if one or more protocol data unit (PDU) sessions are associated with one or more network slices that are not supported by a target BS, the handover request confirmation message includes information for indicating a rejection of the one or more PDU sessions by the target BS.	<i>See</i> limitation 1[e].

8. Claim 8

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Claim Language		Exemplary Citations to Disclosed Art
8	The controller according to claim 7, wherein the processor	<i>See</i> claim 2.

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Claim Language		Exemplary Citations to Disclosed Art
	further performs to receive a non-access stratum (NAS) message including network slice request information.	

9. Claim 9

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
9	The controller according to claim 8, wherein the processor further performs to receive the network slice information from a core network, wherein the network slice information is configured by the network slice request information.	<i>See claim 3.</i>

10. Claim 10

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Claim Language		Exemplary Citations to Disclosed Art
10	The controller according to claim 8, wherein the NAS message including the network slice request information is included in a radio resource	<i>See claim 4.</i>

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Claim Language		Exemplary Citations to Disclosed Art
	control (RRC) connection setup completion message.	

11. Claim 11

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Claim Language		Exemplary Citations to Disclosed Art
11	The controller according to claim 9, wherein the network slice information is configured by the core network entity based on the network slice request information.	<i>See claim 5.</i>

12. Claim 12

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
12	The controller according to claim 11, wherein the transmission of the handover request message is performed through a direct interface associated with the target base station.	<i>See claim 6.</i>

13. Claim 13

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
13[pre]	An apparatus for transmitting and receiving data, the apparatus comprising:	<i>See</i> limitation 1[pre].
13[a]	a controller configured to decide whether to perform a handover,	<i>See</i> limitation 1[a].
13[b]	a transmitter configured to transmit a handover request message when it is decided to perform the handover,	<i>See</i> limitation 1[b].
13[c]	wherein the handover request message includes network slice information; and	<i>See</i> limitation 1[c].
13[d]	a receiver configured to receive a handover request confirmation message in response to the handover request message,	<i>See</i> limitation 1[d].
13[e]	wherein, if one or more protocol data unit (PDU) sessions are associated with one or more network slices that are not supported by a target BS, the handover request confirmation message includes information for indicating a rejection of the	<i>See</i> limitation 1[e].

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Claim Language		Exemplary Citations to Disclosed Art
	one or more PDU sessions by the target BS.	

14. Claim 14

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Claim Language		Exemplary Citations to Disclosed Art
14	The apparatus according to claim 13, wherein the processor further performs to receive a non-access stratum (NAS) message including network slice request information.	<i>See claim 2.</i>

15. Claim 15

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
15	The apparatus according to claim 14, wherein the processor further performs to receive the network slice information from a core network, wherein the network slice information is configured by the network slice request information.	<i>See claim 3.</i>

16. Claim 16

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
16	The apparatus according to claim 14, wherein the NAS message including the network slice request information is included in a radio resource control (RRC) connection setup completion message.	<i>See claim 4.</i>

17. Claim 17

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
17	The apparatus according to claim 15, wherein the network slice information is configured by the core network entity based on the network slice request information.	<i>See claim 5.</i>

18. Claim 18

Invalidity of U.S. Patent 11,627,631 in view of Disclosed Art		
Claim Language		Exemplary Citations to Disclosed Art
18	The apparatus according to claim 17, wherein the transmission of the handover request message is performed through a direct interface associated with the target base station.	<i>See claim 6.</i>