CLAIMS

1. A method of wireless communication performed by a user equipment (UE), comprising:

determining that the UE has an uplink capability corresponding to a plurality of active uplink beams required for the UE, wherein the uplink capability corresponds to support for:

at least two active uplink beams, of the plurality of active uplink beams, each having a spatial relation and being configured for physical uplink control channel (PUCCH) transmissions, and

at least one active uplink beam, of the at least two active uplink beams, being further configured for physical uplink shared channel (PUSCH) transmissions using the spatial relation corresponding to the at least one active uplink beam; and

signaling the uplink capability to a network entity.

2. The method of claim 1, wherein the uplink capability corresponds to a minimum downlink capability corresponding to one or more active downlink beams.

3. The method of claim 1, further comprising:

signaling the uplink capability separately from a minimum downlink capability of the UE corresponding to one or more active downlink beams.

4. The method of claim 1, wherein a common spatial relation is used for transmission across all uplink control resources and all uplink data resources.

5. The method of claim 1, wherein another active uplink beam, of the at least two active uplink beams, depends on one of two active downlink control beams such that the spatial relation corresponding to the other active uplink beam is updated when a spatial relation of the one of the two active downlink control beams changes.

6. The method of claim 5, wherein the spatial relation corresponding to the other active uplink beam maps to a transmission configuration indicator (TCI) state of the one of the two active downlink control beams that satisfies a condition.

7. The method of claim 6, wherein the condition is that the one of the two active downlink control beams is associated with a downlink control identifier having a smaller identifier value, in a current bandwidth part, than the other of the two active downlink control beams.

8. The method of claim 1, wherein another active uplink beam, of the at least two active uplink beams, is indicated to the UE in a medium access control (MAC) control element (CE), wherein the MAC-CE indicates the spatial relation corresponding to the other active uplink beam, and wherein the spatial relation corresponding to the other active uplink beam maps to a transmission configuration indicator (TCI) state of an active downlink control beam.

9. The method of claim 1, wherein another active uplink beam, of the at least two active uplink beams, does not depend on any active downlink control beams such that the spatial relation corresponding to the other active uplink beam is not updated when a transmission configuration indicator (TCI) state of any active downlink control beams changes.

10. The method of claim 1, wherein two spatial relations are used for transmission across different uplink control resources, and wherein one of the two spatial relations is used for transmission across different uplink data resources.

11. The method of claim 1, wherein two active uplink beams, of the plurality of active uplink beams, are configured for uplink control, and wherein each of the two active uplink beams depend on a respective one of two active downlink control beams.

12. The method of claim 11, wherein each of the two active uplink beams depend on a respective one of the two active downlink control beams when the UE supports beam correspondence between uplink beams and downlink beams.

13. The method of claim 11, wherein the spatial relation corresponding to a particular active uplink beam, of the two active uplink beams, maps to a transmission configuration indicator (TCI) state of a first active downlink control beam of the two active downlink control beams.

14. The method of claim 13, wherein the particular active uplink beam is associated with a smaller spatial relation identifier between the two active uplink beams, and wherein the first active downlink control beam is associated with a downlink control identifier having a smaller identifier value, in a current bandwidth part, between the two active downlink control beams.

15. The method of claim 11, wherein the two active uplink beams are indicated to the UE in a medium access control (MAC) control element (CE), wherein the MAC-CE indicates at least the spatial relation corresponding to the at least one active uplink beam, and wherein the spatial relation corresponding to the at least one active uplink beam maps to a transmission configuration indicator (TCI) state of a first active downlink control beam of the two active downlink control beams.

16. The method of claim 1, wherein the at least one active uplink beam and another active uplink beam, of the at least two active uplink beams, do not depend on two active downlink control beams supported by the UE for a minimum capability corresponding to one or more active downlink beams.

17. The method of claim 16, wherein the at least one active uplink beam and the other active uplink beam do not depend on the two active downlink control beams when the UE does not have a capability to support beam correspondence between uplink beams and downlink beams.

18. The method of claim 16, wherein the at least one active uplink beam and the other active uplink beam are indicated to the UE in a medium access control (MAC) control element (CE).

19. The method of claim l, wherein the uplink capability corresponds to a capability to support two or more active uplink beams for all uplink control resources and all uplink data resources.

20. The method of claim 19, wherein two or more spatial relations are configured for transmission across different uplink control resources and uplink data resources.

21. The method of claim 1, wherein the plurality of active uplink beams includes an uplink beam determined based at least in part on a random access procedure in addition to one or more active uplink beams determined in a connected mode.

22. A user equipment (UE) for wireless communication, comprising:

a memory; and

one or more processors coupled to the memory, the one or more processors configured to:

determine that the UE has an uplink capability corresponding to a plurality of active uplink beams required for the UE, wherein the uplink capability corresponds to support for:

at least two active uplink beams, of the plurality of active uplink beams, each having a spatial relation and being configured for physical uplink control channel (PUCCH) transmissions, and

at least one active uplink beam, of the at least two active uplink beams, being further configured for physical uplink shared channel (PUSCH) transmissions using the spatial relation corresponding to the at least one active uplink beam; and

signal the uplink capability to a network entity.

23. The UE of claim 22, wherein the uplink capability corresponds to a minimum downlink capability corresponding to one or more active downlink beams.

24. The UE of claim 22, wherein the one or more processors are further configured to:

signal the uplink capability separately from a minimum downlink capability of the UE corresponding to one or more active downlink beams.

25. The UE of claim 22, wherein a common spatial relation is used for transmission across all uplink control resources and all uplink data resources.

26. The UE of claim 22, wherein another active uplink beam, of the at least two active uplink beams, depends on one of two active downlink control beams such that the spatial relation corresponding to the other active uplink beam is updated when a spatial relation of the one of the two active downlink control beams changes.

27. The UE of claim 22, wherein another active uplink beam, of the at least two active uplink beams, is indicated to the UE in a medium access control (MAC) control element (CE), wherein the MAC-CE indicates the spatial relation corresponding to the other active uplink beam, and wherein the spatial relation corresponding to the other active uplink beam maps to a transmission configuration indicator (TCI) state of an active downlink control beam.

28. The UE of claim 22, wherein another active uplink beam, of the at least two active uplink beams, does not depend on any active downlink control beams such that the spatial relation corresponding to the other active uplink beam is not updated when a transmission configuration indicator (TCI) state of any active downlink control beams changes.

29. The UE of claim 22, wherein two spatial relations are used for transmission across different uplink control resources, and wherein one of the two spatial relations is used for transmission across different uplink data resources.

30. The UE of claim 22, wherein two active uplink beams do not depend on two active downlink control beams supported by the UE for a minimum capability corresponding to one or more active downlink beams.

31. The UE of claim 22, wherein the plurality of active uplink beams includes an uplink beam determined based at least in part on a random access procedure in addition to one or more active uplink beams determined in a connected mode.

32. A user equipment (UE) for wireless communication, comprising:

means for determining that the UE has an uplink capability corresponding to a plurality of active uplink beams required for the UE, wherein the uplink capability corresponds to support for:

at least two active uplink beams, of the plurality of active uplink beams, each having a spatial relation and being configured for physical uplink control channel (PUCCH) transmissions, and

at least one active uplink beam, of the at least two active uplink beams, being further configured for physical uplink shared channel (PUSCH) transmissions using the spatial relation corresponding to the at least one active uplink beam; and

means for signaling the uplink capability to a network entity.

33. A non-transitory computer-readable medium storing computer executable code for wireless communication at a user equipment (UE), comprising code to:

determine that the UE has an uplink capability corresponding to a plurality of active uplink beams required for the UE, wherein the uplink capability corresponds to support for:

at least two active uplink beams, of the plurality of active uplink beams, each having a spatial relation and being configured for physical uplink control channel (PUCCH) transmissions, and

at least one active uplink beam, of the at least two active uplink beams, being configured for physical uplink shared channel (PUSCH) transmissions using the spatial relation corresponding to the at least one active uplink beam; and

signal the uplink capability to a network entity.

34. The method of claim 1, wherein the uplink capability has a minimum requirement to support one active uplink beam for uplink control and uplink data, and one active uplink beam for uplink control.

35. The UE of claim 22, wherein the uplink capability corresponds to a capability to support two or more active uplink beams for all uplink control resources and all uplink data resources.

36. The UE of claim 32, wherein two spatial relations are used for transmission across different uplink control resources, and wherein one of the two spatial relations is used for transmission across different uplink data resources.