CLAIMS

1. A method for wireless communications, the method comprising:

generating a first set of bits indicating a plurality of transmission configuration indicator states for communication with a user equipment (UE);

generating a second set of bits indicating a set of antenna ports and a multi-transmission/reception point multiplexing scheme from a set of possible multiplexing schemes for multi-transmission/reception point operation based at least in part on the first set of bits indicating the plurality of transmission configuration indicator states; and

transmitting, to the UE, a downlink control information message comprising an indication of the first set of bits and the second set of bits.

2. The method of claim 1, further comprising:

selecting, from a plurality of lookup tables, a lookup table mapping both the set of antenna ports and the multi-transmission/reception point multiplexing scheme to the second set of bits, wherein the generating the second set of bits is based at least in part on the selecting.

3. The method of claim 2, further comprising:

configuring the lookup table, the plurality of lookup tables, or a combination thereof; and

transmitting, to the UE, an indication of the lookup table, the plurality of lookup tables, or a combination thereof.

4. The method of claim 1, wherein the second set of bits further indicates a modulation order for at least one transmission configuration indicator state of the plurality of transmission configuration indicator states.

5. The method of claim 1, wherein the second set of bits further indicates a redundancy version for a transport block for at least one transmission configuration indicator state of the plurality of transmission configuration indicator states.

6. The method of claim 1, wherein the multi-transmission/reception point multiplexing scheme comprises a joint spatial division multiplexing scheme, a separate spatial division multiplexing scheme, a joint frequency division multiplexing scheme, a separate

frequency division multiplexing scheme, a joint time division multiplexing scheme, a separate time division multiplexing scheme, or a combination thereof.

7. The method of claim 1, wherein the second set of bits comprises a same number of bits as a set of bits indicating a set of antenna ports for single transmission/reception point operation.

8. The method of claim 1, wherein a lookup table mapping both the set of antenna ports and the multi-transmission/reception point multiplexing scheme to the second set of bits is pre-configured in memory.

9. The method of claim 1, wherein the multi-transmission/reception point operation comprises communication with the UE by a plurality of transmission/reception points at a base station or distributed across a plurality of base stations.

10. A method for wireless communications at a user equipment (UE), the method comprising:

receiving, from a base station, a downlink control information message comprising an indication of a first set of bits and a second set of bits;

identifying, using the first set of bits, a plurality of transmission configuration indicator states for communication with the base station; and

identifying, using the second set of bits, a set of antenna ports and a multi-transmission/reception point multiplexing scheme from a set of possible multiplexing schemes for multi-transmission/reception point operation based at least in part on the identifying the plurality of transmission configuration indicator states.

11. The method of claim 10, further comprising:

selecting, from a plurality of lookup tables, a lookup table mapping the second set of bits to both the set of antenna ports and the multi-transmission/reception point multiplexing scheme, wherein the identifying the set of antenna ports and the multi-transmission/reception point multiplexing scheme is based at least in part on the selecting.

12. The method of claim 11, further comprising:

receiving, from the base station, a configuration of the lookup table, the plurality of lookup tables, or a combination thereof.

13. The method of claim 10, further comprising:

identifying, using the second set of bits, a modulation order for at least one transmission configuration indicator state of the plurality of transmission configuration indicator states.

14. The method of claim 10, further comprising:

identifying, using the second set of bits, a redundancy version for a transport block for at least one transmission configuration indicator state of the plurality of transmission configuration indicator states.

15. The method of claim 10, wherein the multi-transmission/reception point multiplexing scheme comprises a joint spatial division multiplexing scheme, a separate spatial division multiplexing scheme, a joint frequency division multiplexing scheme, a separate frequency division multiplexing scheme, a joint time division multiplexing scheme, a separate time division multiplexing scheme, or a combination thereof.

16. The method of claim 10, wherein the second set of bits comprises a same number of bits as a set of bits indicating a set of antenna ports for single transmission/reception point operation.

17. The method of claim 10, wherein a lookup table mapping the second set of bits to both the set of antenna ports and the multi-transmission/reception point multiplexing scheme is pre-configured in memory.

18. The method of claim 10, wherein the multi-transmission/reception point operation comprises communication with a plurality of transmission/reception points at the base station or distributed across a plurality of base stations comprising at least the base station.

19. The method of claim 18, further comprising:

receiving a plurality of messages from the plurality of transmission/reception points based at least in part on identifying the multi-transmission/reception point multiplexing scheme.

20. An apparatus for wireless communications, the apparatus comprising:

a processor;

memory coupled with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

generate a first set of bits indicating a plurality of transmission configuration indicator states for communication with a user equipment (UE);

generate a second set of bits indicating a set of antenna ports and a multi-transmission/reception point multiplexing scheme from a set of possible multiplexing schemes for multi-transmission/reception point operation based at least in part on the first set of bits indicating the plurality of transmission configuration indicator states; and

transmit, to the UE, a downlink control information message comprising an indication of the first set of bits and the second set of bits.

21. The apparatus of claim 20, wherein the instructions are further executable by the processor to cause the apparatus to:

select, from a plurality of lookup tables, a lookup table mapping both the set of antenna ports and the multi-transmission/reception point multiplexing scheme to the second set of bits, wherein the generating the second set of bits is based at least in part on the selecting.

22. The apparatus of claim 21, wherein the instructions are further executable by the processor to cause the apparatus to:

configure the lookup table, the plurality of lookup tables, or a combination thereof; and

transmit, to the UE, an indication of the lookup table, the plurality of lookup tables, or a combination thereof.

23. The apparatus of claim 20, wherein the second set of bits further indicates a modulation order for at least one transmission configuration indicator state of the plurality of transmission configuration indicator states.

24. The apparatus of claim 20, wherein the second set of bits further indicates a redundancy version for a transport block for at least one transmission configuration indicator state of the plurality of transmission configuration indicator states.

25. The apparatus of claim 20, wherein the multi-transmission/reception point multiplexing scheme comprises a joint spatial division multiplexing scheme, a separate spatial division multiplexing scheme, a joint frequency division multiplexing scheme, a separate frequency division multiplexing scheme, a joint time division multiplexing scheme, a separate time division multiplexing scheme, or a combination thereof.

26. The apparatus of claim 20, wherein the second set of bits comprises a same number of bits as a set of bits indicating a set of antenna ports for single transmission/reception point operation.

27. The apparatus of claim 20, wherein a lookup table mapping both the set of antenna ports and the multi-transmission/reception point multiplexing scheme to the second set of bits is pre-configured in memory.

28. The apparatus of claim 20, wherein the multi-transmission/reception point operation comprises communication with the UE by a plurality of transmission/reception points at a base station or distributed across a plurality of base stations.

29. An apparatus for wireless communications at a user equipment (UE), the apparatus comprising:

a processor;

memory coupled with the processor; and

instructions stored in the memory and executable by the processor to cause the apparatus to:

receive, from a base station, a downlink control information message comprising an indication of a first set of bits and a second set of bits;

identify, using the first set of bits, a plurality of transmission configuration indicator states for communication with the base station; and

identify, using the second set of bits, a set of antenna ports and a multi-transmission/reception point multiplexing scheme from a set of possible multiplexing schemes for multi-transmission/reception point operation based at least in part on the identifying the plurality of transmission configuration indicator states.

30. The apparatus of claim 29, wherein the instructions are further executable by the processor to cause the apparatus to:

select, from a plurality of lookup tables, a lookup table mapping the second set of bits to both the set of antenna ports and the multi-transmission/reception point multiplexing scheme, wherein the identifying the set of antenna ports and the multi-transmission/reception point multiplexing scheme is based at least in part on the selecting.

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

receive, from the base station, a configuration of the lookup table, the plurality of lookup tables, or a combination thereof.

32. The apparatus of claim 29, wherein the instructions are further executable by the processor to cause the apparatus to:

identify, using the second set of bits, a modulation order for at least one transmission configuration indicator state of the plurality of transmission configuration indicator states.

33. The apparatus of claim 29, wherein the instructions are further executable by the processor to cause the apparatus to:

identify, using the second set of bits, a redundancy version for a transport block for at least one transmission configuration indicator state of the plurality of transmission configuration indicator states.

34. The apparatus of claim 29, wherein the multi-transmission/reception point multiplexing scheme comprises a joint spatial division multiplexing scheme, a separate spatial

division multiplexing scheme, a joint frequency division multiplexing scheme, a separate frequency division multiplexing scheme, a joint time division multiplexing scheme, a separate time division multiplexing scheme, or a combination thereof.

35. The apparatus of claim 29, wherein the second set of bits comprises a same number of bits as a set of bits indicating a set of antenna ports for single transmission/reception point operation.

36. The apparatus of claim 29, wherein a lookup table mapping the second set of bits to both the set of antenna ports and the multi-transmission/reception point multiplexing scheme is pre-configured in memory.

37. The apparatus of claim 29, wherein the multi-transmission/reception point operation comprises communication with a plurality of transmission/reception points at the base station or distributed across a plurality of base stations comprising at least the base station.

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

receive a plurality of messages from the plurality of transmission/reception points based at least in part on identifying the multi-transmission/reception point multiplexing scheme.