CLAIMS

~~What is claimed is:~~

1. A method for wireless communication at a user equipment (UE), comprising:

receiving, from a first base station, a configuration for reference signal transmission, the configuration comprising a set of uplink transmit power levels and a set of time and frequency resources;

transmitting, based at least in part on the configuration, a plurality of uplink reference signals at different power levels;

receiving from the first base station, based at least in part on transmitting the plurality of uplink reference signals, an instruction to perform a handover to a second base station, the instruction comprising an indication of a selected uplink reference signal of the plurality of uplink reference signals and a power parameter associated with the indicated uplink reference signal; and

performing the handover to the second base station based at least in part on the instruction.

2. The method of claim 1, wherein the instruction further comprises a set of parameters including the power parameter and one or more of a timing advance value or an uplink grant.

3. The method of claim 1, further comprising:

determining an uplink transmit power for transmission to the second base station based at least in part on the selected uplink reference signal and the power parameter.

4. The method of claim 3, further comprising:

transmitting, to the second base station, a handover complete message at the uplink transmit power.

5. The method of claim 3, further comprising:

transmitting, to the second base station, a first random access message of a random access procedure at the uplink transmit power.

6. The method of claim 5, further comprising:

transmitting, to the second base station, a second random access message of the random access procedure at a second uplink transmit power, the second random access message comprising a retransmission of the first random access message,

wherein the second uplink transmit power is higher than the uplink transmit power.

7. The method of claim 1, further comprising:

determining, based at least in part on a measured signal quality, a measurement event; and

transmitting, to the first base station, a measurement report based at least in part on the measurement event,

wherein the set of uplink transmit power levels is based at least in part on the measurement report.

8. The method of claim 1, wherein the power parameter comprises a power correction value.

9. The method of claim 1, wherein the instruction further comprises one or more of a timing advance value or an uplink grant.

10. The method of claim 1, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.

11. ~~A method for wireless communication at a first base station, comprising:~~

~~transmitting, to a user equipment (UE), a configuration for reference signal transmission, the configuration comprising a set of uplink transmit power levels and a set of time and frequency resources;~~

~~transmitting, to a second base station, a first message comprising an indication of a plurality of uplink reference signals to measure from the UE;~~

receiving, from the second base station, a second message in response to the first message, the second message comprising a selected uplink reference signal of the plurality of uplink reference signals and a power parameter; and

transmitting, to the UE, an instruction to perform a handover to the second base station, the instruction comprising an indication of the selected uplink reference signal and the power parameter as part of a command for the handover to the second base station.

12. The method of claim 11, wherein transmitting the configuration further comprises:

receiving, from the UE, a measurement report based at least in part on a measurement event; and

determining the set of uplink transmit power levels is based at least in part on the measurement report.

13. The method of claim 12, further comprising:

identifying the second base station based at least in part on the measurement report.

14. The method of claim 11, further comprising:

selecting the second base station for the handover based at least in part on the receiving.

15. The method of claim 11, wherein the power parameter comprises a power correction value.

16. The method of claim 11, wherein the instruction further comprises one or more of a timing advance value or an uplink grant.

17. The method of claim 11, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.

18. A method for wireless communication at a second base station, comprising:

receiving, from a first base station, a first message comprising an indication of a plurality of uplink reference signals to measure from a user equipment (UE);

selecting, based at least in part on the receiving, an uplink reference signal of the plurality of uplink reference signals;

determining a power parameter based at least in part on the selecting of the uplink reference signal; and

~~transmitting, to the first base station, a second message in response to the first message, the second message comprising the selected uplink reference signal and the power parameter.~~

~~19. The method of claim 18, further comprising:~~

~~receiving, from the first base station, a forwarding of user data for the UE based at least in part on a handover of service; and~~

~~buffering the user data for the UE based at least in part on the receiving.~~

~~20. The method of claim 18, further comprising:~~

~~receiving, from the UE, a handover complete message based at least in part on the transmitting.~~

~~21. The method of claim 18, further comprising:~~

~~receiving, from the UE, a first random access message of a random access procedure based at least in part on the transmitting.~~

~~22. The method of claim 21, further comprising:~~

~~receiving, from the UE, a second random access message of the random access procedure, the second random access message comprising a retransmission of the first random access message at a higher uplink transmit power,~~

~~wherein receiving the second random access message is based at least in part on an inability to decode the first random access message.~~

~~23. The method of claim 18, wherein the power parameter comprises a power correction value.~~

~~24. The method of claim 18, wherein the determining further comprises:~~

~~determining one or more of a timing advance value or an uplink grant; and~~

~~transmitting the timing advance value or the uplink grant as part of the second message.~~

~~25. The method of claim 18, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.~~

~~26.~~ An apparatus for wireless communication at a user equipment (UE), comprising:

a first interface;

a second interface; and

a wireless modem coupled to the first interface and the second interface, wherein the wireless modem is configured to:

obtain over the first interface a configuration from a first base station for reference signal transmission, the configuration comprising a set of uplink transmit power levels and a set of time and frequency resources;

output, based at least in part on the configuration, a plurality of uplink reference signals over the second interface for transmission at different power levels;

obtain over the first interface, based at least in part on the plurality of uplink reference signals, an instruction from the first base station to perform a handover to a second base station, the instruction comprising an indication of a selected uplink reference signal of the plurality of uplink reference signals and a power parameter associated with the indicated uplink reference signal; and

perform the handover to the second base station based at least in part on the instruction.

~~27.~~ 12. The apparatus of claim ~~26~~11, wherein the instruction further comprises a set of parameters including the power parameter and one or more of a timing advance value or an uplink grant.

~~28.~~ 13. The apparatus of claim ~~26~~11, wherein the wireless modem is further configured to:

determine an uplink transmit power for transmission to the second base station based at least in part on the selected uplink reference signal and the power parameter.

~~29.~~ 14. The apparatus of claim ~~28~~13, wherein the wireless modem is further configured to:

output, to the second base station, a handover complete message at the uplink transmit power.

~~30.~~ 15. The apparatus of claim ~~28~~13, wherein the wireless modem is further configured to:

output, to the second base station, a first random access message of a random access procedure at the uplink transmit power.

~~31.~~ 16. The apparatus of claim ~~30~~15, wherein the wireless modem is further configured to:

output, to the second base station, a second random access message of the random access procedure at a second uplink transmit power, the second random access message comprising a retransmission of the first random access message,

wherein the second uplink transmit power is higher than the uplink transmit power.

~~32.~~ 17. The apparatus of claim ~~26~~11, wherein the wireless modem is further configured to:

determine, based at least in part on a measured signal quality, a measurement event; and

output, to the first base station, a measurement report based at least in part on the measurement event,

wherein the set of uplink transmit power levels is based at least in part on the measurement report.

~~33.~~ 18. The apparatus of claim ~~26~~11, wherein the power parameter comprises a power correction value.

~~34.~~ 19. The apparatus of claim ~~26~~11, wherein the instruction further comprises one or more of a timing advance value or an uplink grant.

~~35.~~ 20. The apparatus of claim ~~26~~11, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.

~~36.~~ 21. An apparatus for wireless ~~communication~~communications at a ~~first base station, comprising:~~

~~a first interface;~~

a second interface; and

a wireless modem coupled to the first interface and the second interface, wherein the wireless modem is configured to:

output, to a user equipment (UE), a configuration for reference signal transmission, the configuration comprising a set of uplink transmit power levels and a set of time and frequency resources;

output, to a second base station, a first message comprising an indication of a plurality of uplink reference signals to measure from the UE;

obtain, from the second base station, a second message in response to the first message, the second message comprising a selected uplink reference signal of the plurality of uplink reference signals and a power parameter; and

output, to the UE, an instruction to perform a handover to the second base station, the instruction comprising an indication of the selected uplink reference signal and the power parameter as part of a command for the handover to the second base station.

37. The apparatus of claim 36, wherein the wireless modem is further configured to:

obtain, from the UE, a measurement report based at least in part on a measurement event; and

determine the set of uplink transmit power levels is based at least in part on the measurement report.

38. The apparatus of claim 37, wherein the wireless modem is further configured to:

identify the second base station based at least in part on the measurement report.

39. The apparatus of claim 36, wherein the wireless modem is further configured to:

select the second base station for the handover based at least in part on the receiving.

40. The apparatus of claim 36, wherein the power parameter comprises a power correction value.

41. The apparatus of claim 36, wherein the instruction further comprises one or more of a timing advance value or an uplink grant.

42. The apparatus of claim 36, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.

43. An apparatus for wireless communication at a second base station, comprising:

a first interface;

a second interface; and

a wireless modem coupled to the first interface and the second interface, wherein the wireless modem is configured to:

obtain, from a first base station, a first message comprising an indication of a plurality of uplink reference signals to measure from a user equipment (UE);

select, based at least in part on the receiving, an uplink reference signal of the plurality of uplink reference signals;

determine a power parameter based at least in part on the selecting of the uplink reference signal; and

output, to the first base station, a second message in response to the first message, the second message comprising the selected uplink reference signal and the power parameter.

44. The apparatus of claim 43, wherein the wireless modem is further configured to:

obtain, from the first base station, a forwarding of user data for the UE based at least in part on a handover of service; and

buffer the user data for the UE based at least in part on the receiving.

45. The apparatus of claim 43, wherein the wireless modem is further configured to:

obtain, from the UE, a handover complete message based at least in part on the transmitting.

46. The apparatus of claim 43, wherein the wireless modem is further configured to:

~~obtain, from the UE, a first random access message of a random access procedure based at least in part on the transmitting.~~

~~47. The apparatus of claim 46, wherein the wireless modem is further configured to:~~

~~obtain, from the UE, a second random access message of the random access procedure, the second random access message comprising a retransmission of the first random access message at a higher uplink transmit power,~~

~~wherein obtaining the second random access message is based at least in part on an inability to decode the first random access message.~~

~~48. The apparatus of claim 43, wherein the power parameter comprises a power correction value.~~

~~49. The apparatus of claim 43, wherein the wireless modem is further configured to:~~

~~determine one or more of a timing advance value or an uplink grant; and~~

~~transmit the timing advance value or the uplink grant as part of the second message.~~

~~50. The apparatus of claim 43, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.~~

~~51. An apparatus for wireless communication at a user equipment (UE), comprising:~~

comprising: means for receiving, from a first base station, a configuration for reference signal transmission, the configuration comprising a set of uplink transmit power levels and a set of time and frequency resources;

means for transmitting, based at least in part on the configuration, a plurality of uplink reference signals at different power levels;

means for receiving from the first base station, based at least in part on transmitting the plurality of uplink reference signals, an instruction to perform a handover to a second base station, the instruction comprising an indication of a selected uplink reference signal of the plurality of uplink reference signals and a power parameter associated with the indicated uplink reference signal; and

means for performing the handover to the second base station based at least in part on the instruction.

~~52.~~ 22. The apparatus of claim ~~51~~21, wherein the instruction further comprises a set of parameters including the power parameter and one or more of a timing advance value or an uplink grant.

~~53.~~ 23. The apparatus of claim ~~51~~21, further comprising~~:~~

means for determining an uplink transmit power for transmission to the second base station based at least in part on the selected uplink reference signal and the power parameter.

~~54.~~ 24. The apparatus of claim ~~53~~23, further comprising:

means for transmitting, to the second base station, a handover complete message at the uplink transmit power.

~~55.~~ 25. The apparatus of claim ~~53~~23, further comprising:

means for transmitting, to the second base station, a first random access message of a random access procedure at the uplink transmit power.

~~56. The apparatus of claim 55, further comprising:~~

~~means for transmitting, to the second base station, a second random access message of the random access procedure at a second uplink transmit power, the second random access message comprising a retransmission of the first random access message,~~

~~wherein the second uplink transmit power is higher than the uplink transmit power.~~

~~57. The apparatus of claim 51, further comprising:~~

~~means for determining, based at least in part on a measured signal quality, a measurement event; and~~

~~means for transmitting, to the first base station, a measurement report based at least in part on the measurement event,~~

~~wherein the set of uplink transmit power levels is based at least in part on the measurement report.~~

58. The apparatus of claim 51, wherein the power parameter comprises a power correction value.

59. The apparatus of claim 51, wherein the instruction further comprises one or more of a timing advance value or an uplink grant.

60. The apparatus of claim 51, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.

61. An apparatus for wireless communication at a first base station, comprising:

means for transmitting, to a user equipment (UE), a configuration for reference signal transmission, the configuration comprising a set of uplink transmit power levels and a set of time and frequency resources;

means for transmitting, to a second base station, a first message comprising an indication of a plurality of uplink reference signals to measure from the UE;

means for receiving, from the second base station, a second message in response to the first message, the second message comprising a selected uplink reference signal of the plurality of uplink reference signals and a power parameter; and

means for transmitting, to the UE, an instruction to perform a handover to the second base station, the instruction comprising an indication of the selected uplink reference signal and the power parameter as part of a command for the handover to the second base station.

62. The apparatus of claim 61, wherein the means for transmitting the configuration further comprises:

means for receiving, from the UE, a measurement report based at least in part on a measurement event; and

means for determining the set of uplink transmit power levels is based at least in part on the measurement report.

63. The apparatus of claim 62, further comprising:

means for identifying the second base station based at least in part on the measurement report.

64. The apparatus of claim 61, further comprising:

means for selecting the second base station for the handover based at least in part on the receiving.

65. The apparatus of claim 61, wherein the power parameter comprises a power correction value.

66. The apparatus of claim 61, wherein the instruction further comprises one or more of a timing advance value or an uplink grant.

67. The apparatus of claim 61, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.

68. An apparatus for wireless communication at a second base station, comprising:

means for receiving, from a first base station, a first message comprising an indication of a plurality of uplink reference signals to measure from a user equipment (UE);

means for selecting, based at least in part on the receiving, an uplink reference signal of the plurality of uplink reference signals;

means for determining a power parameter based at least in part on the selecting of the uplink reference signal; and

means for transmitting, to the first base station, a second message in response to the first message, the second message comprising the selected uplink reference signal and the power parameter.

69. The apparatus of claim 68, further comprising:

means for receiving, from the first base station, a forwarding of user data for the UE based at least in part on a handover of service; and

means for buffering the user data for the UE based at least in part on the receiving.

70. The apparatus of claim 68, further comprising:

means for receiving, from the UE, a handover complete message based at least in part on the transmitting.

71. The apparatus of claim 68, further comprising:

means for receiving, from the UE, a first random access message of a random access procedure based at least in part on the transmitting.

72. The apparatus of claim 71, further comprising:

means for receiving, from the UE, a second random access message of the random access procedure, the second random access message comprising a retransmission of the first random access message at a higher uplink transmit power,

~~wherein receiving the second random access message is based at least in part on an inability to decode the first random access message.~~

~~73. The apparatus of claim 68, wherein the power parameter comprises a power correction value.~~

~~74. The apparatus of claim 68, wherein the determining further comprises:~~

~~means for determining one or more of a timing advance value or an uplink grant; and~~

~~means for transmitting the timing advance value or the uplink grant as part of the second message.~~

~~75. The apparatus of claim 68, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.~~

~~76.~~ 26. A non-transitory computer-readable medium storing code for wireless communication at a user equipment (UE), the code comprising instructions executable by a processor to:

receive, from a first base station, a configuration for reference signal transmission, the configuration comprising a set of uplink transmit power levels and a set of time and frequency resources;

transmit, based at least in part on the configuration, a plurality of uplink reference signals at different power levels;

receive from the first base station, based at least in part on transmitting the plurality of uplink reference signals, an instruction to perform a handover to a second base station, the instruction comprising an indication of a selected uplink reference signal of the plurality of uplink reference signals and a power parameter associated with the indicated uplink reference signal; and

perform the handover to the second base station based at least in part on the instruction.

~~77.~~ 27. The non-transitory computer-readable medium of claim ~~76~~26, wherein the instruction further comprises a set of parameters including the power parameter and one or more of a timing advance value or an uplink grant.

~~78.~~ 28. The non-transitory computer-readable medium of claim ~~76~~26, wherein the instructions are further executable by the processor to:

determine an uplink transmit power for transmission to the second base station based at least in part on the selected uplink reference signal and the power parameter.

~~79.~~ 29. The non-transitory computer-readable medium of claim ~~78~~28, wherein the instructions are further executable by the processor to:

transmit, to the second base station, a handover complete message at the uplink transmit power.

~~80.~~ 30. The non-transitory computer-readable medium of claim ~~78~~28, wherein the instructions are further executable by the processor to:

transmit, to the second base station, a first random access message of a random access procedure at the uplink transmit power.

~~81. The non-transitory computer-readable medium of claim 80, wherein the instructions are further executable to:~~

~~transmit, to the second base station, a second random access message of the random access procedure at a second uplink transmit power, the second random access message comprising a retransmission of the first random access message,~~

~~wherein the second uplink transmit power is higher than the uplink transmit power.~~

~~82. The non-transitory computer-readable medium of claim 76, wherein the instructions are further executable to:~~

~~determine, based at least in part on a measured signal quality, a measurement event; and~~

~~transmit, to the first base station, a measurement report based at least in part on the measurement event,~~

~~wherein the set of uplink transmit power levels is based at least in part on the measurement report.~~

~~83. The non-transitory computer-readable medium of claim 76, wherein the power parameter comprises a power correction value.~~

84. The non-transitory computer-readable medium of claim 76, wherein the instruction further comprises one or more of a timing advance value or an uplink grant.

85. The non-transitory computer-readable medium of claim 76, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.

86. A non-transitory computer-readable medium storing code for wireless communication at a first base station, the code comprising instructions executable by a processor to:

transmit, to a user equipment (UE), a configuration for reference signal transmission, the configuration comprising a set of uplink transmit power levels and a set of time and frequency resources;

transmit, to a second base station, a first message comprising an indication of a plurality of uplink reference signals to measure from the UE;

receive, from the second base station, a second message in response to the first message, the second message comprising a selected uplink reference signal of the plurality of uplink reference signals and a power parameter; and

transmit, to the UE, an instruction to perform a handover to the second base station, the instruction comprising an indication of the selected uplink reference signal and the power parameter as part of a command for the handover to the second base station.

87. The non-transitory computer-readable medium of claim 86, wherein the instructions to transmit the configuration are further executable to:

receive, from the UE, a measurement report based at least in part on a measurement event; and

determine the set of uplink transmit power levels is based at least in part on the measurement report.

88. The non-transitory computer-readable medium of claim 87, wherein the instructions are further executable to:

identify the second base station based at least in part on the measurement report.

89. The non-transitory computer-readable medium of claim 86, wherein the instructions are further executable to:

select the second base station for the handover based at least in part on the receiving.

90. The non-transitory computer-readable medium of claim 86, wherein the power parameter comprises a power correction value.

91. The non-transitory computer-readable medium of claim 86, wherein the instruction further comprises one or more of a timing advance value or an uplink grant.

92. The non-transitory computer-readable medium of claim 86, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.

93. A non-transitory computer-readable medium storing code for wireless communication at a second base station, the code comprising instructions executable by a processor to:

receive, from a first base station, a first message comprising an indication of a plurality of uplink reference signals to measure from a user equipment (UE);

select, based at least in part on the receiving, an uplink reference signal of the plurality of uplink reference signals;

determine a power parameter based at least in part on the selecting of the uplink reference signal; and

transmit, to the first base station, a second message in response to the first message, the second message comprising the selected uplink reference signal and the power parameter.

94. The non-transitory computer-readable medium of claim 93, wherein the instructions are further executable to:

receive, from the first base station, a forwarding of user data for the UE based at least in part on a handover of service; and

buffer the user data for the UE based at least in part on the receiving.

95. The non-transitory computer-readable medium of claim 93, wherein the instructions are further executable to:

receive, from the UE, a handover complete message based at least in part on the transmitting.

96. The non-transitory computer-readable medium of claim 93, wherein the instructions are further executable to:

receive, from the UE, a first random access message of a random access procedure based at least in part on the transmitting.

~~97. The non-transitory computer-readable medium of claim 96, wherein the instructions are further executable to:~~

~~receive, from the UE, a second random access message of the random access procedure, the second random access message comprising a retransmission of the first random access message at a higher uplink transmit power,~~

~~wherein receiving the second random access message is based at least in part on an inability to decode the first random access message.~~

~~98. The non-transitory computer-readable medium of claim 93, wherein the power parameter comprises a power correction value.~~

~~99. The non-transitory computer-readable medium of claim 93, wherein the instructions to determine the power parameter are executable to:~~

~~determine one or more of a timing advance value or an uplink grant; and~~

~~transmit the timing advance value or the uplink grant as part of the second message.~~

~~100. The non-transitory computer-readable medium of claim 93, wherein the plurality of uplink reference signals comprise sounding reference signal repetitions.~~