

CLAIMS

1. A method for wireless communications at a user equipment (UE), comprising:
 - receiving a control message from a base station that indicates, for a plurality of component carriers configured for the UE according to a carrier aggregation configuration, one or more of: an active transmission configuration indicator state, a set of active transmission configuration indicator states, or a spatial relation reference signal identifier;
 - determining a communication configuration for the plurality of component carriers based at least in part on the control message; and
 - performing or receiving a transmission using the plurality of component carriers based at least in part on the communication configuration.
2. The method of claim 1, further comprising:
 - identifying the plurality of component carriers or a set of bandwidth part component carrier pairs for configuration according to the active transmission configuration indicator state, the set of active transmission configuration indicator states, or the spatial relation reference signal identifier based at least in part on a format of the control message, wherein the format corresponds to a transmission configuration indicator selection format.
3. The method of claim 1, further comprising:
 - receiving an indication of the plurality of component carriers or a set of bandwidth part component carrier pairs for configuration according to the active transmission configuration indicator state, the set of active transmission configuration indicator states, or the spatial relation reference signal identifier, wherein the indication is separate from the control message.
4. The method of claim 1, further comprising:
 - reporting, to the base station, a group of component carriers or a set of bandwidth part component carrier pairs configured for the UE that are spatially quasi-located, wherein the group of component carriers or the set of bandwidth part component carrier pairs comprises the plurality of component carriers.
5. The method of claim 1, wherein the control message comprises a medium access control-control element (MAC-CE).

6. The method of claim 1, wherein the control message indicates the active transmission configuration indicator state for the plurality of component carriers, the method further comprising:

identifying a control resource set identifier that is common to a subset of component carriers of the plurality of component carriers based at least in part on the control message; and

applying the active transmission configuration indicator state to each component carrier of the subset of component carriers associated with the control resource set identifier.

7. The method of claim 6, further comprising:

identifying a second subset of component carriers of the plurality of component carriers, wherein each component carrier of the second subset of component carriers is associated with a same set of configured candidate transmission configuration indicator states as each component carrier of the subset of component carriers indicated in the control message; and

applying the active transmission configuration indicator state to each component carrier of the second subset of component carriers.

8. The method of claim 6, wherein the control message indicates an unspecified component carrier identifier, the method further comprising:

identifying a second subset of component carriers of the plurality of component carriers, wherein each component carrier of the second subset of component carriers is associated with a same set of configured candidate transmission configuration indicator states; and

applying the active transmission configuration indicator state to each component carrier of the second subset of component carriers.

9. The method of claim 6, further comprising:

identifying a second subset of component carriers of the plurality of component carriers, wherein each component carrier of the second subset of component carriers is associated with a same frequency band; and

applying the active transmission configuration indicator state to each component carrier of the second subset of component carriers.

10. The method of claim 1, wherein the control message indicates the set of active transmission configuration indicator states for a shared channel, the method further comprising:

identifying a first set of bandwidth part component carrier pairs based at least in part on the control message, wherein each of the first set of bandwidth part component carrier pairs includes a component carrier of the plurality of component carriers; and

applying the set of active transmission configuration indicator states for the shared channel across each of the first set of bandwidth part component carrier pairs.

11. The method of claim 10, further comprising:

identifying a second set of bandwidth part component carrier pairs, wherein each of the second set of bandwidth part component carrier pairs is associated with a same set of configured candidate transmission configuration indicator states as each of the first set of bandwidth part component carrier pairs indicated in the control message; and

applying the set of active transmission configuration indicator states for the shared channel across each of the second set of bandwidth part component carrier pairs.

12. The method of claim 10, wherein the control message indicates an unspecified bandwidth part component carrier pair, the method further comprising:

identifying a second set of bandwidth part component carrier pairs, wherein each of the second set of bandwidth part component carrier pairs is associated with a same set of configured candidate transmission configuration indicator states; and

applying the set of active transmission configuration indicator states for the shared channel across each of the second set of bandwidth part component carrier pairs.

13. The method of claim 10, further comprising:

identifying a second set of bandwidth part component carrier pairs, wherein each bandwidth part component carrier pair of the second set of bandwidth part component carrier pairs is associated with a same frequency band; and

applying the active transmission configuration indicator state to the each bandwidth part component carrier pair of the second set of bandwidth part component carrier pairs.

14. The method of claim 10, wherein the shared channel comprises a physical downlink shared channel (PDSCH).

15. The method of claim 1, wherein the control message indicates the spatial relation reference signal identifier for a sounding reference signal, the method further comprising:

identifying a first set of bandwidth part component carrier pairs based at least in part on the control message, wherein each of the first set of bandwidth part component carrier pairs includes a component carrier of the plurality of component carriers; and
configuring resources for the sounding reference signal for each of the first set of bandwidth part component carrier pairs according to the spatial relation reference signal identifier.

16. The method of claim 15, further comprising:

identifying a second set of bandwidth part component carrier pairs, wherein each of the second set of bandwidth part component carrier pairs is associated with a same set of configured candidate transmission configuration indicator states as each of the first set of bandwidth part component carrier pairs indicated in the control message; and

configuring resources for the sounding reference signal for each of the second set of bandwidth part component carrier pairs.

17. The method of claim 15, wherein the control message indicates an unspecified bandwidth part component carrier pair, the method further comprising:

identifying a second set of bandwidth part component carrier pairs, wherein each of the second set of bandwidth part component carrier pairs is associated with a same set of configured candidate transmission configuration indicator states; and

configuring resources for the sounding reference signal for each of the second set of bandwidth part component carrier pairs.

18. The method of claim 15, further comprising:

identifying a second set of bandwidth part component carrier pairs, wherein each bandwidth part component carrier pair of the second set of bandwidth part component carrier pairs is associated with a same frequency band; and

configuring resources for the sounding reference signal for each of the second set of bandwidth part component carrier pairs.

19. The method of claim 15, wherein the sounding reference signal comprises a periodic sounding reference signal, a semi-persistent sounding reference signal, or an aperiodic sounding reference signal.

20. A method for wireless communications at a base station, comprising:
identifying, for a plurality of component carriers configured for a user equipment (UE) according to a carrier aggregation configuration, one or more of: an active transmission configuration indicator state, a set of active transmission configuration indicator states, or a spatial relation reference signal identifier;

transmitting a control message to the UE that indicates the active transmission configuration indicator state, the set of active transmission configuration indicator states, the spatial relation reference signal identifier, or any combination thereof for the plurality of component carriers; and

performing or receiving a transmission using the plurality of component carriers configured based at least in part on the control message.

21. The method of claim 20, wherein a format of the control message corresponds to a transmission configuration indicator selection format for indicating the active transmission configuration indicator state, the set of active transmission configuration indicator states, the spatial relation reference signal identifier, or any combination thereof for the plurality of component carriers.

22. The method of claim 20, further comprising:
transmitting an indication of the plurality of component carriers or a set of bandwidth part component carrier pairs for configuration according to the active transmission configuration indicator state, the set of active transmission configuration indicator states, or the spatial relation reference signal identifier, wherein the indication is separate from the control message.

23. The method of claim 20, further comprising:
receiving, from the UE, an indication of a group of component carriers or a set of bandwidth part component carrier pairs configured for the UE that are spatially quasi-located; and

identifying the plurality of component carriers based at least in part on the indication of the group of component carriers or the set of bandwidth part component carrier pairs.

24. The method of claim 20, wherein the control message comprises a medium access control-control element (MAC-CE).

25. The method of claim 20, further comprising:
selecting the active transmission configuration indicator state for the plurality of component carriers based at least in part on a control resource set identifier that is common to the plurality of component carriers, wherein the control message indicates the active transmission configuration indicator state for the plurality of component carriers and a component carrier identifier of the plurality of component carriers.

26. The method of claim 20, further comprising:
selecting the active transmission configuration indicator state for the plurality of component carriers based at least in part on a common active transmission configuration indicator state for the plurality of component carriers, wherein the control message indicates the active transmission configuration indicator state for the plurality of component carriers and an unspecified component carrier identifier.

27. The method of claim 20, further comprising:
selecting the active transmission configuration indicator state for the plurality of component carriers based at least in part on a frequency band common to the plurality of component carriers, wherein the control message indicates the active transmission configuration indicator state for the plurality of component carriers.

28. The method of claim 20, further comprising:
selecting the set of active transmission configuration indicator states for a shared channel of a first set of bandwidth part component carrier pairs, each of the first set of bandwidth part component carrier pairs is associated with a same set of configured candidate transmission configuration indicator states, wherein the control message indicates the set of active transmission configuration indicator states and a component carrier identifier of the plurality of component carriers.

29. The method of claim 20, further comprising:

selecting the set of active transmission configuration indicator states for a shared channel of a first set of bandwidth part component carrier pairs, each of the first set of bandwidth part component carrier pairs is associated with a same set of configured candidate transmission configuration indicator states, wherein the control message indicates the set of active transmission configuration indicator states and an unspecified component carrier identifier.

30. The method of claim 20, further comprising:

selecting the set of active transmission configuration indicator states for a shared channel of a first set of bandwidth part component carrier pairs, each of the first set of bandwidth part component carrier pairs is associated with a same frequency band, wherein the control message indicates the set of active transmission configuration indicator states.

31. The method of claim 20, further comprising:

selecting the spatial relation reference signal identifier for a sounding reference signal of a first set of bandwidth part component carrier pairs, each of the first set of bandwidth part component carrier pairs is associated with a same set of configured candidate transmission configuration indicator states, wherein the control message indicates the spatial relation reference signal identifier and a bandwidth part component carrier pair.

32. The method of claim 20, further comprising:

selecting the spatial relation reference signal identifier for a sounding reference signal of a first set of bandwidth part component carrier pairs, each of the first set of bandwidth part component carrier pairs is associated with a same set of configured candidate transmission configuration indicator states, wherein the control message indicates the spatial relation reference signal identifier and an unspecified bandwidth part component carrier pair.

33. The method of claim 20, further comprising:

selecting the spatial relation reference signal identifier for a sounding reference signal of a first set of bandwidth part component carrier pairs, each of the first set of bandwidth part component carrier pairs is associated with a same frequency band, wherein the control message indicates the spatial relation reference signal identifier and an unspecified bandwidth part component carrier pair.

34. An apparatus for wireless communications at a user equipment (UE), comprising:
 a processor,
 memory in electronic communication with the processor; and
 instructions stored in the memory and executable by the processor to cause the apparatus to:

receive a control message from a base station that indicates, for a plurality of component carriers configured for the UE according to a carrier aggregation configuration, one or more of: an active transmission configuration indicator state, a set of active transmission configuration indicator states, or a spatial relation reference signal identifier;

determine a communication configuration for the plurality of component carriers based at least in part on the control message; and

perform or receive a transmission using the plurality of component carriers based at least in part on the communication configuration.

35. The apparatus of claim 34, wherein the instructions are further executable by the processor to cause the apparatus to:

identify the plurality of component carriers or a set of bandwidth part component carrier pairs for configuration according to the active transmission configuration indicator state, the set of active transmission configuration indicator states, or the spatial relation reference signal identifier based at least in part on a format of the control message, wherein the format corresponds to a transmission configuration indicator selection format.

36. The apparatus of claim 34, wherein the instructions are further executable by the processor to cause the apparatus to:

receive an indication of the plurality of component carriers or a set of bandwidth part component carrier pairs for configuration according to the active transmission configuration indicator state, the set of active transmission configuration indicator states, or the spatial relation reference signal identifier, wherein the indication is separate from the control message.

37. The apparatus of claim 34, wherein the instructions are further executable by the processor to cause the apparatus to:

report, to the base station, a group of component carriers or a set of bandwidth part component carrier pairs configured for the UE that are spatially quasi-located, wherein the group of component carriers or the set of bandwidth part component carrier pairs comprises the plurality of component carriers.

38. The apparatus of claim 34, wherein the control message comprises a medium access control-control element (MAC-CE).

39. An apparatus for wireless communications at a base station, comprising:
 a processor,
 memory in electronic communication with the processor; and
 instructions stored in the memory and executable by the processor to cause the apparatus to:

identify, for a plurality of component carriers configured for a user equipment (UE) according to a carrier aggregation configuration, one or more of: an active transmission configuration indicator state, a set of active transmission configuration indicator states, or a spatial relation reference signal identifier;
 transmit a control message to the UE that indicates the active transmission configuration indicator state, the set of active transmission configuration indicator states, the spatial relation reference signal identifier, or any combination thereof for the plurality of component carriers; and
 perform or receive a transmission using the plurality of component carriers configured based at least in part on the control message.

40. The apparatus of claim 39, wherein a format of the control message corresponds to a transmission configuration indicator selection format for indicating the active transmission configuration indicator state, the set of active transmission configuration indicator states, the spatial relation reference signal identifier, or any combination thereof for the plurality of component carriers.

41. The apparatus of claim 39, wherein the instructions are further executable by the processor to cause the apparatus to:
 transmit an indication of the plurality of component carriers or a set of bandwidth part component carrier pairs for configuration according to the active transmission

configuration indicator state, the set of active transmission configuration indicator states, or the spatial relation reference signal identifier, wherein the indication is separate from the control message.

42. The apparatus of claim 39, wherein the instructions are further executable by the processor to cause the apparatus to:

receive, from the UE, an indication of a group of component carriers or a set of bandwidth part component carrier pairs configured for the UE that are spatially quasi-located; and

identify the plurality of component carriers based at least in part on the indication of the group of component carriers or the set of bandwidth part component carrier pairs.

43. The apparatus of claim 39, wherein the control message comprises a medium access control-control element (MAC-CE).