CLAIMS

1. A method for wireless communications at a base station, comprising: transmitting an indication of which of a clustered scheme or a distributed scheme is configured for control information transmissions;

transmitting, during first time resources and over a first frequency bandwidth, first control information scheduling a first data transmission during second time resources and over a second frequency bandwidth, the first time resources being selected based at least in part on the indication;

transmitting, during third time resources and over a third frequency bandwidth, second control information scheduling a second data transmission during fourth time resources and over a fourth frequency bandwidth, the third time resources being selected based at least in part on the indication;

transmitting the first data transmission during the second time resources;

and transmitting the second data transmission during the fourth time resources.

2. The method of claim 1, wherein the indication indicates that the clustered scheme is configured for control information transmissions, and wherein the first control information and the second control information are transmitted in a control information transmission cluster.

3. The method of claim 2, wherein the first control information is transmitted in a first beam direction and the second control information is transmitted in a second beam direction.

4. The method of claim 3, further comprising: transmitting a mapping pattern between a beam pattern corresponding to a synchronization signal transmission and a control information beam pattern of the control information transmission cluster.

5. The method of claim 2, further comprising: indicating a monitoring pattern for the control information transmission cluster.

6. The method of claim 2, wherein the second time resources and the fourth time resources occur after the first time resources and the third time resources.

7. The method of claim 2, wherein the second time resources occur after the first time

resources, wherein the third time resources occur before the second time resources, and wherein the fourth time resources occur after the second time resources.

8. The method of claim 1, wherein the indication indicates that the distributed scheme is configured for control information transmissions.

9. The method of claim 1, wherein the indication is transmitted in a master information block (MIB).

10. The method of claim 1, wherein the first frequency bandwidth is smaller than the second frequency bandwidth, and wherein the third frequency bandwidth is smaller than the fourth frequency bandwidth.

11. The method of claim 1, wherein the first frequency bandwidth is a same size as the second frequency bandwidth, and wherein the third frequency bandwidth is a same size as the fourth frequency bandwidth.

12. The method of claim 1, wherein the first frequency bandwidth is non-overlapping in frequency with the second frequency bandwidth, and wherein the third frequency bandwidth is non-overlapping with the fourth frequency bandwidth.

13. The method of claim 1, wherein the first data transmission or the second data transmission comprises a system information block (SIB) message, a random access response message, a paging message, or a user data block.

14. A method for wireless communications at a user equipment (UE), comprising: receiving, from a base station, an indication of which of a clustered scheme or a distributed scheme is configured for control information transmissions;

monitoring, based at least in part on the indication, a control information resource set for control information for the UE;

receiving, during first time resources and over a first frequency bandwidth, the control information for the UE based at least in part on the monitoring, the control information scheduling a data transmission for the UE during second time resources;

and receiving the data transmission during the second time resources and over a second frequency bandwidth.

15. The method of claim 14, wherein the indication indicates that the clustered

scheme is configured for control information transmissions, wherein the first time resources occur during a control information transmission cluster, and wherein the control information transmission cluster occurs before the second time resources.

16. The method of claim 15, further comprising: receiving, from the base station, an indication of a monitoring pattern for the control information transmission cluster.

17. The method of claim 15, further comprising: identifying a preferred transmit beam direction based at least in part on one or more synchronization signals transmitted by the base station, wherein a location of the control information resource set in the control information transmission cluster corresponds to the preferred transmit beam direction.

18. The method of claim 15, further comprising: receiving a mapping pattern between a beam pattern corresponding to a synchronization signal transmission and a control information beam pattern of the control information transmission cluster;

and identifying the first time resources based at least in part on the beam pattern and the mapping pattern.

19. The method of claim 15, wherein third time resources occur during the control information transmission cluster and after the first time resources.

20. The method of claim 14, wherein the indication indicates that the distributed scheme is configured for control information transmissions.

21. The method of claim 14, wherein the indication is received in a master information block (MIB), a system information block (SIB), radio resource control (RRC) signaling, a medium access control (MAC) control element (CE), or downlink control information (DCI).

22. The method of claim 14, wherein the first frequency bandwidth is smaller than the second frequency bandwidth.

23. The method of claim 14, wherein the first frequency bandwidth is a same size as the second frequency bandwidth.

24. The method of claim 14, wherein the first frequency bandwidth overlaps in frequency with the second frequency bandwidth.

25. The method of claim 14, wherein the data transmission comprises a system information block (SIB) message, a random access response message, a paging message, or a user data block.

26. 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: transmit an indication of which of a clustered scheme or a distributed scheme is configured for control information transmissions;

transmit, during first time resources and over a first frequency bandwidth, first control information scheduling a first data transmission during second time resources and over a second frequency bandwidth, the first time resources being selected based at least in part on the indication;

transmit, during third time resources and over a third frequency bandwidth, second control information scheduling a second data transmission during fourth time resources and over a fourth frequency bandwidth, the third time resources being selected based at least in part on the indication;

transmit the first data transmission during the second time resources;

and transmit the second data transmission during the fourth time resources.

27. The apparatus of claim 26, wherein the indication indicates that the clustered scheme is configured for control information transmissions, and wherein the first control information and the second control information are transmitted in a control information transmission cluster.

28. The apparatus of claim 27, wherein the first control information is transmitted in a first beam direction and the second control information is transmitted in a second beam direction.

29. The apparatus of claim 28, wherein the instructions are further executable by the processor to cause the apparatus to: transmit a mapping pattern between a beam pattern corresponding to a synchronization signal transmission and a control information beam pattern of the control information transmission cluster.

30. The apparatus of claim 27, wherein the instructions are further executable by the

processor to cause the apparatus to: indicate a monitoring pattern for the control information transmission cluster.

31. The apparatus of claim 27, wherein the second time resources occur after the first time resources, wherein the third time resources occur before the second time resources, and wherein the fourth time resources occur after the second time resources.

32. The apparatus of claim 26, wherein the indication indicates that the distributed scheme is configured for control information transmissions.

33. The apparatus of claim 26, wherein the indication is transmitted in a master information block (MIB).

34. The apparatus of claim 26, wherein the first data transmission or the second data transmission comprises a system information block (SIB) message, a random access response message, a paging message, or a user data block.

35. The apparatus of claim 26, wherein: the first frequency bandwidth is smaller than the second frequency bandwidth and the third frequency bandwidth is smaller than the fourth frequency bandwidth, or the first frequency bandwidth is a same size as the second frequency bandwidth and the third frequency bandwidth is a same size as the fourth frequency bandwidth, or the first frequency bandwidth is non-overlapping in frequency with the second frequency bandwidth and the third frequency bandwidth is non-overlapping with the fourth frequency bandwidth.

36. 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, from a base station, an indication of which of a clustered scheme or a distributed scheme is configured for control information transmissions;

monitor, based at least in part on the indication, a control information resource set for control information for the UE;

receive, during first time resources and over a first frequency bandwidth, the control information for the UE based at least in part on the monitoring, the control information scheduling a data transmission for the UE during second time resources;

and receive the data transmission during the second time resources and over a second frequency bandwidth.

37. The apparatus of claim 36, wherein the indication indicates that the clustered scheme is configured for control information transmissions, wherein the first time resources occur during a control information transmission cluster, and wherein the control information transmission cluster occurs before the second time resources.

38. The apparatus of claim 37, wherein the instructions are further executable by the processor to cause the apparatus to: receive, from the base station, an indication of a monitoring pattern for the control information transmission cluster.

39. The apparatus of claim 37, wherein the instructions are further executable by the processor to cause the apparatus to: identify a preferred transmit beam direction based at least in part on one or more synchronization signals transmitted by the base station, wherein a location of the control information resource set in the control information transmission cluster corresponds to the preferred transmit beam direction.

40. The apparatus of claim 37, wherein the instructions are further executable by the processor to cause the apparatus to: receive a mapping pattern between a beam pattern corresponding to a synchronization signal transmission and a control information beam pattern of the control information transmission cluster;

and identify the first time resources based at least in part on the beam pattern and the mapping pattern.

41. The apparatus of claim 36, wherein the indication indicates that the distributed scheme is configured for control information transmissions.

42. The apparatus of claim 36, wherein: the indication is received in a master information block (MIB), a system information block (SIB), radio resource control (RRC) signaling, a medium access control (MAC) control element (CE), or downlink control information (DCI), or the data transmission comprises a system information block (SIB) message, a random access response message, a paging message, or a user data block.

43. The apparatus of claim 36, wherein: the first frequency bandwidth is smaller than the second frequency bandwidth, or the first frequency bandwidth is a same size as the

second frequency bandwidth, or the first frequency bandwidth overlaps in frequency with the second frequency bandwidth.