~~CLAIMS~~

~~**What is claimed is:**~~

CLAIMS

1. A method for wireless communications at a wireless device, comprising:

~~receiving, during a transmission time interval (TTI) of a subframe,~~receiving control information comprising an indication of transmission repetitions of a transport block (TB) for a plurality of ~~TTIs~~transmission time intervals (TTIs) of a subframe;

identifying a quantity of transmission repetitions of the TB based at least in part on the control information, wherein at least one subslot of the subframe is not counted in the identified quantity of transmission repetitions; and

monitoring for the transmission repetitions of the TB based at least in part on the identifying.

2. The method of claim 1, further comprising:

determining that a second TTI is not used for ~~transmitting~~ one of the transmission repetitions based at least in part on a control format indicator (CFI) field having a value of 2.

~~———~~3. The method of claim 1, further comprising:

identifying a value in a field of a control format indicator (CFI) associated with the control information; and

determining that a second TTI is not available for ~~transmitting~~ one of the transmission repetitions of the TB based at least in part on the value in the field of the CFI.

4. The method of claim 3, wherein the value in the field of the CFI is 2.

5. The method of claim 3, wherein the second TTI is a mini-slot.

6. The method of claim 3, wherein monitoring for the transmission repetitions of the TB comprises:

monitoring a physical downlink shared channel (PDSCH) for the transmission repetitions of the TB.

7. The method of claim 1, further comprising:

determining whether an initial TTI associated with a TTI index is available for an initial transmission associated with the transmission repetitions of the TB based at least in part on the control information.

8. The method of claim 7, further comprising:

identifying a value in a field of a control format indicator (CFI) associated with the control information, wherein determining whether the initial TTI is available for the initial transmission is further based at least in part on the value in the field of the CFI.

9. The method of claim 8, further comprising:

determining that the initial TTI associated with the TTI index is unavailable for the initial transmission based at least in part on the value in the field of the CFI; and

delaying the initial transmission to a second TTI after the initial TTI.

10. The method of claim 8, further comprising:

determining that the initial TTI associated with the TTI index is unavailable for the initial transmission based at least in part on the value in the field of the CFI;

puncturing the initial TTI based at least in part on determining that the initial TTI is unavailable; and

monitoring for a subsequent TB transmission of the quantity of transmission repetitions during a second TTI after the initial TTI.

11. The method of claim 8, wherein the CFI is received dynamically or semi-statically.

12. The method of claim 8, wherein the CFI is received on a physical control format indicator channel (PCFICH) or via higher layer signaling.

———13. The method of claim 1, further comprising:

determining that a portion of the transmission repetitions extend across a subframe boundary based at least in part on a TTI index of an initial transmission and the

control information;

identifying that the wireless device is configured to support extending across ~~a~~the subframe boundary; and

identifying a quantity of available TTIs in a second subframe.

14. The method of claim 13, further comprising:

determining that a physical downlink shared channel (PDSCH) is not mapped to resources of a TTI in the second subframe based at least in part on identifying the quantity of available TTIs;

puncturing the TTI in the second subframe based at least in part on the PDSCH not being mapped to the TTI; and

monitoring the portion of the transmission repetitions during the second subframe based at least in part on the puncturing.

15. The method of claim 1, wherein each TB transmission of the transmission repetitions is monitored for in a different TTI of a repetition window.

16. The method of claim 1, further comprising:

identifying a TTI index for an initial transmission associated with the transmission repetitions of the TB;

determining that a portion of the transmission repetitions extend across a subframe boundary based at least in part on the TTI index of the initial transmission and the control information; and

monitoring the portion of the transmission repetitions extending across ~~a~~the subframe boundary.

17. The method of claim 1, further comprising:

identifying that the wireless device is not configured to support extending across a subframe boundary; and

determining a quantity of available TTIs for the transmission repetitions of the TB, wherein monitoring for the transmission repetitions of the TB is further based at least in part on the quantity of available TTIs.

18. The method of claim 17, further comprising:

determining that the quantity of available TTIs is below the plurality of TTIs for the quantity of transmission repetitions of the TB; and

suspending monitoring at least one TTI of the plurality of TTIs after an ultimate TTI of the quantity of available TTIs.

19. The method of claim 17, further comprising:

determining to monitor for the transmission repetitions of the TB until an ultimate TTI of the quantity of available TTIs based at least in part on an indication received in a downlink control information (DCI).

20. The method of claim 1, further comprising:

identifying a configuration of the wireless device; and

determining whether the wireless device is configured to support extending across a subframe boundary based at least in part on the configuration.

21. The method of claim 20, wherein identifying the configuration is based at least in part on a capability of the wireless device, the capability comprising a demodulation reference signal (DMRS) sharing capability, a DMRS combining capability, a configuration signaling, or an indication of the DMRS sharing capability or the DMRS combining capability relative to TTIs on each side of ~~a~~the subframe boundary, or a combination thereof.

22. The method of claim 1, further comprising:

identifying a configuration of the wireless device; and

determining whether the wireless device is configured to support extending across an enhanced interference mitigation and traffic adaptation (eIMTA) boundary based at least in part on the configuration.

23. The method of claim 22, wherein identifying the configuration is based at least in part on a capability of the wireless device, the capability comprising a demodulation reference signal (DMRS) sharing capability, a DMRS combining capability, a configuration signaling, or an indication of the DMRS sharing capability or the DMRS

combining capability relative to TTIs on each side of a subframe boundary, or a combination thereof.

24. The method of claim 22, further comprising:

determining a subframe configuration of the subframe based at least in part on the control information; and

determining that a portion of the transmission repetitions extend across the eIMTA boundary based at least in part on the subframe configuration.

25. The method of claim 24, further comprising:

identifying that the wireless device is not configured to support extending across the eIMTA boundary based at least in part on the subframe configuration, wherein monitoring for the transmission repetitions of the TB further comprises suspending monitoring the portion of the transmission repetitions occurring after the eIMTA boundary based at least in part on the wireless device not being configured to support extending across the eIMTA boundary.

26. The method of claim 25, further comprising:

determining a quantity of available TTIs for the transmission repetitions of the TB based at least in part on the wireless device not being configured to support extending across the eIMTA boundary, wherein monitoring for the transmission repetitions of the TB is further based at least in part on the quantity of available TTIs.

27. The method of claim 26, further comprising:

determining that the quantity of available TTIs is below the plurality of TTIs for the quantity of transmission repetitions of the TB; and

suspending monitoring at least one TTI of the plurality of TTIs after an ultimate TTI of the quantity of available TTIs.

28. The method of claim 24, further comprising:

identifying that the wireless device is configured to support extending across the eIMTA boundary based at least in part on the subframe configuration, wherein monitoring for the transmission repetitions of the TB further comprises monitoring for the portion of the transmission repetitions occurring after the eIMTA boundary based at least in

part on the wireless device being configured to support extending across the eIMTA boundary.

29. The method of claim 28, further comprising:

identifying a TTI index for an initial transmission associated with the transmission repetitions of the TB;

determining that the portion of the transmission repetitions extend across the eIMTA boundary based at least in part on the TTI index of the initial transmission and the control information; and

monitoring the portion of the transmission repetitions extending across the eIMTA boundary based at least in part on the subframe configuration.

30. The method of claim 29, further comprising:

identifying a quantity of available TTIs in a second subframe based at least in part on the wireless device being configured to support extending across the eIMTA boundary;

determining that a physical downlink shared channel (PDSCH) is not mapped to resources of a TTI in the second subframe based at least in part on identifying the quantity of available TTIs;

puncturing the TTI in the second subframe based at least in part on the PDSCH not being mapped to the TTI; and

monitoring the portion of the transmission repetitions during the second subframe based at least in part on the puncturing.

31. The method of claim 24, further comprising:

determining that the portion of the transmission repetitions extend across an uplink portion of a special switching subframe (SSF) associated with the subframe configuration, wherein monitoring for the transmission repetitions of the TB further comprises suspending monitoring the portion of the transmission repetitions occurring after the uplink portion of the SSF based at least in part on the wireless device not being configured to support extending across the SSF.

32. The method of claim 24, further comprising:

determining that the portion of the transmission repetitions extend across an uplink subframe associated with the subframe configuration, wherein the transmission repetitions are in a downlink transmission and monitoring for the transmission repetitions of the TB further comprises suspending monitoring the portion of the transmission repetitions occurring after the uplink subframe based at least in part on the wireless device not being configured to support extending across the uplink subframe.

33. The method of claim 24, further comprising:

determining that the portion of the transmission repetitions extend across an uplink portion of a special switching subframe (SSF) associated with the subframe configuration, wherein monitoring for the transmission repetitions of the TB further comprises delaying or puncturing a subframe following the SSF for monitoring the portion of the transmission repetitions occurring after the uplink portion of the SSF based at least in part on the wireless device being configured to support extending across the SSF.

34. The method of claim 24, further comprising:

determining that the portion of the transmission repetitions extend across an uplink subframe associated with the subframe configuration, wherein the transmission repetitions are in a downlink transmission and monitoring for the transmission repetitions of the TB further comprises delaying or puncturing a subframe following the uplink subframe for monitoring the portion of the transmission repetitions occurring after the uplink subframe based at least in part on the wireless device being configured to support extending across the uplink subframe.

35. An apparatus for wireless communications at a wireless device, 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 identify a quantity of transmission repetitions of the TB based at least in part on the control information

monitor for the transmission repetitions of the TB based at least in part

on the identifying.

36. The apparatus of claim 35, further comprising:

a receiver; and

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

configure the receiver to receive the control information.

37. The apparatus of claim 35, wherein the instructions are further executable by the processor to cause the apparatus to:

determine that a second TTI is not used for one of the transmission repetitions based at least in part on a control format indicator (CFI) field having a value of 2.

38. The apparatus of claim 35, wherein the instructions are further executable by the processor to cause the apparatus to:

identify a value in a field of a control format indicator (CFI) associated with the control information; and

determine that a second TTI is not available for one of the transmission repetitions of the TB based at least in part on the value in the field of the CFI.

39. The apparatus of claim 38, wherein the value in the field of the CFI is 2.

40. The apparatus of claim 38, wherein the second TTI is a mini-slot.

41. The apparatus of claim 38, wherein the instructions to monitor for the transmission repetitions of the TB are executable by the processor to cause the apparatus to:

monitor a physical downlink shared channel (PDSCH) for the transmission repetitions of the TB.

42. The apparatus of claim 35, wherein the instructions are further executable by the processor to cause the apparatus to:

determine whether an initial TTI associated with a TTI index is available for an initial transmission associated with the transmission repetitions of the TB based at least in

part on the control information.

43. The apparatus of claim 42, wherein the instructions are further executable by the processor to cause the apparatus to:

identify a value in a field of a control format indicator (CFI) associated with the control information, wherein determining whether the initial TTI is available for the initial transmission is further based at least in part on the value in the field of the CFI.

44. The apparatus of claim 43, wherein the instructions are further executable by the processor to cause the apparatus to:

determine that the initial TTI associated with the TTI index is unavailable for the initial transmission based at least in part on the value in the field of the CFI; and

delay the initial transmission to a second TTI after the initial TTI.

45. The apparatus of claim 43, wherein the instructions are further executable by the processor to cause the apparatus to:

determine that the initial TTI associated with the TTI index is unavailable for the initial transmission based at least in part on the value in the field of the CFI;

puncture the initial TTI based at least in part on determining that the initial TTI is unavailable; and

monitor for a subsequent TB transmission of the quantity of transmission repetitions during a second TTI after the initial TTI.

46. The apparatus of claim 43, wherein the CFI is received dynamically or semi-statically.

47. An apparatus for wireless communications at a wireless device, comprising:

means for receiving~~, during a transmission time interval (TTI) of a subframe,~~ control information comprising an indication of transmission repetitions of a transport block (TB) for a plurality of ~~TTIs~~transmission time intervals (TTIs) of a subframe;

means for identifying a quantity of transmission repetitions of the TB based at least in part on the control information, wherein at least one subslot of the subframe is not

counted in the identified quantity of transmission repetitions; and

means for monitoring for the transmission repetitions of the TB based at least in part on the identifying.

~~36. The apparatus of claim 35, further comprising:~~

~~means for determining that a second TTI is not used for transmitting one of the transmission repetitions based at least in part on a control format indicator (CFI) field having a value of 2.~~

~~37. The apparatus of claim 35, further comprising:~~

~~means for identifying a value in a field of a control format indicator (CFI) associated with the control information; and~~

~~means for determining that a second TTI is not available for transmitting one of the transmission repetitions of the TB based at least in part on the value in the field of the CFI.~~

~~38. The apparatus of claim 37, wherein the value in the field of the CFI is 2.~~

~~39. The apparatus of claim 37, wherein the second TTI is a mini-slot.~~

~~40. The apparatus of claim 37, wherein the means for monitoring for the transmission repetitions of the TB comprises:~~

~~means for monitoring a physical downlink shared channel (PDSCH) for the transmission repetitions of the TB.~~

~~41. The apparatus of claim 35, further comprising:~~

~~means for determining whether an initial TTI associated with a TTI index is available for an initial transmission associated with the transmission repetitions of the TB based at least in part on the control information.~~

~~42. The apparatus of claim 41, further comprising:~~

~~means for identifying a value in a field of a control format indicator (CFI) associated with the control information, wherein the means for determining whether the initial TTI is available for the initial transmission is further based at least in part on the value in the field of the CFI.~~

~~43. The apparatus of claim 42, further comprising:~~

~~means for determining that the initial TTI associated with the TTI index is unavailable for the initial transmission based at least in part on the value in the field of the CFI; and~~

means for delaying the initial transmission to a second TTI after the initial TTI.

44. The apparatus of claim 42, further comprising:

means for determining that the initial TTI associated with the TTI index is unavailable for the initial transmission based at least in part on the value in the field of the CFI;

means for puncturing the initial TTI based at least in part on determining that the initial TTI is unavailable; and

means for monitoring for a subsequent TB transmission of the quantity of transmission repetitions during a second TTI after the initial TTI.

45. The apparatus of claim 42, wherein the CFI is received dynamically or semi-statically.

46. An apparatus for wireless communications at a wireless device, 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, during a transmission time interval (TTI) of a subframe, control information comprising an indication of transmission repetitions of a transport block (TB) for a plurality of TTIs;

identify a quantity of transmission repetitions of the TB based at least in part on the control information; and

monitor for the transmission repetitions of the TB based at least in part on the identifying.

47. The apparatus of claim 46, further comprising:

a receiver; and

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

configure the receiver to receive, during the TTI of the subframe, the control information.

48. A non-transitory computer-readable medium storing code for wireless

communications at a wireless device, the code comprising instructions executable by a processor to:

receive~~, during a transmission time interval (TTI) of a subframe,~~ control information comprising an indication of transmission repetitions of a transport block (TB) for a plurality of transmission time intervals (TTIs) of a subframe;

identify a quantity of transmission repetitions of the TB based at least in part on the control information, wherein at least one subslot of the subframe is not counted in the identified quantity of transmission repetitions; and

monitor for the transmission repetitions of the TB based at least in part on the identifying.