

CLAIMS

What is claimed is:

- 1 1. A method for wireless communication by a user equipment (UE),
2 comprising:
3 receiving an indicator indicating to derive a quasi co-location (QCL)
4 assumption for a demodulation reference signal (DMRS) for a first bandwidth part from a
5 reference signal of a second bandwidth part;
6 receiving a grant in the second bandwidth part instructing the UE to switch
7 from the second bandwidth part to the first bandwidth part; and
8 demodulating, based at least in part on the QCL assumption, a transmission in
9 the first bandwidth part received within a transition time window occurring after the UE
10 receives the grant.
- 1 2. The method of claim 1, wherein a duration of the transition time
2 window corresponds to a duration of a first data channel on the first bandwidth part, the first
3 data channel comprising the transmission in the first bandwidth part.
- 1 3. The method of claim 1, wherein the indicator indicates that the
2 reference signal of the second bandwidth part is cross bandwidth part quasi co-located with a
3 second reference signal of the first bandwidth part, the method further comprising:
4 filtering the reference signal and the second reference signal across the first
5 and second bandwidth parts to determine a QCL parameter, wherein the transmission in the
6 first bandwidth part is demodulated based at least in part on the QCL parameter.
- 1 4. The method of claim 1, wherein the indicator indicates that the
2 reference signal of the second bandwidth part is not cross bandwidth part quasi co-located
3 with a second reference signal of the first bandwidth part, the method further comprising:
4 determining not to filter the reference signal and the second reference signal
5 across the first and second bandwidth parts.
- 1 5. The method of claim 1, further comprising:
2 determining that the transition time window has expired;

3 deriving a second QCL assumption for the DMRS for the first bandwidth part
4 from a reference signal of the first bandwidth part; and
5 demodulating, after the transition time window has expired, a second
6 transmission in the first bandwidth part based at least in part on the second QCL assumption.

1 6. The method of claim 1, wherein the QCL assumption indicates to
2 derive a QCL parameter for the first bandwidth part based at least in part on the reference
3 signal of the second bandwidth part, and wherein the transmission in the first bandwidth part
4 is demodulated based at least in part on the QCL parameter.

1 7. The method of claim 6, wherein the QCL parameter is a delay spread
2 parameter, a Doppler parameter, an average delay parameter, a Doppler shift parameter, a
3 spatial receive parameter, or any combination thereof.

1 8. The method of claim 1, further comprising:
2 receiving radio resource control signaling, or downlink control information, or
3 a control element that indicates a duration of the transition time window.

1 9. The method of claim 1, further comprising:
2 receiving radio resource control signaling, or downlink control information, or
3 a control element that indicates whether the reference signal of the second bandwidth part is
4 cross bandwidth part quasi co-located with a second reference signal of the first bandwidth
5 part.

1 10. The method of claim 1, wherein the UE locally stores a duration of the
2 transition time window.

1 11. The method of claim 1, wherein a duration of the transition time
2 window is a function of a periodicity of a second reference signal of the first bandwidth part.

1 12. The method of claim 1, wherein the reference signal is a channel state
2 information reference signal (CSI-RS), a synchronization signal block (SSB), or a tracking
3 reference signal (TRS).

1 13. The method of claim 1, wherein the indicator is a transmission
2 configuration indicator (TCI) that indicates a QCL parameter set from a plurality of different
3 QCL parameter sets.

1 14. The method of claim 1, further comprising:
2 deriving a transmission configuration indicator (TCI) state for the first
3 bandwidth part based at least in part on a configured TCI state for the second bandwidth part.

1 15. The method of claim 1, further comprising:
2 receiving configuration information configuring the UE to utilize a first
3 transmission configuration indicator (TCI) state for the first bandwidth part of a plurality of
4 different TCI states, and wherein each TCI state of the plurality of TCI states identifies at
5 least one reference signal and includes a parameter for a receive beam configured for
6 receiving a direction transmission in the second bandwidth part; and
7 receiving the transmission in the first bandwidth part in accordance with the
8 first TCI state.

1 16. The method of claim 1, further comprising:
2 receiving, prior to the grant, a control element configuring the UE to utilize a
3 transmission configuration indicator (TCI) interpretation in the second bandwidth part;
4 determining that an application time of the control element occurs within the
5 transition time window; and
6 receiving the transmission in the first bandwidth part in accordance with the
7 TCI interpretation.

1 17. The method of claim 1, further comprising:
2 receiving, prior to the grant, a control element configuring the UE to utilize a
3 transmission configuration indicator (TCI) interpretation in the second bandwidth part; and
4 determining whether to apply or reject the TCI interpretation for transmissions
5 received in the first bandwidth part during the transition time window based at least in part on
6 an application time of the control element extending after the transition time window.

1 18. The method of claim 1, further comprising:

2 monitoring a shared data channel or a control channel of the first bandwidth
3 part for the transmission.

1 19. The method of claim 1, wherein the transmission is a control resource
2 set (CORESET), and wherein demodulating the transmission in the first bandwidth part
3 during the transition time window further comprises:

4 demodulating the CORESET in the first bandwidth part based at least in part
5 on the QCL assumption.

1 20. The method of claim 1, wherein the transmission is a first control
2 resource set (CORESET), and wherein demodulating the transmission in the first bandwidth
3 part during the transition time window further comprises:

4 mapping the first CORESET and a second CORESET in the first bandwidth
5 part; and

6 demodulating the first CORESET and the second CORESET based at least in
7 part on the QCL assumption and the mapping.

1 21. A method for wireless communication by a base station, comprising:

2 transmitting, to a user equipment (UE), an indicator indicating to derive a
3 quasi co-location (QCL) assumption for a demodulation reference signal (DMRS) for a first
4 bandwidth part from a reference signal of a second bandwidth part;

5 transmitting a grant in the second bandwidth part instructing the UE to switch
6 from the second bandwidth part to the first bandwidth part;

7 generating a transmission in accordance with the QCL assumption; and

8 transmitting the transmission in the first bandwidth part during a transition
9 time window occurring after the UE is instructed to switch from the second bandwidth part to
10 the first bandwidth part.

1 22. The method of claim 21, wherein a duration of the transition time
2 window corresponds to a duration of a first data channel on the first bandwidth part, the first
3 data channel comprising the transmission in the first bandwidth part.

1 23. The method of claim 21, further comprising:

2 determining that the transition time window has expired;

3 generating a second transmission in accordance a second QCL assumption
4 corresponding to the first bandwidth part; and
5 transmitting, after the transition time window has expired, the second
6 transmission in the first bandwidth part.

1 24. The method of claim 21, further comprising:
2 transmitting radio resource control signaling, or downlink control information,
3 or a control element that indicates a duration of the transition time window.

1 25. The method of claim 21, further comprising:
2 transmitting radio resource control signaling, or downlink control information,
3 or a control element that indicates whether the reference signal of the second bandwidth part
4 is cross bandwidth part quasi co-located with a second reference signal of the first bandwidth
5 part.

1 26. The method of claim 21, further comprising:
2 transmitting the reference signal in the second bandwidth part; and
3 transmitting a second reference signal in the first bandwidth part.

1 27. The method of claim 21, wherein the reference signal is a channel state
2 information reference signal (CSI-RS), a synchronization signal block (SSB), or a tracking
3 reference signal.

1 28. An apparatus for wireless communication by a user equipment (UE),
2 comprising:
3 means for receiving an indicator indicating to derive a quasi co-location
4 (QCL) assumption for a demodulation reference signal (DMRS) for a first bandwidth part
5 from a reference signal of a second bandwidth part;
6 means for receiving a grant in the second bandwidth part instructing the UE to
7 switch from the second bandwidth part to the first bandwidth part; and
8 means for demodulating, based at least in part on the QCL assumption, a
9 transmission in the first bandwidth part received within a transition time window occurring
10 after the UE receives the grant.

1 29. An apparatus for wireless communication by a base station,
2 comprising:
3 means for transmitting, to a user equipment (UE), an indicator indicating to
4 derive a quasi co-location (QCL) assumption for a demodulation reference signal (DMRS)
5 for a first bandwidth part from a reference signal of a second bandwidth part;
6 means for transmitting a grant in the second bandwidth part instructing the UE
7 to switch from the second bandwidth part to the first bandwidth part;
8 means for generating a transmission in accordance with the QCL assumption;
9 and
10 means for transmitting the transmission in the first bandwidth part during a
11 transition time window occurring after the UE is instructed to switch from the second
12 bandwidth part to the first bandwidth part.

1 30. An apparatus for wireless communication by a user equipment (UE),
2 comprising:
3 a processor;
4 memory in electronic communication with the processor; and
5 instructions stored in the memory and executable by the processor to cause the
6 apparatus to:
7 receive an indicator indicating to derive a quasi co-location (QCL)
8 assumption for a demodulation reference signal (DMRS) for a first bandwidth part from a
9 reference signal of a second bandwidth part;
10 receive a grant in the second bandwidth part instructing the UE to
11 switch from the second bandwidth part to the first bandwidth part; and
12 demodulate, based at least in part on the QCL assumption, a
13 transmission in the first bandwidth part received within a transition time window occurring
14 after the UE receives the grant.

1 31. The apparatus of claim 30, wherein the indicator indicates that the
2 reference signal of the second bandwidth part is cross bandwidth part quasi co-located with a
3 second reference signal of the first bandwidth part, and wherein the instructions are further
4 executable by the processor to cause the apparatus to:

5 filter the reference signal and the second reference signal across the first and
6 second bandwidth parts to determine a QCL parameter, wherein the transmission in the first
7 bandwidth part is demodulated based at least in part on the QCL parameter.

1 32. The apparatus of claim 30, wherein the indicator indicates that the
2 reference signal of the second bandwidth part is not cross bandwidth part quasi co-located
3 with a second reference signal of the first bandwidth part, and wherein the instructions are
4 further executable by the processor to cause the apparatus to:

5 determine not to filter the reference signal and the second reference signal
6 across the first and second bandwidth parts.

1 33. The apparatus of claim 30, wherein the instructions are further
2 executable by the processor to cause the apparatus to:

3 determine that the transition time window has expired;
4 derive a second QCL assumption for the DMRS for the first bandwidth part
5 from a reference signal of the first bandwidth part; and
6 demodulate, after the transition time window has expired, a second
7 transmission in the first bandwidth part based at least in part on the second QCL assumption.

1 34. The apparatus of claim 30, wherein the QCL assumption indicates to
2 derive a QCL parameter for the first bandwidth part based at least in part on the reference
3 signal of the second bandwidth part, and wherein the transmission in the first bandwidth part
4 is demodulated based at least in part on the QCL parameter.

1 35. The apparatus of claim 34, wherein the QCL parameter is a delay
2 spread parameter, a Doppler parameter, an average delay parameter, a Doppler shift
3 parameter, a spatial receive parameter, or any combination thereof.

1 36. The apparatus of claim 30, wherein the instructions are further
2 executable by the processor to cause the apparatus to:
3 receive radio resource control signaling, or downlink control information, or a
4 control element that indicates a duration of the transition time window.

1 37. The apparatus of claim 30, wherein the instructions are further
2 executable by the processor to cause the apparatus to:

3 receive radio resource control signaling, or downlink control information, or a
4 control element that indicates whether the reference signal of the second bandwidth part is
5 cross bandwidth part quasi co-located with a second reference signal of the first bandwidth
6 part.

1 38. The apparatus of claim 30, wherein the UE locally stores a duration of
2 the transition time window.

1 39. The apparatus of claim 30, wherein a duration of the transition time
2 window is a function of a periodicity of a second reference signal of the first bandwidth part.

1 40. The apparatus of claim 30, wherein the reference signal is a channel
2 state information reference signal (CSI-RS), a synchronization signal block (SSB), or a
3 tracking reference signal (TRS).

1 41. The apparatus of claim 30, wherein the indicator is a transmission
2 configuration indicator (TCI) that indicates a QCL parameter set from a plurality of different
3 QCL parameter sets.

1 42. The apparatus of claim 30, wherein the instructions are further
2 executable by the processor to cause the apparatus to:
3 derive a transmission configuration indicator (TCI) state for the first
4 bandwidth part based at least in part on a configured TCI state for the second bandwidth part.

1 43. The apparatus of claim 30, wherein the instructions are further
2 executable by the processor to cause the apparatus to:
3 receive configuration information configuring the UE to utilize a first
4 transmission configuration indicator (TCI) state for the first bandwidth part of a plurality of
5 different TCI states, and wherein each TCI state of the plurality of TCI states identifies at
6 least one reference signal and includes a parameter for a receive beam configured for
7 receiving a direction transmission in the second bandwidth part; and
8 receive the transmission in the first bandwidth part in accordance with the first
9 TCI state.

1 44. The apparatus of claim 30, wherein the instructions are further
2 executable by the processor to cause the apparatus to:

3 receive, prior to the grant, a control element configuring the UE to utilize a
4 transmission configuration indicator (TCI) interpretation in the second bandwidth part;
5 determine that an application time of the control element occurs within the
6 transition time window; and
7 receive the transmission in the first bandwidth part in accordance with the TCI
8 interpretation.

1 45. The apparatus of claim 30, wherein the instructions are further
2 executable by the processor to cause the apparatus to:
3 receive, prior to the grant, a control element configuring the UE to utilize a
4 transmission configuration indicator (TCI) interpretation in the second bandwidth part; and
5 determine whether to apply or reject the TCI interpretation for transmissions
6 received in the first bandwidth part during the transition time window based at least in part on
7 an application time of the control element extending after the transition time window.

1 46. The apparatus of claim 30, wherein the instructions are further
2 executable by the processor to cause the apparatus to:
3 monitor a shared data channel or a control channel of the first bandwidth part
4 for the transmission.

1 47. The apparatus of claim 30, wherein the instructions to the transmission
2 is a control resource set (CORESET), and wherein demodulating the transmission in the first
3 bandwidth part during the transition time window further are executable by the processor to
4 cause the apparatus to:
5 demodulate the CORESET in the first bandwidth part based at least in part on
6 the QCL assumption.

1 48. The apparatus of claim 30, wherein the instructions to the transmission
2 is a first control resource set (CORESET), and wherein demodulating the transmission in the
3 first bandwidth part during the transition time window further are executable by the processor
4 to cause the apparatus to:
5 map the first CORESET and a second CORESET in the first bandwidth part;
6 and

7 demodulate the first CORESET and the second CORESET based at least in
8 part on the QCL assumption and the mapping.

1 49. An apparatus for wireless communication by a base station,
2 comprising:
3 a processor;
4 memory in electronic communication with the processor; and
5 instructions stored in the memory and executable by the processor to cause the
6 apparatus to:

7 transmit, to a user equipment (UE), an indicator indicating to derive a
8 quasi co-location (QCL) assumption for a demodulation reference signal (DMRS) for a first
9 bandwidth part from a reference signal of a second bandwidth part;
10 transmit a grant in the second bandwidth part instructing the UE to
11 switch from the second bandwidth part to the first bandwidth part;
12 generate a transmission in accordance with the QCL assumption; and
13 transmit the transmission in the first bandwidth part during a transition
14 time window occurring after the UE is instructed to switch from the second bandwidth part to
15 the first bandwidth part.

1 50. The apparatus of claim 49, wherein the instructions are further
2 executable by the processor to cause the apparatus to:
3 determine that the transition time window has expired;
4 generate a second transmission in accordance a second QCL assumption
5 corresponding to the first bandwidth part; and
6 transmit, after the transition time window has expired, the second transmission
7 in the first bandwidth part.

1 51. The apparatus of claim 49, wherein the instructions are further
2 executable by the processor to cause the apparatus to:
3 transmit radio resource control signaling, or downlink control information, or
4 a control element that indicates a duration of the transition time window.

1 52. The apparatus of claim 49, wherein the instructions are further
2 executable by the processor to cause the apparatus to:

3 transmit radio resource control signaling, or downlink control information, or
4 a control element that indicates whether the reference signal of the second bandwidth part is
5 cross bandwidth part quasi co-located with a second reference signal of the first bandwidth
6 part.

1 53. The apparatus of claim 49, wherein the instructions are further
2 executable by the processor to cause the apparatus to:

3 transmit the reference signal in the second bandwidth part; and
4 transmit a second reference signal in the first bandwidth part.

1 54. The apparatus of claim 49, wherein the reference signal is a channel
2 state information reference signal (CSI-RS), a synchronization signal block (SSB), or a
3 tracking reference signal.

1 55. A non-transitory computer-readable medium storing code for wireless
2 communication by a user equipment (UE), the code comprising instructions executable by a
3 processor to:

4 receive an indicator indicating to derive a quasi co-location (QCL) assumption
5 for a demodulation reference signal (DMRS) for a first bandwidth part from a reference
6 signal of a second bandwidth part;

7 receive a grant in the second bandwidth part instructing the UE to switch from
8 the second bandwidth part to the first bandwidth part; and

9 demodulate, based at least in part on the QCL assumption, a transmission in
10 the first bandwidth part received within a transition time window occurring after the UE
11 receives the grant.

1 56. A non-transitory computer-readable medium storing code for wireless
2 communication by a base station, the code comprising instructions executable by a processor
3 to:

4 transmit, to a user equipment (UE), an indicator indicating to derive a quasi
5 co-location (QCL) assumption for a demodulation reference signal (DMRS) for a first
6 bandwidth part from a reference signal of a second bandwidth part;

7 transmit a grant in the second bandwidth part instructing the UE to switch
8 from the second bandwidth part to the first bandwidth part;

- 9 generate a transmission in accordance with the QCL assumption; and
10 transmit the transmission in the first bandwidth part during a transition time
11 window occurring after the UE is instructed to switch from the second bandwidth part to the
12 first bandwidth part.