

CLAIMS

1. A method of wireless communication, comprising: identifying, by a user equipment (UE), a potential collision between a scheduled legacy transmission time interval (TTI) communication and a scheduled shortened TTI (sTTI) communication, the legacy TTI communication having a legacy TTI duration that is longer than an sTTI duration associated with the sTTI communication; determining, by the UE, whether the legacy TTI communication is within a threshold time of being transmitted, the threshold time of being transmitted being equal to or less than an amount of time between a deadline for preparing the legacy TTI communication for transmission and an actual transmission of the legacy TTI communication; and transmitting, by the UE, at least one of the sTTI communication or the legacy TTI communication based at least in part on the determination.
2. The method of claim 1, wherein transmitting at least one of the sTTI communication or the legacy TTI communication comprises transmitting the sTTI communication multiplexed with uplink control information from the legacy TTI communication based at least in part on determining that the legacy TTI communication is not within the threshold time of being transmitted.
3. The method of claim 1, wherein transmitting at least one of the sTTI communication or the legacy TTI communication comprises transmitting the sTTI communication multiplexed with at least a portion of the legacy TTI communication based at least in part on determining that the legacy TTI communication is not within the threshold time of being transmitted.
4. The method of claim 3, wherein the portion of the legacy TTI communication is determined based at least in part on one or more of: a length of the sTTI communication, a format of the sTTI communication when the sTTI communication is a shortened physical uplink control channel (sPUCCH) communication, or some combination thereof.
5. The method of claim 1, wherein the threshold time of being transmitted is determined based at least in part on one or more of: a timing advance value associated with the UE,

a physical uplink control channel (PUCCH) format of the TTI communication, or some combination thereof.

6. The method of claim 1, wherein transmitting at least one of the sTTI communication or the legacy TTI communication comprises transmitting the legacy TTI communication and dropping the sTTI communication based at least in part on determining that the legacy TTI communication is within the threshold time of being transmitted.

7. The method of claim 1, wherein the legacy TTI communication is a physical uplink control channel (PUCCH) communication; and wherein transmitting at least one of the sTTI communication or the legacy TTI communication comprises transmitting the PUCCH communication and dropping the sTTI communication based at least in part on determining that the PUCCH communication is within the threshold time of being transmitted and the PUCCH communication has a first format.

8. The method of claim 7, wherein the first format includes at least one of: format 1, format 1a, format 1b, or format 3.

9. The method of claim 1, wherein the legacy TTI communication is a physical uplink control channel (PUCCH) communication; and wherein transmitting at least one of the sTTI communication or the legacy TTI communication comprises transmitting the sTTI communication and dropping one or more overlapping symbols of the PUCCH communication and a remaining portion of the PUCCH communication based at least in part on determining that the PUCCH communication is within the threshold time of being transmitted and the PUCCH communication has a first format.

10. The method of claim 1, wherein the legacy TTI communication is a physical uplink control channel (PUCCH) communication; and wherein transmitting at least one of the sTTI communication or the legacy TTI communication comprises puncturing the PUCCH communication and transmitting the sTTI communication based at least in part on determining that the PUCCH communication is within the threshold time of being transmitted and the PUCCH communication has a second format.

11. The method of claim 10, wherein the second format includes at least one of: format

2, format 4, or format 5.

12. The method of claim 10, further comprising dropping a remaining portion of the PUCCH communication.

13. The method of claim 1, wherein the legacy TTI communication is a physical uplink shared channel (PUSCH) communication; and wherein transmitting at least one of the sTTI communication or the legacy TTI communication comprises puncturing the PUSCH communication and transmitting the sTTI communication based at least in part on determining that the PUSCH communication is within the threshold time of being transmitted.

14. The method of claim 13, further comprising dropping a remaining portion of the PUSCH communication.

15. The method of claim 1, wherein the sTTI communication includes at least one of: a shortened physical uplink control channel (sPUCCH) communication, a shortened physical uplink shared channel (sPUSCH) communication, or some combination thereof.

16. The method of claim 1, wherein the sTTI communication includes both a shortened physical uplink control channel (sPUCCH) communication and a shortened physical uplink shared channel (sPUSCH) communication.

17. The method of claim 16, wherein transmitting at least one of the sTTI communication or the legacy TTI communication comprises transmitting the sPUCCH communication and the sPUSCH communication in parallel based at least in part on a determination that the UE is capable of transmitting parallel transmissions.

18. The method of claim 16, wherein transmitting at least one of the sTTI communication or the legacy TTI communication comprises transmitting uplink control information using the sPUSCH communication based at least in part on a determination that the UE is not capable of transmitting parallel transmissions and that the UE has data to transmit on the sPUSCH.

19. The method of claim 16, wherein transmitting at least one of the sTTI communication or the legacy TTI communication comprises transmitting uplink control information using the sPUCCH communication based at least in part on a determination that the UE is not capable of transmitting parallel transmissions and that the UE does not have data to transmit on the sPUSCH.

20. The method of claim 1, wherein the threshold time of being transmitted is equal to zero and indicates whether transmission of the legacy TTI communication has begun.

21. The method of claim 1, wherein the UE is configured to limit a number of supported lengths of the sTTI communication on at least one of: a carrier aggregation physical uplink control channel (PUCCH) group, multiple carrier aggregation PUCCH groups, or some combination thereof.

22. The method of claim 1, wherein the UE is configured to split transmission power across multiple carrier aggregation physical uplink control channel (PUCCH) groups for transmitting the at least one of the sTTI communication or the legacy TTI communication.

23. An apparatus for wireless communication, comprising: a memory; and at least one processor coupled to the memory and configured to: identify a potential collision between a scheduled legacy transmission time interval (TTI) communication and a scheduled shortened TTI (sTTI) communication, the legacy TTI communication having a legacy TTI duration that is longer than an sTTI duration associated with the sTTI communication; determine whether the legacy TTI communication is within a threshold time of being transmitted, the threshold time being equal to or less than an amount of time between a deadline for preparing the legacy TTI communication for transmission and an actual transmission of the legacy TTI communication; and transmit at least one of the sTTI communication or the legacy TTI communication based at least in part on the determination.

24. The apparatus of claim 23, wherein the at least one processor, when transmitting at least one of the sTTI communication or the legacy TTI communication, is configured to

transmit the sTTI communication multiplexed with uplink control information from the legacy TTI communication based at least in part on determining that the legacy TTI communication is not within the threshold time of being transmitted.

25. The apparatus of claim 23, wherein the at least one processor, when transmitting at least one of the sTTI communication or the legacy TTI communication, is configured to transmit the sTTI communication multiplexed with at least a portion of the legacy TTI communication based at least in part on determining that the legacy TTI communication is not within the threshold time of being transmitted.

26. The apparatus of claim 25, wherein the portion of the legacy TTI communication is determined based at least in part on one or more of: a length of the sTTI communication, a format of the sTTI communication when the sTTI communication is a shortened physical uplink control channel (sPUCCH) communication, or some combination thereof.

27. The apparatus of claim 23, wherein the threshold time of being transmitted is determined based at least in part on one or more of: a timing advance value associated with the apparatus, a physical uplink control channel (PUCCH) format of the TTI communication, or some combination thereof.

28. The apparatus of claim 23, wherein the at least one processor, when transmitting at least one of the sTTI communication or the legacy TTI communication, is configured to transmit the legacy TTI communication and dropping the sTTI communication based at least in part on determining that the legacy TTI communication is within the threshold time of being transmitted.

29. An apparatus for wireless communication, comprising: means for identifying a potential collision between a scheduled legacy transmission time interval (TTI) communication and a scheduled shortened TTI (sTTI) communication, the legacy TTI communication having a legacy TTI duration that is longer than an sTTI duration associated with the sTTI communication; means for determining whether the legacy TTI communication is within a threshold time of being transmitted, the threshold time of being transmitted being equal to or less than an amount of time between a deadline

for preparing the legacy TTI communication for transmission and an actual transmission of the legacy TTI communication; and means for transmitting at least one of the sTTI communication or the legacy TTI communication based at least in part on the determination.

30. A non-transitory computer-readable medium storing computer executable code for wireless communication, comprising code for: identifying a potential collision between a scheduled legacy transmission time interval (TTI) communication and a scheduled shortened TTI (sTTI) communication, the legacy TTI communication having a legacy TTI duration that is longer than an sTTI duration associated with the sTTI communication; determining whether the legacy TTI communication is within a threshold time of being transmitted, the threshold time of being transmitted being equal to or less than an amount of time between a deadline for preparing the legacy TTI communication for transmission and an actual transmission of the legacy TTI communication; and transmitting at least one of the sTTI communication or the legacy TTI communication based at least in part on the determination.