

WHAT IS CLAIMED IS:

CLAIMS

1. A method of wireless communication performed by a user equipment (UE), comprising:  
receiving a control format indicator (CFI) value in a radio resource control (RRC) message or a system information block (SIB); and  
using the CFI value received in the RRC message or the SIB regardless of a configuration with which the UE is operating.
2. The method of claim 1, wherein the UE receives the CFI value in the RRC message or the SIB based at least in part on being configured with an ultra-reliable low latency communication (URLLC) configuration or a shortened transmission time interval (sTTI) configuration.
3. The method of claim 1, wherein a physical control format indicator channel (PCFICH) is not decoded based at least in part on receiving the CFI value in the RRC message or the SIB.
4. The method of claim 1, wherein the CFI value received in the RRC message or the SIB is used for at least one of:  
an ultra-reliable low latency communications (URLLC) configuration,  
an enhanced mobile broadband (eMBB) configuration,  
a legacy transmission time interval (TTI) configuration,  
a 1 millisecond TTI configuration,  
a shortened TTI (sTTI) configuration,  
a configuration with a latency requirement that satisfies a threshold,  
a configuration with a reliability requirement that satisfies a threshold,  
a carrier aggregation configuration,  
a dual connectivity configuration, or  
some combination thereof.

5. A method of wireless communication performed by a user equipment (UE), comprising:

receiving a first control format indicator (CFI) value in a message that is not carried via a physical control format indicator channel (PCFICH);

determining whether the UE is operating using at least one of a first configuration with which the first CFI value is to be used or a second configuration with which a second CFI value, indicated in the PCFICH, is to be used; and

operating using at least one of the first CFI value or the second CFI value based at least in part on determining whether the UE is operating using the at least one of the first configuration or the second configuration.

6. The method of claim 5, wherein the first CFI value is used when the UE is operating using the first configuration, or wherein the second CFI value is used when the UE is operating using the second configuration.

7. The method of claim 5, wherein the first configuration includes at least one of:

an ultra-reliable low latency communications (URLLC) configuration,  
a shortened TTI (sTTI) configuration,  
a configuration with a latency requirement that is less than or equal to a threshold,  
a configuration with a reliability requirement that is greater than or equal to a threshold, or  
some combination thereof.

8. The method of claim 5, wherein the second configuration includes at least one of:

an enhanced mobile broadband (eMBB) configuration,  
a legacy transmission time interval (TTI) configuration,  
a configuration with a latency requirement that is greater than or equal to a threshold,  
a configuration with a reliability requirement that is less than or equal to a threshold,  
or  
some combination thereof.

9. The method of claim 5, wherein the PCFICH is not decoded based at least in part on determining that the UE is operating using the first configuration and not the second configuration.

10. The method of claim 5, wherein the PCFICH is decoded based at least in part on determining that the UE is operating using:

~~the second configuration and not the first configuration, or  
both the first configuration and the second configuration.~~

11. The method of claim 5, wherein the first CFI value is used for communicating using the first configuration, and wherein the second CFI value is used for communicating using the second configuration.

12. The method of claim 5, wherein the second CFI value is required to be less than or equal to the first CFI value.

13. The method of claim 12, wherein the UE is configured to indicate an error if the second CFI value is greater than the first CFI value.

14. The method of claim 5, wherein the first CFI value is selected from multiple CFI values indicated in the message.

15. The method of claim 14, wherein the selection is based at least in part on a determination that the UE is operating in a subframe to which the first CFI value is to be applied.

16. The method of claim 15, wherein the subframe is included in a set of subframes, indicated in the message, to which the first CFI value is to be applied.

17. The method of claim 5, wherein the first configuration is a configuration where all components carriers of the UE are configured using one or more CFI values indicated in the message.

18. The method of claim 17, wherein all of the component carriers are configured using a same CFI value indicated in the message.

19. The method of claim 17, wherein different ones of the component carriers are configured using different CFI values indicated in the message.
20. The method of claim 5, wherein the second configuration is a configuration where no components carriers of the UE are configured using CFI values indicated in the message.
21. The method of claim 5, wherein the second configuration is a configuration where all component carriers of the UE are configured using one or more CFI values indicated in the PCFICH.
22. The method of claim 5, wherein a first set of component carriers of the UE operates using the first configuration and a second set of component carriers of the UE operates using the second configuration.
23. The method of claim 22, wherein the first set of component carriers use the first CFI value and the second set of component carriers use the second CFI value.
24. The method of claim 22, wherein the first set of component carriers use a first set of CFI values indicated in the message.
25. The method of claim 24, wherein the second set of component carriers use a second set of CFI values indicated in the PCFICH.
26. The method of claim 5, wherein the first CFI value is used for a first component carrier of the UE, and wherein one or more other CFI values, indicated in the message, are used for a corresponding one or more other component carriers of the UE.
27. The method of claim 5, wherein if the UE is configured with a CFI value in the message for a secondary cell when the secondary cell is operating using the second configuration, the UE is required to be configured with a CFI in the message for the secondary cell when the secondary cell is operating using the first configuration.
28. The method of claim 5, wherein the message is a radio resource control (RRC) message or a system information message carried in a system information block (SIB).

~~29. A method of wireless communication performed by a user equipment (UE), comprising:~~

~~\_receiving, in a message, an indication of a first set of subframes to which of a first type, wherein the first set of subframes is associated with a first control format indicator (CFI) value is to be applied;~~

~~\_receiving, in the message, an indication of a second set of subframes to which of a second type, wherein the second set of subframes is associated with a second CFI value is to be applied; identifying that a subframe, in which the UE is operating, is included in the first set of subframes or the second set of subframes; and~~

~~\_selectively using the first CFI value or the second CFI value for a subframe based at least in part on whether identifying that the subframe is included in the first set of subframes or the second set of subframes.~~

~~302. The method of claim 29, wherein the first set of subframes includes subframes of a first type and the second set of subframes includes subframes of a second type.~~

~~31. The method of claim 301, wherein at least one of the first type or the second type is indicated in the message.~~

~~323. The method of claim 301, wherein the first type is a multicast-broadcast single-frequency network (MBSFN) subframe type and the second type is a non-MBSFN subframe type.~~

~~334. The method of claim 291, wherein at least one of the first CFI value or the second CFI value is indicated in the message.~~

~~345. The method of claim 291, wherein at least one of the first CFI value or the second CFI value is not indicated in the message.~~

~~356. The method of claim 291, wherein at least one of the first CFI value or the second CFI value is hard coded in memory of the UE.~~

367. The method of claim 291, wherein at least one of the first set of subframes or the second set of subframes is indicated using a bitmap.

378. The method of claim 291, wherein the message indicates at least one of:

a first set of CFI values that map to the first set of subframes,

or a second set of CFI values that map to the second set of subframes, or,

some combination thereof.

389. The method of claim 291, wherein the message includes:

an information element that indicates the first CFI value and the second CFI value, a first bitmap that maps the first CFI value or the second CFI value to each subframe included in the first set of subframes, and a second bitmap that maps the first CFI value or the second CFI value to each subframe included in the second set of subframes.

10. The method of claim 1, wherein the message is a radio resource control (RRC) message or a system information block (SIB) message.

11. The method of claim 1, wherein the first CFI value or the second CFI value is used for the subframe based at least in part on a determination that the UE is operating using a configuration with which a CFI value, received in the message, is to be used.

12. The method of claim 1, wherein the first CFI value or the second CFI value is used for the subframe based at least in part on a determination that the UE is not operating using a configuration with which a CFI value, received in a physical control format indicator channel (PCFICH), is to be used.

13. The method of claim 1, wherein the first set of subframes and the second set of subframes apply to all component carriers of the UE.

14. The method of claim 1, wherein the first set of subframes and the second set of subframes apply to a first component carrier of the UE.

15. The method of claim 14, wherein different subframe sets apply to one or more other component carriers of the UE.

16. A user equipment (UE) for wireless communication, comprising: a memory; and one or more processors operatively coupled to the memory, the memory and the one or more processors configured to: receive, in a message, an indication of a first set of subframes of a first type, wherein the first set of subframes is associated with a first control format indicator (CFI) value to be applied; receive, in the message, an indication of a second set of subframes of a second type, wherein the second set of subframes is associated with a second CFI value to be applied; identify that a subframe, in which the UE is operating, is included in the first set of subframes or the second set of subframes; and selectively use the first CFI value or the

second CFI value for the subframe based at least in part on identifying that the subframe is included in the first set of subframes or the second set of subframes.

17. The UE of claim 16, wherein at least one of the first type or the second type is indicated in the message.

18. The UE of claim 16, wherein the first type is a multicast-broadcast single-frequency network (MBSFN) subframe type and the second type is a non-MBSFN subframe type.

19. The UE of claim 16, wherein at least one of the first CFI value or the second CFI value is indicated in the message.

20. The UE of claim 16, wherein at least one of the first CFI value or the second CFI value is not indicated in the message.

21. The UE of claim 16, wherein at least one of the first CFI value or the second CFI value is hard coded in memory of the UE.

22. The UE of claim 16, wherein at least one of the first set of subframes or the second set of subframes is indicated using a bitmap.

23. The UE of claim 16, wherein the message includes: an information element that indicates the first CFI value and the second CFI value, a first bitmap that maps the first CFI value or the second CFI value to each subframe included in the first set of subframes, and a second bitmap that maps the first CFI value or the second CFI value to each subframe included in the second set of subframes.

24. The method of claim 16, wherein the message is a radio resource control (RRC) message or a system information block (SIB) message.

~~40. The method of claim 29, wherein the first CFI value or the second CFI value is used for the subframe based at least in part on a determination that the UE is operating using a configuration with which a CFI value, received in the message, is to be used.~~

~~41. The method of claim 29~~25. The UE of claim 16, wherein the first CFI value or the second CFI value is used for the subframe based at least in part on a determination that the UE is not operating using a configuration with which a CFI value, received in a physical control format indicator channel (PCFICH), is to be used.

~~42. The method of claim 29, wherein the first set of subframes and the second set of subframes apply to all component carriers of the UE.~~

26. A non-transitory computer-readable medium storing a set of instructions for wireless communication, the set of instructions comprising: one or more instructions that, when

executed by one or more processors of a user equipment (UE), cause the UE to: receive, in a message, an indication of a first set of subframes of a first type, wherein the first set of subframes is associated with a first control format indicator (CFI) value to be applied; receive, in the message, an indication of a second set of subframes of a second type, wherein the second set of subframes is associated with a second CFI value to be applied; identify that a subframe, in which the UE is operating, is included in the first set of subframes or the second set of subframes; and selectively use the first CFI value or the second CFI value for the subframe based at least in part on identifying that the subframe is included in the first set of subframes or the second set of subframes.

27. The non-transitory computer-readable medium of claim 26, wherein at least one of the first type or the second type is indicated in the message.

4328. The ~~method~~non-transitory computer-readable medium of claim 2926, wherein the first set of subframestype is a multicast-broadcast single-frequency network (MBSFN) subframe type and the second set of subframes apply to a first component carrier of the UEtype is a non-MBSFN subframe type.

4429. The ~~method~~non-transitory computer-readable medium of claim 4326, wherein different subframe sets apply to at least one or more other component carriers of the first CFI value or the second CFI value is indicated in the message.

30. The non-transitory computer-readable medium of claim 26, wherein at least one of the first CFI value or the second CFI value is not indicated in the message.

31. The non-transitory computer-readable medium of claim 26, wherein at least one of the first CFI value or the second CFI value is hard coded in memory of the UE.

45. A user equipment (UE) for wireless communication, comprising:

memory; and

one or more processors operatively coupled to the memory, the memory and the one or more processors configured to:

receive a control format indicator (CFI) value in32. The non-transitory computer-readable medium of claim 26, wherein at least one of the first set of subframes or the second set of subframes is indicated using a bitmap.

33. The non-transitory computer-readable medium of claim 26, wherein the message includes: an information element that indicates the first CFI value and the second CFI value, a first bitmap that maps the first CFI value or the second CFI value to each subframe included in the first set of subframes, and a second bitmap that maps the first CFI value or the second CFI value to each subframe included in the second set of subframes.

34. The non-transitory computer-readable medium of claim 26, wherein the message is a radio resource control (RRC) message or a system information block (SIB); and) message.

~~use~~35. The non-transitory computer-readable medium of claim 26, wherein the first CFI value received in the RRC message or the SIB regardless of second CFI value is used for the subframe based at least in part on a determination that the UE is not operating using a configuration with which the UE is operating a CFI value, received in a physical control format indicator channel (PCFICH), is to be used.

36. An user equipment (UE) for wireless communication, comprising: means for receiving, in a message, an indication of a first set of subframes of a first type, wherein the first set of subframes is associated with a first control format indicator (CFI) value to be applied; means for receiving, in the message, an indication of a second set of subframes of a second type, wherein the second set of subframes is associated with a second CFI value to be applied; means for identifying that a subframe, in which the UE is operating, is included in the first set of subframes or the second set of subframes; and means for selectively using the first CFI value or the second CFI value for the subframe based at least in part on identifying that the subframe is included in the first set of subframes or the second set of subframes.

37. The UE of claim 36, wherein at least one of the first type or the second type is indicated in the message.

38. The UE of claim 36, wherein the first type is a multicast-broadcast single-frequency network (MBSFN) subframe type and the second type is a non-MBSFN subframe type.

39. The UE of claim 36, wherein at least one of the first CFI value or the second CFI value is indicated in the message.

40. The UE of claim 36, wherein at least one of the first CFI value or the second CFI value is not indicated in the message.

41. The UE of claim 36, wherein at least one of the first CFI value or the second CFI value is hard coded in memory of the UE.

42. The UE of claim 36, wherein at least one of the first set of subframes or the second set of subframes is indicated using a bitmap.

43. The UE of claim 36, wherein the message includes: an information element that indicates the first CFI value and the second CFI value, a first bitmap that maps the first CFI value or the second CFI value to each subframe included in the first set of subframes, and a second bitmap that maps the first CFI value or the second CFI value to each subframe included in the second set of subframes.

44. The UE of claim 36, wherein the message is a radio resource control (RRC) message or a system information block (SIB) message.

45. The UE of claim 36, wherein the first CFI value or the second CFI value is used for the subframe based at least in part on a determination that the UE is not operating using a configuration with which a CFI value, received in a physical control format indicator channel (PCFICH), is to be used.