

CLAIMS

1. A method of wireless communication by a node, the method comprising:
determining at least one of a cyclic prefix (CP) length or a tone spacing for a signal for a communication link based on a dynamic indication, wherein the CP length is determined from a plurality of CP lengths, and the tone spacing is determined from a plurality of tone spacings; and
communicating the signal utilizing the determined at least one of the CP length or the tone spacing.
2. The method of claim 1,
wherein the communication link comprises at least one of a downlink, an uplink, or a sidelink, and
wherein the determining comprises:
determining a first CP length or tone spacing for one of the downlink, the uplink or the sidelink; and
determining a second CP length or tone spacing for another one of the downlink, the uplink or the sidelink.
3. The method of claim 1, further comprising:
determining the plurality of CP lengths based on the dynamic indication, wherein the plurality of CP lengths are different from a plurality of CP lengths for another node.
4. The method of claim 1, further comprising:
configuring the plurality of CP lengths by radio resource control (RRC).
5. The method of claim 1, further comprising:
configuring the plurality of CP lengths utilizing cell-specific signaling that is the same as cell-specific signaling used to configure a plurality of CP lengths for another node.

6. The method of claim 1, wherein the determining the CP length is further based on at least one of a modulation and coding scheme (MCS), a subcarrier spacing, a service type, a communication link direction, a rank number, a type or a capability of the node, or a number of nodes scheduled in a same transmission time interval (TTI).

7. The method of claim 1,
wherein the plurality of CP lengths comprise a plurality of sets of CP lengths,
wherein each of the sets of CP lengths is associated with at least one of a modulation and coding scheme (MCS), a subcarrier spacing, a service type, a communication link direction, a rank number, a type or a capability of the node, or a number of nodes scheduled in a same transmit time interval (TTI); and
wherein the dynamic indication comprises one of the set of the CP lengths associated with the node.

8. The method of claim 1, further comprising communicating the signal over a transmission time interval (TTI) comprising a plurality of symbols, wherein the determining the CP length comprises:

determining a first CP length for a first symbol of the plurality of symbols in the TTI; and

determining a second CP length, different from the first CP length, for a second symbol of the plurality of symbols in the TTI.

9. The method of claim 1, further comprising communicating the signal on a data channel, wherein the determining the CP length comprises:

determining a CP length for a control channel associated with the data channel, wherein the determining the CP length for the control channel is based on at least one of a semi-static indication, a static indication, or a hardcoded value.

10. The method of claim 9, wherein the control channel and the data channel are time-division multiplexed.

11. The method of claim 1, further comprising:
reporting, to another node, a recommendation for one or more CP lengths.
12. The method of claim 1, further comprising:
receiving information comprising a subset of the plurality of CP lengths; and
reporting, to another node, one or more CP lengths based on the subset.
13. The method of claim 1, wherein the determining the tone spacing is further based on at least one of a modulation and coding scheme (MCS), a subcarrier spacing, a service type, a communication link direction, a rank number, a type or a capability of the node, or a number of nodes scheduled in a same transmit time interval (TTI).
14. The method of claim 1, further comprising:
reporting, to another node, a recommendation of one or more tone spacings.
15. The method of claim 1, further comprising:
receiving information comprising a subset of the plurality of tone spacings; and
reporting, to another node, one or more tone spacings based on the subset.
16. An apparatus for wireless communication comprising:
a communication interface configured to utilize a signal for a communication link;
a memory stored with executable code; and
a processor operatively coupled to the communication interface and memory,
wherein the processor is configured by the executable code to:
determine at least one of a cyclic prefix (CP) length or a tone spacing for a signal for a communication link based on a dynamic indication, wherein the CP length is determined from a plurality of CP lengths, and the tone spacing is determined from a plurality of tone spacings; and

communicate the signal utilizing the determined at least one of the CP length or the tone spacing.

17. The apparatus of claim 16,
wherein the communication link comprises at least one of a downlink, an uplink, or a sidelink, and
wherein the processor is further configured to:
determine a first CP length or tone spacing for one of the downlink, the uplink or the sidelink; and
determine a second CP length or tone spacing for another one of the downlink, the uplink or the sidelink.
18. The apparatus of claim 16, wherein the processor is further configured to:
determine the plurality of CP lengths based on the dynamic indication, wherein the plurality of CP lengths are different from a plurality of CP lengths for another node.
19. The apparatus of claim 16, wherein the processor is further configured to:
configure the plurality of CP lengths by radio resource control (RRC).
20. The apparatus of claim 16, wherein the processor is further configured to:
configure the plurality of CP lengths utilizing cell-specific signaling that is the same as cell-specific signaling used to configure a plurality of CP lengths for another node.
21. The apparatus of claim 16, wherein the processor is further configured to determine the CP length further based on at least one of a modulation and coding scheme (MCS), a subcarrier spacing, a service type, a communication link direction, a rank number, a type or a capability of the apparatus, or a number of nodes scheduled in a same transmission time interval (TTI).
22. The apparatus of claim 16,
wherein the plurality of CP lengths comprise a plurality of sets of CP lengths,

wherein each of the sets of CP lengths is associated with at least one of a modulation and coding scheme (MCS), a subcarrier spacing, a service type, a communication link direction, a rank number, a type or a capability of the apparatus, or a number of nodes scheduled in a same transmit time interval (TTI); and

wherein the dynamic indication comprises one of the set of the CP lengths associated with the apparatus.

23. The apparatus of claim 16, wherein the processor is further configured to:
 - communicate the signal over a transmission time interval (TTI) comprising a plurality of symbols;
 - determine a first CP length for a first symbol of the plurality of symbols in the TTI; and
 - determine a second CP length, different from the first CP length, for a second symbol of the plurality of symbols in the TTI.
24. The apparatus of claim 16, wherein the processor is further configured to:
 - communicate the signal on a data channel; and
 - determine a CP length for a control channel associated with the data channel, based on at least one of a semi-static indication, a static indication, or a hardcoded value.
25. The apparatus of claim 24, wherein the control channel and the data channel are time-division multiplexed.
26. The apparatus of claim 16, wherein the processor is further configured to:
 - report, to another node, a recommendation for one or more CP lengths.
27. The apparatus of claim 16, wherein the processor is further configured to:
 - receive information comprising a subset of the plurality of CP lengths; and
 - report, to another node, one or more CP lengths based on the subset.

28. The apparatus of claim 16, wherein the processor is further configured to determine the tone spacing further based on at least one of a modulation and coding scheme (MCS), a subcarrier spacing, a service type, a communication link direction, a rank number, a type or a capability of the apparatus, or a number of nodes scheduled in a same transmit time interval (TTI).
29. The apparatus of claim 16, wherein the processor is further configured to: report, to another node, a recommendation of one or more tone spacings.
30. The apparatus of claim 16, wherein the processor is further configured to: receive information comprising a subset of the plurality of tone spacings; and report, to another node, one or more tone spacings based on the subset.