~~WHAT IS CLAIMED IS:~~

CLAIMS

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

receiving a transmit power control (TPC) command in a grant associated with transmitting an uplink communication,

wherein a scheduling delay between the grant and the uplink communication is a flexible scheduling delay;

sampling a TPC state in association with determining a transmit power for transmitting the uplink communication~~; and~~ , wherein a timing of the sampling of the TPC state is determined relative to the grant and determined as a function of a downlink control information (DCI) parameter; and determining the transmit power based at least in part on the TPC state and the TPC command.

~~determining the transmit power based at least in part on the TPC state and the TPC command.~~

2. ~~The method of claim 1, wherein timing associated with sampling the TPC state is relative to the grant.~~

~~3. The method of claim 1, wherein timing associated with sampling the TPC state is relative to a resource associated with transmitting the uplink communication.~~

~~4.~~ The method of claim 1, wherein, when the timing of the sampling of the TPC state ~~being sampled~~ coincides with timing of at least one TPC command that is to be accumulated into the TPC state, the TPC state is sampled after the at least one TPC command is accumulated into the TPC state.

~~5~~3. The method of claim 1, wherein, when the timing of the sampling of the TPC state ~~being sampled~~ coincides with timing of at least one TPC command that is to be accumulated into the TPC state, the TPC state is sampled before the at least one TPC command is accumulated into the TPC state.

~~6~~4. The method of claim ~~5~~3, wherein, when the at least one TPC command is the TPC command, the TPC command is added to a result of sampling the TPC state.

~~7~~5. The method of claim 1, wherein the timing of the sampling of the TPC state ~~being sampled is~~determined based at least in part on at least one of:

the scheduling delay between the grant and the uplink communication,

a grant type associated with the grant, or

a capability of the UE.

~~8~~6. The method of claim 1, wherein the timing of the sampling of the TPC state ~~being sampled is semistatically configured.~~

~~9. The method of claim 1, wherein timing of the TPC state being sampled~~ is dynamically determined.

~~10. The method of claim 1, wherein information associated with timing of the TPC state being sampled is at least one of:~~

~~signaled in downlink control information (DCI),~~

~~a preconfigured constant, or~~

~~a function of a DCI parameter.~~

~~11~~7. The method of claim 1, wherein the uplink communication is one of:

~~———~~a physical uplink shared channel (PUSCH) communication,

~~———~~a physical uplink control channel (PUCCH) communication,

~~———~~a sounding reference signal (SRS), or

~~————~~ a physical random access channel (PRACH) sequence.

~~12~~8. The method of claim 1, wherein the TPC command is accumulated into the TPC state.

~~13~~9. The method of claim ~~12~~8, wherein timing associated with accumulating the TPC command into the TPC state is relative to the grant.

~~14~~10. The method of claim ~~12~~8, wherein timing associated with accumulating the TPC command into the TPC state is relative to a resource associated with transmitting the uplink communication.

~~15~~11. The method of claim ~~12~~8, wherein the TPC command is accumulated into the TPC state before the TPC state is sampled.

~~16~~12. The method of claim ~~12~~8, wherein the TPC state is sampled before the TPC command is accumulated.

~~17~~13. The method of claim ~~12~~8, wherein the TPC command is accumulated into the TPC state concurrently with the TPC state being sampled.

~~18~~14. The method of claim ~~12~~8, wherein timing of the TPC command being accumulated into the TPC state is based at least in part on at least one of:

the scheduling delay between the grant and the uplink communication,

a grant type associated with the grant, or

a capability of the UE.

~~19~~15. The method of claim ~~12~~8, wherein timing of the TPC command being accumulated into the TPC state is semistatically configured.

~~20~~16. The method of claim ~~12~~8, wherein timing of the TPC command being accumulated into the TPC state is dynamically determined.

~~21~~17. The method of claim ~~12~~8, wherein information associated with timing of the TPC command being accumulated into the TPC state is at least one of: signaled in downlink control information (DCI), a preconfigured constant, or a function of a DCI parameter.

~~signaled in downlink control information (DCI),~~

~~a preconfigured constant, or~~

~~a function of a DCI parameter.~~

18. The method of claim 1, wherein the flexible scheduling delay is identified by a k2 parameter in a New Radio or 5G radio technology that indicates an amount of time between the grant received in a physical downlink control channel (PDCCH) and the uplink communication scheduled by the grant in a physical uplink shared channel (PUSCH).

19. The method of claim 1, wherein the flexible scheduling delay is identified by a k1 parameter in a New Radio or 5G radio technology that indicates an amount of time between

the grant associated with a physical downlink shared channel (PDSCH) and an acknowledgment or negative acknowledgment feedback associated with a PDSCH communication.

20. The method of claim 1, wherein the timing of the sampling of the TPC state is determined based at least in part on: the scheduling delay between the grant and the uplink communication, a grant type associated with the grant, and a capability of the UE.

~~22~~21. A user equipment (UE) for wireless communication, comprising:

a memory; ~~and~~

one or more processors operatively coupled to the memory~~,~~; and instructions stored in the memory and operable, when executed by the one or more processors ~~configured~~ to~~:~~

cause the UE to: receive a transmit power control (TPC) command in a grant associated with transmitting an uplink communication,

wherein a scheduling delay between the grant and the uplink communication is a flexible scheduling delay;

sample a TPC state in association with determining a transmit power for transmitting the uplink communication~~; and~~

, wherein a timing of sampling of the TPC state is determined relative to the grant and determined as a function of a downlink control information (DCI) parameter; and determine the transmit power based at least in part on the TPC state and the TPC command.

~~23~~22. The UE of claim ~~22, wherein timing associated with sampling the TPC state is relative to the grant or is relative to a resource associated with transmitting the uplink communication.~~

~~24. The UE of claim 22~~21, wherein, when the timing of the sampling of the TPC state ~~being sampled~~ coincides with timing of at least one TPC command that is to be accumulated into the TPC state, the TPC state is sampled after the at least one TPC command is accumulated into the TPC state.

~~25~~23. The UE of claim ~~22~~21, wherein, when the timing of the sampling of the TPC state ~~being sampled~~ coincides with timing of at least one TPC command that is to be accumulated into the TPC state, the TPC state is sampled before the at least one TPC command is accumulated into the TPC state.

~~26~~24. The UE of claim ~~22~~21, wherein the timing of the sampling of the TPC state ~~being sampled~~ is determined based at least in part on at least one of:

the scheduling delay between the grant and the uplink communication,

a grant type associated with the grant, or

a capability of the UE.

~~27~~25. The UE of claim ~~22~~21, wherein the TPC command is accumulated into the TPC state, ~~————~~wherein timing associated with accumulating the TPC command into the TPC state is relative to the grant or is relative to a resource associated with transmitting the uplink communication.

~~28~~26. The UE of claim ~~27~~25, wherein timing of the TPC command being accumulated into the TPC state is based at least in part on at least one of: the scheduling delay between the grant and the uplink communication, a grant type associated with the grant, or a capability of the UE.

27. The UE of claim 21, wherein the timing of the sampling of the TPC state is dynamically determined.

28. The UE of claim 21, wherein the uplink communication is one of: a physical uplink shared channel (PUSCH) communication, a physical uplink control channel (PUCCH) communication, a sounding reference signal (SRS), or a physical random access channel (PRACH) sequence.

29. The UE of claim 21, wherein the TPC command is accumulated into the TPC state.

30. The UE of claim 29, wherein the TPC command is accumulated into the TPC state before the TPC state is sampled.

31. The UE of claim 29, wherein the TPC state is sampled before the TPC command is accumulated.

32. The UE of claim 29, wherein the TPC command is accumulated into the TPC state concurrently with the TPC state being sampled.

33. The UE of claim 29, wherein timing of the TPC command being accumulated into the TPC state is based at least in part on at least one of: the scheduling delay between the grant and the uplink communication,

a grant type associated with the grant, or

a capability of the UE.

34. The UE of claim 21, wherein the flexible scheduling delay is identified by a k2 parameter in a New Radio or 5G radio technology that indicates an amount of time between the grant received in a physical downlink control channel (PDCCH) and the uplink communication scheduled by the grant in a physical uplink shared channel (PUSCH).

35. The UE of claim 21, wherein the flexible scheduling delay is identified by a k1 parameter in a New Radio or 5G radio technology that indicates an amount of time between the grant associated with a physical downlink shared channel (PDSCH) and an acknowledgment or negative acknowledgment feedback associated with a PDSCH communication.

36. The UE of claim 21, wherein the timing of the sampling of the TPC state is determined based at least in part on: the scheduling delay between the grant and the uplink communication, a grant type associated with the grant, and a capability of the UE.

~~29~~37. A non-transitory computer-readable medium storing one or more instructions for wireless communication~~, the one or more instructions comprising:~~

~~one or more instructions~~ that, when executed by one or more processors of a user equipment (UE), cause the ~~one or more processors~~UE to:

receive a transmit power control (TPC) command in a grant associated with transmitting an uplink communication, wherein a scheduling delay between the grant and the uplink communication is a flexible scheduling delay; sample a TPC state in association with determining a transmit power for transmitting the uplink communication, wherein a timing of sampling of the TPC state is determined relative to the grant and determined as a function of a downlink control information (DCI) parameter; and determine the transmit power based at least in part on the TPC state and the TPC command.

38. The non-transitory computer-readable medium of claim 37, wherein ~~a~~the timing of the sampling of the TPC state is determined based at least in part on at least one of: the scheduling delay between the grant and the uplink communication ~~is a flexible scheduling delay;~~

~~sample a TPC state in association~~, a grant type associated with ~~determining a transmit power for transmitting the uplink communication; and~~the grant, or a capability of the UE.

~~determine~~

39. The non-transitory computer-readable medium of claim 37, wherein the ~~transmit power~~timing of the sampling of the TPC state is dynamically determined.

40. The non-transitory computer-readable medium of claim 37, wherein the uplink communication is one of: a physical uplink shared channel (PUSCH) communication, a physical uplink control channel (PUCCH) communication, a sounding reference signal (SRS), or a physical random access channel (PRACH) sequence.

41. The non-transitory computer-readable medium of claim 37, wherein the TPC command is accumulated into the TPC state.

42. The non-transitory computer-readable medium of claim 41, wherein the TPC command is accumulated into the TPC state before the TPC state is sampled.

43. The non-transitory computer-readable medium of claim 37, wherein the flexible scheduling delay is identified by a k2 parameter in a New Radio or 5G radio technology that indicates an amount of time between the grant received in a physical downlink control channel (PDCCH) and the uplink communication scheduled by the grant in a physical uplink shared channel (PUSCH).

44. The non-transitory computer-readable medium of claim 37, wherein the flexible scheduling delay is identified by a k1 parameter in a New Radio or 5G radio technology that indicates an amount of time between the grant associated with a physical downlink shared channel (PDSCH) and an acknowledgment or negative acknowledgment feedback associated with a PDSCH communication.

45. The non-transitory computer-readable medium of claim 37, wherein the flexible scheduling delay is an amount of time between the grant and the uplink communication, associated with the grant, that varies dynamically with each grant and uplink communication.

46. The non-transitory computer-readable medium of claim 37, wherein the timing of the sampling of the TPC state is determined based at least in part on ~~the TPC state and the TPC command~~: the scheduling delay between the grant and the uplink communication, a grant type associated with the grant, and a capability of the UE.

~~30~~47. An apparatus for wireless communication, comprising:

means for receiving a transmit power control (TPC) command in a grant associated with transmitting an uplink communication,

wherein a scheduling delay between the grant and the uplink communication is a flexible scheduling delay;

means for sampling a TPC state in association with determining a transmit power for transmitting the uplink communication~~; and~~

, wherein a timing of sampling of the TPC state is determined relative to the grant and determined as a function of a downlink control information (DCI) parameter; and means for determining the transmit power based at least in part on the TPC state and the TPC command.

~~31. A method of wireless communication performed by a user equipment (UE), comprising:~~

~~detecting a power headroom report (PHR) trigger,~~

~~wherein the UE is configured to transmit uplink communications using a plurality of carriers;~~

~~identifying, based at least in part on detecting the PHR trigger, a set of carriers, of the plurality of carriers, that is to be ignored when calculating a power headroom associated with a carrier of the plurality of carriers; and~~

~~calculating the power headroom based at least in part on an uplink transmission, associated with the carrier, and based at least in part on ignoring the set of carriers that is to be ignored.~~

~~32. The method of claim 31, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a particular time,~~

wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.

33. The method of claim 32, wherein the particular time is a time at which a first grant was received after the PHR trigger was detected.

34. The method of claim 31, wherein the set of carriers is identified based at least in part on determining that the UE has no uplink grants associated with the set of carriers.

35. The method of claim 31, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a threshold amount of time from a time at which an uplink grant, associated with the carrier, was received by the UE,

wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.

36. The method of claim 31, wherein the power headroom is calculated further based at least in part on a particular uplink transmission of at least two uplink transmissions associated with another carrier of the plurality of carriers,

wherein the at least two uplink transmissions at least partially overlap the uplink transmission associated with the carrier.

37. The method of claim 36, wherein a subcarrier spacing, associated with the other carrier, is higher than a subcarrier spacing of the carrier.

38. The method of claim 36, wherein the particular uplink transmission is a first uplink transmission of the at least two uplink transmissions.

39. The method of claim 36, wherein the particular uplink transmission is a last uplink transmission of the at least two uplink transmissions.

40. The method of claim 36, wherein the particular uplink transmission is an uplink transmission, of the at least two uplink transmissions, with a smallest power headroom.

41. The method of claim 36, wherein the uplink transmission is a particular one of at least two uplink transmissions associated with the carrier.

42. 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:

detect a power headroom report (PHR) trigger,

wherein the UE is configured to transmit uplink communications using a plurality of carriers;

identify, based at least in part on detecting the PHR trigger, a set of carriers, of the plurality of carriers, that is to be ignored when calculating a power headroom associated with a carrier of the plurality of carriers; and

calculate the power headroom based at least in part on an uplink transmission, associated with the carrier, and based at least in part on ignoring the set of carriers that is to be ignored.

43. The UE of claim 42, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a particular time,

wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.

44. The UE of claim 43, wherein the particular time is a time at which a first grant was received after the PHR trigger was detected.

45. The UE of claim 42, wherein the set of carriers is identified based at least in part on determining that the UE has no uplink grants associated with the set of carriers.

46. The UE of claim 42, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a threshold amount of time from a time at which an uplink grant, associated with the carrier, was received by the UE,

wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.

~~47. The UE of claim 42, wherein the power headroom is calculated further based at least in part on a particular uplink transmission of at least two uplink transmissions associated with another carrier of the plurality of carriers,~~

~~wherein the at least two uplink transmissions at least partially overlap the uplink transmission associated with the carrier.~~

~~48. The UE of claim 47, wherein a subcarrier spacing, associated with the other carrier, is higher than a subcarrier spacing of the carrier.~~

~~49. The UE of claim 47, wherein the particular uplink transmission is a first uplink transmission of the at least two uplink transmissions.~~

48. The apparatus of claim 47, wherein the flexible scheduling delay is identified by a k2 parameter in a New Radio or 5G radio technology that indicates an amount of time between the grant received in a physical downlink control channel (PDCCH) and the uplink communication scheduled by the grant in a physical uplink shared channel (PUSCH).

49. The apparatus of claim 47, wherein the flexible scheduling delay is identified by a k1 parameter in a New Radio or 5G radio technology that indicates an amount of time between the grant associated with a physical downlink shared channel (PDSCH) and an acknowledgment or negative acknowledgment feedback associated with a PDSCH communication.

50. The apparatus of claim 47, wherein the timing of the sampling of the TPC state is determined based at least in part on at least one of: the scheduling delay between the grant and the uplink communication, a grant type associated with the grant, or a capability of the apparatus.

~~50. The UE~~51. The apparatus of claim 47, wherein the ~~particular uplink transmission is a last uplink transmission of the at least two uplink transmissions.~~ timing of the sampling of the TPC state is dynamically determined.

~~51~~52. The ~~UE~~apparatus of claim 47, wherein the ~~particular~~ uplink ~~transmission~~communication is ~~an~~one of: a physical uplink ~~transmission, of the at least two~~shared channel (PUSCH) communication, a physical uplink ~~transmissions, with a smallest~~

~~power headroom.~~ control channel (PUCCH) communication, a sounding reference signal (SRS), or a physical random access channel (PRACH) sequence.

~~52~~53. The ~~UE~~apparatus of claim 47, wherein the ~~uplink transmission is a particular one of at least two uplink transmissions associated with the carrier~~TPC command is accumulated into the TPC state.

~~53. A non-transitory computer-readable medium storing one or more instructions for wireless communication, the one or more instructions comprising:~~

~~one or more instructions that, when executed by one or more processors of a user equipment, cause the one or more processors to:~~

~~detect a power headroom report (PHR) trigger,~~

~~wherein the UE is configured to transmit uplink communications using a plurality of carriers;~~

~~identify, based at least in part on detecting the PHR trigger, a set of carriers, of the plurality of carriers, that is to be ignored when calculating a power headroom associated with a carrier of the plurality of carriers; and~~

~~calculate the power headroom based at least in part on an uplink transmission, associated with the carrier, and based at least in part on ignoring the set of carriers that is to be ignored.~~

54. The ~~non-transitory computer-readable medium~~ apparatus of claim 53, wherein the ~~set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a particular time,~~ TPC command is accumulated into the TPC state before the TPC state is sampled.

~~wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.~~

55. The ~~non-transitory computer-readable medium~~apparatus of claim ~~54~~47, wherein the ~~particular time~~flexible scheduling delay is ~~a time at which a first grant was received after the PHR trigger was detected.~~

56. The non-transitory computer-readable medium of claim 53, wherein the set of carriers is identified based at least in part on determining that the UE has no uplink grants associated with the set of carriers.

57. The non-transitory computer-readable medium of claim 53, wherein the set of carriers is identified based at least in part on determining that a set of uplink grants was received by the UE after a thresholdan amount of time from a time at which an uplink between the grant and the uplink communication, associated with the grant, that varies dynamically with each grant, associated with the carrier, was received by the UE,

wherein each uplink grant, of the set of uplink grants, is associated with a respective carrier of the set of carriers.

58. The non-transitory computer-readable medium of claim 53, wherein the power headroom is calculated further based at least in part on a particular uplink transmission of at least two uplink transmissions associated with another carrier of the plurality of carriers,

wherein the at least two uplink transmissions at least partially overlap the uplink transmission associated with the carrier.

59. The non-transitory computer-readable medium of claim 58, wherein the uplink transmission is a particular one of at least two uplink transmissions associated with the carrier.

60. An apparatus for wireless and uplink communication, comprising:.

means for detecting a power headroom report (PHR) trigger,

56. The apparatus of claim 47, wherein the apparatus timing of the sampling of the TPC state is configured to transmit uplink communications using a plurality of carriers;

means for identifying,determined based at least in part on detecting the PHR trigger, a set of carriers, of the plurality of carriers, that is to be ignored when calculating a power headroom: the scheduling delay between the grant and the uplink communication, a grant type associated with a carrier of the plurality of carriers; and

means for calculating the power headroom based at least in part on an uplink transmission, associated with the carrierthe grant, and based at least in part on ignoring the set of carriers that is to be ignored.a capability of the UE.