

## CLAIMS

1. A method for wireless communications by a user equipment (UE), comprising: receiving signaling indicating a base sequence from a set of base sequences available for use in sending one or more bits of uplink control information (UCI) within a transmission time interval (TTI); receiving signaling indicating a set of cyclic shifts from a network entity; selecting one of the cyclic shifts from the set of cyclic shifts based on a value of the one or more bits of UCI; and transmitting the one or more bits of UCI using the base sequence and the selected cyclic shift, wherein a size of the set of cyclic shifts depends on a number of the one or more bits of UCI.
2. The method of claim 1, wherein the signaling indicating the set of cyclic shifts comprises dynamic signaling.
3. The method of claim 1, wherein the signaling indicating the set of cyclic shifts comprises radio resource control (RRC) signaling.
4. The method of claim 1, wherein the signaling indicating the base sequence comprises radio resource control (RRC) signaling semi-statically configuring the UE to use one of the set of base sequences.
5. The method of claim 4, wherein: the RRC signaling indicates a base sequence for each resource block (RB) allocation size; and the UE receives dynamic signaling indicating an RB allocation size.
6. The method of claim 4, wherein: the RRC signaling indicates a base sequence for each resource block (RB) allocation size; and the RRC signaling also indicates an RB allocation size.
7. The method of claim 1, wherein the signaling indicating the base sequence comprises: radio resource control (RRC) signaling semi-statically configuring a UE RB allocation size; and dynamic signaling indicating the base sequence out of the set of base sequences.
8. The method of claim 1, wherein: when the one or more bits of UCI is provided via multiple physical uplink control channel (PUCCH) orthogonal frequency division multiplexing (OFDM) symbols, the UE is configured with a different set of cyclic shifts for each symbol.
9. A method for wireless communications by a network entity, comprising: providing, to at least one user equipment (UE), signaling indicating a base sequence from a set of base sequences available for use in sending one or more bits of uplink control information (UCI) within a transmission time interval (TTI); providing signaling indicating a set of cyclic shifts to at least one UE; and detecting one or more bits of UCI transmitted from the UE using the base sequence and one of the cyclic shifts selected from the set of cyclic shifts, wherein a size of the set of cyclic shifts depends on a number of the one or more bits of UCI.

10. The method of claim 9, wherein the signaling indicating the set of cyclic shifts comprises dynamic signaling.

11. The method of claim 9, wherein the signaling indicating the set of cyclic shifts comprises radio resource control (RRC) signaling.

12. The method of claim 9, wherein the signaling indicating the base sequence comprises radio resource control (RRC) signaling semi-statically configuring the UE to use one of the set of base sequences.

13. The method of claim 12, wherein: the RRC signaling indicates a base sequence for each resource block (RB) allocation size; and the UE receives dynamic signaling indicating an RB allocation size.

14. The method of claim 13, wherein: the RRC signaling indicates a base sequence for each resource block (RB) allocation size; and the RRC signaling also indicates an RB allocation size.

15. The method of claim 9, wherein the signaling indicating the base sequence comprises: radio resource control (RRC) signaling semi-statically configuring a UE RB allocation size; and dynamic signaling indicating the base sequence out of the set of base sequences.

16. The method of claim 9, wherein: when the one or more bits of UCI is provided via multiple physical uplink control channel (PUCCH) orthogonal frequency division multiplexing (OFDM) symbols, the UE is configured with a different set of cyclic shifts for each symbol.

17. An apparatus for wireless communications by a user equipment (UE), comprising: means for receiving signaling indicating a base sequence from a set of base sequences available for use in sending one or more bits of uplink control information (UCI) within a transmission time interval (TTI); means for receiving signaling indicating a set of cyclic shifts from a network entity; means for selecting one of the cyclic shifts from the set of cyclic shifts based on a value of the one or more bits of UCI; and means for transmitting the one or more bits of UCI using the base sequence and the selected cyclic shift, wherein a size of the set of cyclic shifts depends on a number of the one or more bits of UCI.

18. The apparatus of claim 17, wherein the signaling indicating the set of cyclic shifts comprises dynamic signaling.

19. The apparatus of claim 17, wherein the signaling indicating the set of cyclic shifts comprises radio resource control (RRC) signaling.

20. The apparatus of claim 17, wherein the signaling indicating the base sequence comprises radio resource control (RRC) signaling semi-statically configuring the UE to use one of the set of base sequences.

21. The apparatus of claim 20, wherein: the RRC signaling indicates a base sequence for each resource block (RB) allocation size; and the UE receives dynamic signaling indicating an RB allocation size.
22. The apparatus of claim 20, wherein: the RRC signaling indicates a base sequence for each resource block (RB) allocation size; and the RRC signaling also indicates an RB allocation size.
23. The apparatus of claim 17, wherein the signaling indicating the base sequence comprises: radio resource control (RRC) signaling semi-statically configuring a UE RB allocation size; and dynamic signaling indicating the base sequence out of the set of base sequences.
24. The apparatus of claim 17, wherein: when the one or more bits of UCI is provided via multiple physical uplink control channel (PUCCH) orthogonal frequency division multiplexing (OFDM) symbols, the UE is configured with a different set of cyclic shifts for each symbol.
25. An apparatus for wireless communications by a network entity, comprising: means for providing, to at least one user equipment (UE), signaling indicating a base sequence from a set of base sequences available for use in sending one or more bits of uplink control information (UCI) within a transmission time interval (TTI); means for providing signaling indicating a set of cyclic shifts to at least one UE; and means for detecting one or more bits of UCI transmitted from the UE using the base sequence and one of the cyclic shifts selected from the set of cyclic shifts, wherein a size of the set of cyclic shifts depends on a number of the one or more bits of UCI.
26. The apparatus of claim 25, wherein the signaling indicating the set of cyclic shifts comprises dynamic signaling.
27. The apparatus of claim 25, wherein the signaling indicating the set of cyclic shifts comprises radio resource control (RRC) signaling.
28. The apparatus of claim 25, wherein the signaling indicating the base sequence comprises radio resource control (RRC) signaling semi-statically configuring the UE to use one of the set of base sequences.
29. The apparatus of claim 28, wherein: the RRC signaling indicates a base sequence for each resource block (RB) allocation size; and the UE receives dynamic signaling indicating an RB allocation size.
30. The apparatus of claim 29, wherein: the RRC signaling indicates a base sequence for each resource block (RB) allocation size; and the RRC signaling also indicates an RB allocation size.
31. The apparatus of claim 25, wherein the signaling indicating the base sequence comprises: radio resource control (RRC) signaling semi-statically configuring a UE RB allocation size; and

dynamic signaling indicating the base sequence out of the set of base sequences.

32. The apparatus of claim 25, wherein: when the one or more bits of UCI is provided via multiple physical uplink control channel (PUCCH) orthogonal frequency division multiplexing (OFDM) symbols, the UE is configured with a different set of cyclic shifts for each symbol.

33. An apparatus for wireless communications by a user equipment (UE), comprising: a receiver configured to receive signaling indicating a base sequence from a set of base sequences available for use in sending one or more bits of uplink control information (UCI) within a transmission time interval (TTI) and signaling indicating a set of cyclic shifts; a processor configured to select one of the cyclic shifts from the set of cyclic shifts based on a value of the one or more bits of UCI; and a transmitter configured to transmit the one or more bits of UCI using the base sequence and the selected cyclic shift, wherein a size of the set of cyclic shifts depends on a number of the one or more bits of UCI.

34. An apparatus for wireless communications by a network entity, comprising: a transmitter configured to transmit, to at least one user equipment (UE), signaling indicating a base sequence from a set of base sequences available for use in sending one or more bits of uplink control information (UCI) within a transmission time interval (TTI) and to transmit signaling indicating a set of cyclic shifts to at least one UE; and a receiver configured to detect one or more bits of UCI transmitted from the UE using the base sequence and one of the cyclic shifts selected from the set of cyclic shifts, wherein a size of the set of cyclic shifts depends on a number of the one or more bits of UCI.