CLAIMS

1. A method of wireless communication performed by a user equipment (UE), comprising: determining information regarding an antenna switching capability for dual connectivity of the UE that relates to a capability of the UE to switch an antenna for a plurality of bands that are included in a band combination supported by the UE, wherein at least a first band, of the plurality of bands, corresponds to a first radio access technology (RAT) and at least a second band, of the plurality of bands, corresponds to a second RAT; and signaling the information regarding the antenna switching capability for the dual connectivity to a network entity, wherein the information regarding the antenna switching capability for the dual connectivity indicates whether the first band corresponding to the first RAT and the second band corresponding to the second RAT are associated with switching together from a first antenna to a second antenna.

2. The method of claim 1, wherein the band combination includes a number of bands corresponding to a number of transmit chains of the UE, and wherein each transmit chain capable of switching between multiple bands is capable of switching to one of the first band corresponding to the first RAT or the second band corresponding to the second RAT to form the band combination.

3. The method of claim 1, wherein the antenna switching capability for the dual connectivity further indicates at least one of: a number of transmit antennas and receive antennas that the UE is capable of switching, or one or more bands, of the plurality of bands, for which downlink communications are interrupted by a switch in another band.

4. The method of claim 1, wherein the antenna switching capability for the dual connectivity further indicates whether downlink communications of one of the first band corresponding to the first RAT or the second band corresponding to the second RAT is interrupted by a switch in the other of the first band corresponding to the first RAT or the second band corresponding to the second RAT.

5. The method of claim 1, further comprising signaling a carrier switching capability to the network entity, wherein the carrier switching capability indicates an interruption time to at least one of an uplink operation or a downlink operation due to a switch from a source band, of the plurality of bands, to a target band of the plurality of bands.

6. The method of claim 5, wherein the source band is one of the first band corresponding to the first RAT or the second band corresponding to the second RAT, and the target band is the other of the first band corresponding to the first RAT or the second band corresponding to the second RAT.

7. The method of claim 5, further comprising determining whether to switch from the source band to the target band based at least in part on a type of information to be transmitted in at least one of the source band or the target band.

8. The method of claim 5, wherein the source band and the target band are associated with a same RAT, and wherein the carrier switching capability does not indicate inter-RAT interruption times.

9. The method of claim 5, wherein the second RAT has a sub-6 GHz frequency range and a millimeter wave frequency range.

10. The method of claim 9, wherein the carrier switching capability indicates whether a carrier switch to one of the first RAT or the sub-6 GHz frequency range affects the other one of the first RAT or the sub-6 GHz frequency range without indicating whether a carrier switch to the millimeter wave frequency range affects the first RAT or the sub-6 GHz frequency range.

11. The method of claim 1, wherein a carrier switching capability indicates one or more bands, of the plurality of bands, that experience an interruption when a sounding reference signal (SRS) is transmitted in a band, of the plurality of bands, without an uplink capability.

12. The method of claim 1 wherein a carrier switching capability indicates at least one of: whether a carrier switch to one of the first RAT or the second RAT affects a first operation on the other of the first RAT or the second RAT, or whether a carrier switch to at least one of the first RAT, a first frequency range of the second RAT, or a second frequency range of the second RAT affects a second operation on another one of the first RAT, the first frequency range, or the second frequency range.

13. The method of claim 1, wherein the antenna switching capability for the dual connectivity further indicates a switching time or an interruption time, wherein the switching time or the interruption time is indicated using a configured or predefined granularity.

14. The method of claim 1, wherein the antenna switching capability for the dual connectivity further indicates at least one of: a number of concurrent intra-RAT switches supported by the UE, or a number of concurrent inter-RAT switches supported by the UE.

15. The method of claim 1, wherein the antenna switching capability for the dual connectivity further indicates a number of concurrent intra-RAT switches supported by the UE for each of the first RAT and the second RAT.

16. The method of claim 1, wherein a determination of whether to transmit a sounding reference signal (SRS) on a band, of the plurality of bands, is based at least in part on a channel that would be interrupted due to the SRS.

17. A method of wireless communication performed by a network entity, comprising: receiving information that identifies an antenna switching capability for dual connectivity of a user equipment (UE) that relates to a capability of the UE to switch an antenna for a plurality of bands that are included in a band combination supported by the UE, wherein at least a first band, of the plurality of bands, corresponds to a first radio access technology (RAT) and at least a second band, of the plurality of bands, corresponds to a second RAT, and wherein the information that identifies the antenna switching capability for the dual connectivity indicates whether the first band corresponding to the first RAT and the second band corresponding to the second RAT are associated with switching together from a first antenna to a second antenna; and communicating with the UE based at least in part on the antenna switching capability for the dual connectivity.

18. The method of claim 17, wherein the band combination includes a number of bands corresponding to a number of transmit chains of the UE, and wherein each transmit chain capable of switching between multiple bands is capable of switching to one of the first band corresponding to the first RAT or the second band corresponding to the second RAT to form the band combination.

19. The method of claim 17, wherein the antenna switching capability for the dual connectivity further indicates at least one of: a number of transmit antennas and receive antennas that the UE is capable of switching, or one or more bands, of the plurality of bands, for which downlink communications are interrupted by a switch in another band.

20. The method of claim 17, wherein the antenna switching capability for the dual connectivity indicates further whether downlink communications of one of the first band corresponding to the first RAT or the second band corresponding to the second RAT is interrupted by a switch in the other of the first band corresponding to the first RAT or the second band corresponding to the second RAT.

21. The method of claim 17, wherein the second RAT has a sub-6 GHz frequency range and a millimeter wave frequency range.

22. The method of claim 21, wherein the antenna switching capability for the dual connectivity further indicates whether an antenna switch in one of the first RAT or the sub-6 GHz frequency range affects the other one of the first RAT or the sub-6 GHz frequency range without indicating whether an antenna switch in the millimeter wave frequency range affects the first RAT or the sub-6 GHz frequency range.

23. The method of claim 17, further comprising receiving information that identifies a carrier switching capability of the UE, wherein the carrier switching capability indicates an interruption time to at least one of an uplink operation or a downlink operation due to a switch from a source band, of the plurality of bands, to a target band of the plurality of bands.

24. The method of claim 23, wherein the source band is one of the first band corresponding to the first RAT or the second band corresponding to the second RAT, and the target band is the other of the first band corresponding to the first RAT or the second band corresponding to the second RAT.

25. The method of claim 23, wherein the source band and the target band are associated with a same RAT, and wherein the carrier switching capability does not indicate inter-RAT interruption times.

26. The method of claim 23, wherein the second RAT has a sub-6 GHz frequency range and a millimeter wave frequency range.

27. The method of claim 26, wherein the carrier switching capability indicates whether a carrier switch to one of the first RAT or the sub-6 GHz frequency range affects the other one of the first RAT or the sub-6 GHz frequency range without indicating whether a carrier switch to the millimeter wave frequency range affects the first RAT or the sub-6 GHz frequency range.

28. The method of claim 17, wherein a carrier switching capability indicates one or more bands, of the plurality of bands, that experience an interruption when a sounding reference signal (SRS) is transmitted in a band, of the plurality of bands, without an uplink capability.

29. The method of claim 17, wherein a carrier switching capability indicates at least one of: whether a carrier switch to one of the first RAT or the second RAT affects a first operation on the other of the first RAT or the second RAT, or whether a carrier switch to at least one of the first RAT, a first frequency range of the second RAT, or a second frequency range of the second RAT affects a second operation on another one of the first RAT, the first frequency range, or the second frequency range.

30. The method of claim 17, wherein the antenna switching capability for the dual connectivity further indicates a switching time or an interruption time, wherein the switching time or the interruption time is indicated using a configured or predefined granularity.

31. The method of claim 17, wherein the antenna switching capability for the dual connectivity further indicates at least one of: a number of concurrent intra-RAT switches supported by the UE, or a number of concurrent inter-RAT switches supported by the UE.

32. The method of claim 17, wherein the antenna switching capability for the dual connectivity further indicates a number of concurrent intra-RAT switches supported by the UE for each of the first RAT and the second RAT.

33. A user equipment (UE) for wireless communication, comprising: one or more memories; and one or more processors coupled to the one or more memories, the one or more processors configured to: determine information regarding an antenna switching capability for dual connectivity of the UE that relates to a capability of the UE to switch an antenna for a plurality of bands that are included in a band combination supported by the UE, wherein at least a first band, of the plurality of bands, corresponds to a first radio access technology (RAT) and at least a second band, of the plurality of bands, corresponds to a second RAT; and signal the information regarding the antenna switching capability for the dual connectivity to a network entity, wherein the information regarding the antenna switching capability for the dual connectivity indicates whether the first band corresponding to the first RAT and the second band corresponding to the second RAT are associated with switching together from a first antenna to a second antenna.

34. The UE of claim 33, wherein the band combination includes a number of bands corresponding to a number of transmit chains of the UE, and wherein each transmit chain capable of switching between multiple bands is capable of switching to one of the first band corresponding to the first RAT or the second band corresponding to the second RAT to form the band combination.

35. The UE of claim 33, wherein the antenna switching capability for the dual connectivity further indicates at least one of: a number of transmit antennas and receive antennas that the UE is capable of switching, or one or more bands, of the plurality of bands, for which downlink communications are interrupted by a switch in another band.

36. The UE of claim 33, wherein the antenna switching capability for the dual connectivity further indicates whether downlink communications of one of the first band corresponding to the first RAT or the second band corresponding to the second RAT is interrupted by a switch in the other of the first band corresponding to the first RAT or the second band corresponding to the second RAT.

37. The UE of claim 33, wherein the one or more processors are further configured to signal a carrier switching capability to the network entity, wherein the carrier switching capability indicates an interruption time to at least one of an uplink operation or a downlink operation due to a switch from a source band, of the plurality of bands, to a target band of the plurality of bands.

38. The UE of claim 37, wherein the source band is one of the first band corresponding to the first RAT or the second band corresponding to the second RAT, and the target band is the other of the first band corresponding to the first RAT or the second band corresponding to the second RAT.

39. The UE of claim 37, wherein the source band and the target band are associated with a same RAT, and wherein the carrier switching capability does not indicate inter-RAT interruption times.

40. The UE of claim 37, wherein the carrier switching capability indicates at least one of: whether a carrier switch to one of the first RAT or the second RAT affects a first operation on the other of the first RAT or the second RAT, or whether a carrier switch to at least one of the first RAT, a first frequency range of the second RAT, or a second frequency range of the second RAT affects a second operation on another one of the first RAT, the first frequency range, or the second frequency range.

41. The UE of claim 37, wherein the one or more processors are further configured to: determine whether to switch from the source band to the target band based at least in part on a type of information to be transmitted in at least one of the source band or the target band.

42. The UE of claim 33, wherein the antenna switching capability for the dual connectivity further indicates a switching time or an interruption time, wherein the switching time or the interruption time is indicated using a configured or predefined granularity.

43. The UE of claim 33, wherein the antenna switching capability for the dual connectivity further indicates at least one of: a number of concurrent intra-RAT switches supported by the UE, or a number of concurrent inter-RAT switches supported by the UE.

44. The UE of claim 33, wherein the antenna switching capability for the dual connectivity further indicates a number of concurrent intra-RAT switches supported by the UE for each of the first RAT and the second RAT.

45. The UE of claim 33, wherein a carrier switching capability indicates one or more bands, of the plurality of bands, that experience an interruption when a sounding reference signal (SRS) is transmitted in a band, of the plurality of bands, without an uplink capability.

46. A network entity for wireless communication, comprising: one or more memories; and one or more processors coupled to the one or more memories, the one or more processors configured to: receive information that identifies an antenna switching capability for dual connectivity of a user equipment (UE) that relates to a capability of the UE to switch an antenna for a plurality of bands that are included in a band combination supported by the UE, wherein at least a first band, of the plurality of bands, corresponds to a first radio access technology (RAT) and at least a second band, of the plurality of bands, corresponds to a second RAT, and wherein the information that identifies the antenna switching capability for the dual connectivity indicates whether the first band corresponding to the first RAT and the second band corresponding to the second RAT are associated with switching together from a first antenna to a second antenna; and communicate with the UE based at least in part on the antenna switching capability for the dual connectivity.

47. The network entity of claim 46, wherein the band combination includes a number of bands corresponding to a number of transmit chains of the UE, and wherein each transmit chain capable of switching between multiple bands is capable of switching to one of the first band corresponding to the first RAT or the second band corresponding to the second RAT to form the band combination.

48. The network entity of claim 46, wherein the antenna switching capability for the dual connectivity further indicates at least one of: a number of transmit antennas and receive antennas that the UE is capable of switching, or one or more bands, of the plurality of bands, for which downlink communications are interrupted by a switch in another band.

49. The network entity of claim 46, wherein the antenna switching capability for the dual connectivity further indicates whether downlink communications of one of the first band corresponding to the first RAT or the second band corresponding to the second RAT is interrupted by a switch in the other of the first band corresponding to the first RAT or the second band corresponding to the second RAT.

50. The network entity of claim 46, wherein the one or more processors are further configured to receive information that identifies a carrier switching capability of the UE, wherein the carrier switching capability indicates an interruption time to at least one of an uplink operation or a downlink operation due to a switch from a source band, of the plurality of bands, to a target band of the plurality of bands.

51. The network entity of claim 50, wherein the source band is one of the first band corresponding to the first RAT or the second band corresponding to the second RAT, and the target band is the other of the first band corresponding to the first RAT or the second band corresponding to the second RAT.

52. The network entity of claim 50, wherein the source band and the target band are associated with a same RAT, and wherein the carrier switching capability does not indicate inter-RAT interruption times.

53. The network entity of claim 46, wherein the antenna switching capability for the dual connectivity further indicates at least one of: a number of concurrent intra-RAT switches supported by the UE, or a number of concurrent inter-RAT switches supported by the UE.

54. The network entity of claim 46, wherein the antenna switching capability for the dual connectivity further indicates a number of concurrent intra-RAT switches supported by the UE for each of the first RAT and the second RAT.

55. The network entity of claim 46, wherein a carrier switching capability indicates one or more bands, of the plurality of bands, that experience an interruption when a sounding reference signal (SRS) is transmitted in a band, of the plurality of bands, without an uplink capability.

56. The network entity of claim 46, wherein a carrier switching capability indicates at least one of: whether a carrier switch to one of the first RAT or the second RAT affects a first operation on the other of the first RAT or the second RAT, or whether a carrier switch to at least one of the first RAT, a first frequency range of the second RAT, or a second frequency range of the second RAT affects a second operation on another one of the first RAT, the first frequency range, or the second frequency range.

57. The method of claim 1, wherein the dual connectivity is Long Term Evolution—New Radio (LTE-NR) dual connectivity, the first RAT is LTE RAT, and the second RAT is NR RAT.

58. The method of claim 1, wherein the first RAT is NR RAT, the second RAT is a RAT associated with a later generation-based communication system, and the dual connectivity is between the NR RAT and the RAT associated with the later generation-based communication system.

59. The method of claim 17, wherein the dual connectivity is Long Term Evolution—New Radio (LTE-NR) dual connectivity, the first RAT is LTE RAT, and the second RAT is NR RAT.

60. The method of claim 17, wherein the first RAT is NR RAT, the second RAT is a RAT associated with a later generation-based communication system, and the dual connectivity is between the NR RAT and the RAT associated with the later generation-based communication system.

61. The UE of claim 33, wherein the dual connectivity is Long Term Evolution—New Radio (LTE-NR) dual connectivity, the first RAT is LTE RAT, and the second RAT is NR RAT.

62. The UE of claim 33, wherein the first RAT is NR RAT, the second RAT is a RAT associated with a later generation-based communication system, and the dual connectivity is between the NR RAT and the RAT associated with the later generation-based communication system.

63. The network entity of claim 46, wherein the dual connectivity is Long Term Evolution—New Radio (LTE-NR) dual connectivity, the first RAT is LTE RAT, and the second RAT is NR RAT.

64. The network entity of claim 46, wherein the first RAT is NR RAT, the second RAT is a RAT associated with a later generation-based communication system, and the dual connectivity is between the NR RAT and the RAT associated with the later generation- based communication system.