~~CLAIMS~~

~~What is claimed is:~~

CLAIMS

1. A method of wireless communication comprising:

~~determining a Doppler metric associated with a wireless channel and a user equipment (UE);~~

~~selecting a first reference signal density configuration based at least in part on the Doppler metric; and~~

reference signal configuration from a plurality of reference signal configurations, the plurality of reference signal configurations indicating a plurality of reference signal density configurations and a plurality of decoding processing timelines; and

transmitting, by a base station to ~~the UE,~~a user equipment (UE), an indication of the ~~first~~ reference signal ~~density~~ configuration indicating a first reference signal density configuration and a decoding processing timeline for communicating with the UE.

2. The method of claim 1, wherein the plurality of reference signal density configurations comprise a plurality of reference signal positions and reference signal quantities within a transmit time interval.

3. The method of claim 1, further comprising:

transmitting, by the base station, a downlink data burst including reference signals and data in accordance with the first reference signal density configuration.

~~3~~4. The method of claim 1, further comprising:

receiving, by the base station, an uplink data burst including reference signals and data in accordance with the first reference signal density configuration.

~~4~~5. The method of claim 1, further comprising:

~~selecting, from~~ determining a ~~plurality of wireless channel estimation techniques and based at least in part on the~~ Doppler ~~metric,~~ characteristic associated with a wireless channel ~~estimation technique associated with~~ and the UE; and

communicating with the UE~~; and~~

~~transmitting, by the base station to the UE, an indication to communicate using the wireless channel estimation technique.~~

~~5. The method of claim 4, wherein selecting the wireless channel estimation technique comprises:~~

~~determining that the Doppler metric satisfies a first threshold; and~~

~~selecting a causal wireless channel estimation technique as the wireless channel estimation technique.~~

~~6. The method of claim 4, wherein selecting the wireless channel estimation technique comprises:~~

~~determining that the Doppler metric satisfies a second threshold; and~~

~~selecting a non-causal wireless channel estimation technique as the wireless channel estimation technique.~~

~~7. The method of claim 1, wherein determining the Doppler metric comprises:~~

~~measuring Doppler effects associated~~ in accordance with ~~uplink data received from the UE; and~~

~~determining, by the base station, the Doppler metric based at least in part on the Doppler effects associated with the uplink data received from the UE.~~

~~8. The method of claim 1, wherein determining the Doppler metric comprises:~~

~~receiving, by the base station, information related to Doppler effects measured by the UE; and~~

~~determining, by the base station, the Doppler metric based at least in part on the information related to the Doppler effects measured by the UE.~~

~~9. The method of claim 1, wherein determining the Doppler metric comprises:~~

~~receiving, by the base station, an indication of the Doppler metric from the UE.~~

~~10. The method of claim 1, wherein selecting~~ the first reference signal density configuration ~~comprises:~~ and based at least in part on the Doppler characteristic.

~~identifying a first Doppler classification associated with the Doppler metric; and~~

~~selecting~~

6. The method of claim 1, further comprising:

determining that a Doppler characteristic associated with a wireless channel and the UE satisfies a first threshold, wherein the decoding processing timeline is associated with an extrapolation wireless channel estimation technique; and

communicating with the UE in accordance with the first reference signal density configuration ~~from a plurality of reference signal density configurations~~and based at least in part on the ~~first~~ Doppler ~~classification~~characteristic.

~~11~~7. The method of claim 1, further comprising:

determining that a Doppler characteristic associated with a wireless channel and the UE satisfies a second threshold, wherein ~~transmitting, by the base station to the UE,~~the decoding processing timeline is associated with an interpolation wireless channel estimation technique; and

communicating with the ~~indication of~~UE in accordance with the first reference signal density configuration ~~comprises:~~ and based at least in part on the Doppler characteristic.

~~transmitting, via a signaling radio bearer channel, the indication of the first reference signal density configuration.~~

~~12. The method of claim 1, wherein transmitting, by the base station to the UE, the indication of the first reference signal density configuration comprises:~~

~~transmitting, via a resource grant to the UE, the indication of the first reference signal density configuration.~~

~~13~~8. The method of claim 1, further comprising:

determining ~~an additional~~ a Doppler ~~metric~~characteristic associated with ~~the~~a wireless channel and the UE;

determining that the ~~additional~~ Doppler ~~metric~~characteristic indicates a higher Doppler shift value than ~~the~~a previously-determined Doppler ~~metric~~characteristic; and

determining a second reference signal density configuration based at least in part on the ~~additional~~ Doppler ~~metric~~characteristic, the second reference signal density configuration having more reference signals per transmit time interval than the first reference signal density configuration.

9. The method of claim 1, wherein transmitting, by the base station to the UE, the indication of the reference signal configuration comprises:

transmitting, via a signaling radio bearer channel, the indication of the reference signal configuration.

~~14~~10. A method of wireless communication comprising:

~~,~~receiving, by ~~a~~ user equipment (UE~~,~~), an indication of a reference signal configuration indicating a first reference signal density configuration and a decoding processing timeline; and

receiving one or more reference signals and data in accordance with the reference signal configuration; and

decoding the data based at least in part on the decoding processing timeline.

11. The method of claim 10, further comprising:

determining a Doppler characteristic associated with a ~~Doppler metric;~~wireless channel and

~~communicating with~~ a base station, and

wherein receiving one or more reference signals and data comprises receiving the one or more reference signals and the data from the base station in accordance with the reference signal configuration and based at least in part on the Doppler characteristic.

12. The method of claim 10, wherein the first reference signal density configuration is indicated from a plurality of reference signal density configurations, the plurality of reference signal density configurations indicating a plurality of reference signal positions and reference signal quantities within a transmission time interval.

~~15~~13. The method of claim ~~14, further comprising:~~

~~receiving, by~~ 10, wherein the ~~UE,~~ decoding processing timeline is indicated from a ~~first indication to communicate using a causal~~plurality of decoding processing timelines, the plurality of decoding processing timelines associated with extrapolation and interpolation wireless channel estimation ~~technique associated with the Doppler metric; and~~techniques.

~~determining to switch from the causal wireless channel estimation technique to a non-causal wireless channel estimation technique for communicating with a base station based at least in part on the first indication.~~

~~16. The method of claim 14, wherein determining to switch from the causal wireless channel estimation technique to the non-causal wireless channel estimation technique comprises:~~

~~receiving, by the UE, a second indication to communicate using the non-causal wireless channel estimation technique associated with a second Doppler condition different from the first Doppler condition; and~~

~~switching from the causal wireless channel estimation technique to the non-causal wireless channel estimation technique for communicating with the base station.~~

~~17. The method of claim 14~~14. The method of claim 10, further comprising:

transmitting, by the UE, information related to Doppler effects measured by the UE, and wherein receiving the indication of the reference signal configuration is based at least in part on transmitting the information related to the Doppler effects.

~~18~~15. The method of claim ~~14, further comprising:~~

~~transmitting, by the UE, an indication of a first Doppler metric for determining whether to change reference signal density configurations.~~

~~19. The method of claim 14~~10, wherein communicating with the base station comprises:

transmitting, by the UE, an uplink data burst including reference signals and data in accordance with the first reference signal density configuration.

~~20~~16. The method of claim ~~14, wherein communicating with the base station comprises:~~

~~receiving, by the UE, a first downlink data burst including reference signals and data in accordance with the first reference signal density configuration; and~~

~~decoding the first downlink data burst based at least in part on the first reference signal density configuration.~~

~~21. The method of claim 20~~10, further ~~comprising~~:

~~receiving, by the UE, an indication of a second reference signal density configuration different from the first reference signal density configuration, the second reference signal density configuration having more reference signals per transmit time interval than the first reference signal density configuration;~~

~~receiving a second downlink data burst including reference signals and data in accordance with the second reference signal density configuration; and~~

~~decoding the second downlink data burst based at least in part on the second reference signal density configuration.~~

~~22. The method of claim 14, further comprising:~~

~~transmitting, by the UE, an indication of a suggested reference signal density configuration.~~

~~23~~17. The method of claim ~~14~~10, wherein receiving, by the UE, the indication of the ~~first~~ reference signal ~~density~~ configuration comprises:

receiving, via a signaling radio bearer channel, the indication of the ~~first~~ reference signal ~~density~~ configuration.

~~24~~18. The method of claim ~~14~~10, wherein receiving, by the UE, the indication of the ~~first~~ reference signal ~~density~~ configuration comprises:

receiving, via a resource grant from the base station, the indication of the ~~first~~ reference signal ~~density~~ configuration.

~~25~~19. An apparatus for wireless communication, comprising:

a processor;

memory ~~in electronic communication~~coupled with the processor; and

instructions stored in the memory and operable, when executed by the processor, to cause the apparatus to:

select a reference signal configuration from a plurality of reference signal configurations, the plurality of reference signal configurations indicating a plurality of reference signal density configurations and a plurality of decoding processing timelines; and

transmit, to a user equipment (UE), an indication of the reference signal configuration indicating a first reference signal density configuration and a decoding processing timeline for communicating with the UE.

20. An apparatus for wireless communication, comprising:

a processor;

memory coupled with the processor; and

instructions stored in the memory and operable, when executed by the processor, to cause the apparatus to:

~~determine a Doppler metric associated with a wireless channel and a user equipment (UE);~~

~~select~~receive an indication of a reference signal configuration indicating a first reference signal density configuration ~~based at least in part on the Doppler metric; and~~

~~transmit an indication of the first reference signal density configuration.~~and a decoding processing timeline;

~~26. The apparatus of claim 25, wherein the instructions are operable to cause the apparatus to:~~

~~transmit a downlink data burst including~~receive one or more reference signals and data in accordance with the ~~first~~ reference signal ~~density~~ configuration~~.~~; and

~~27. The apparatus of claim 25, wherein~~decode the ~~instructions are operable to cause the apparatus to:~~

~~receive an uplink~~ data ~~burst including reference signals and data in accordance with the first reference signal density configuration.~~

~~28. The apparatus of claim 25, wherein the instructions operable to cause the apparatus to:~~

~~select, from a plurality of wireless channel estimation techniques and~~ based at least in part on the ~~Doppler metric, a wireless channel estimation technique associated with communicating with the UE; and~~

~~transmit an indication to communicate using the wireless channel estimation technique.~~

~~29. An apparatus for wireless communication, comprising:~~

~~a processor;~~

~~memory in electronic communication with the processor; and~~

~~instructions stored in the memory and operable, when executed by the processor, to cause the apparatus to:~~

~~receive an indication of a first reference signal density configuration associated with a Doppler metric; and~~

~~communicate with a base station in accordance with the first reference signal density configuration.~~

30. The apparatus of claim 29, wherein the instructions are operable to cause the apparatus to:

receive a first indication to communicate using a causal wireless channel estimation technique associated with the Doppler metric; and

determine to switch from the causal wireless channel estimation technique to a non-causal wireless channel estimation technique for communicating with a base station based at least in part on the first indication.

31. An apparatus of wireless communication comprising:

means for determining a Doppler metric associated with a wireless channel and a user equipment (UE);

means for selecting a first reference signal density configuration based at least in part on the Doppler metric; and

means for transmitting, by a base station to the UE, an indication of the first reference signal density configuration.

32. The apparatus of claim 31, further comprising:

means for transmitting, by the base station, a downlink data burst including reference signals and data in accordance with the first reference signal density configuration.

33. The apparatus of claim 31, further comprising:

means for receiving, by the base station, an uplink data burst including reference signals and data in accordance with the first reference signal density configuration.

34. The apparatus of claim 31, further comprising:

means for selecting, from a plurality of wireless channel estimation techniques and based at least in part on the Doppler metric, a wireless channel estimation technique associated with communicating with the UE; and

means for transmitting, by the base station to the UE, an indication to communicate using the wireless channel estimation technique.

35. The apparatus of claim 34, wherein the means for selecting the wireless channel estimation technique comprises:

means for determining that the Doppler metric satisfies a first threshold; and

means for selecting a causal wireless channel estimation technique as the wireless channel estimation technique.

36. The apparatus of claim 34, wherein the means for selecting the wireless channel estimation technique comprises:

means for determining that the Doppler metric satisfies a second threshold; and

means for selecting a non-causal wireless channel estimation technique as the wireless channel estimation technique.

37. The apparatus of claim 31, wherein the means for determining the Doppler metric comprises:

means for measuring Doppler effects associated with uplink data received from the UE; and

means for determining, by the base station, the Doppler metric based at least in part on the Doppler effects associated with the uplink data received from the UE.

38. The apparatus of claim 31, wherein the means for determining the Doppler metric comprises:

means for receiving, by the base station, information related to Doppler effects measured by the UE; and

means for determining, by the base station, the Doppler metric based at least in part on the information related to the Doppler effects measured by the UE.

39. The apparatus of claim 31, wherein the means for determining the Doppler metric comprises:

means for receiving, by the base station, an indication of the Doppler metric from the UE.

40. The apparatus of claim 31, wherein the means for selecting the first reference signal density configuration comprises:

means for identifying a first Doppler classification associated with the Doppler metric; and

means for selecting the first reference signal density configuration from a plurality of reference signal density configurations based at least in part on the first Doppler classification.

41. The apparatus of claim 31, wherein the means for transmitting, by the base station to the UE, the indication of the first reference signal density configuration comprises:

means for transmitting, via a signaling radio bearer channel, the indication of the first reference signal density configuration.

42. The apparatus of claim 31, wherein the means for transmitting, by the base station to the UE, the indication of the first reference signal density configuration comprises:

means for transmitting, via a resource grant to the UE, the indication of the first reference signal density configuration.

43. The apparatus of claim 31, further comprising:

means for determining an additional Doppler metric associated with the wireless channel and the UE;

means for determining that the additional Doppler metric indicates a higher Doppler shift value than the Doppler metric; and

means for determining a second reference signal density configuration based at least in part on the additional Doppler metric, the second reference signal density configuration having more reference signals per transmit time interval than the first reference signal density configuration.

44. An apparatus of wireless communication comprising:

means for receiving, by a UE, an indication of a first reference signal density configuration associated with a Doppler metric; and

means for communicating with a base station in accordance with the first reference signal density configuration.

45. The apparatus of claim 44, further comprising:

means for receiving, by the UE, a first indication to communicate using a causal wireless channel estimation technique associated with the Doppler metric; and

means for determining to switch from the causal wireless channel estimation technique to a non-causal wireless channel estimation technique for communicating with a base station based at least in part on the first indication.

46. The apparatus of claim 44, wherein the means for determining to switch from the causal wireless channel estimation technique to the non-causal wireless channel estimation technique comprises:

means for receiving, by the UE, a second indication to communicate using the non-causal wireless channel estimation technique associated with a second Doppler condition different from the first Doppler condition; and

means for switching from the causal wireless channel estimation technique to the non-causal wireless channel estimation technique for communicating with the base station.

47. The apparatus of claim 44, further comprising:

means for transmitting, by the UE, information related to Doppler effects measured by the UE.

48. The apparatus of claim 44, further comprising:

means for transmitting, by the UE, an indication of a first Doppler metric for determining whether to change reference signal density configurations.

49. The apparatus of claim 44, wherein the means for communicating with the base station comprises:

means for transmitting, by the UE, an uplink data burst including reference signals and data in accordance with the first reference signal density configuration.

50. The apparatus of claim 44, wherein the means for communicating with the base station comprises:

means for receiving, by the UE, a first downlink data burst including reference signals and data in accordance with the first reference signal density configuration; and

means for decoding the first downlink data burst based at least in part on the first reference signal density configuration.

51. The apparatus of claim 50, further comprising:

means for receiving, by the UE, an indication of a second reference signal density configuration different from the first reference signal density configuration, the second reference signal density configuration having more reference signals per transmit time interval than the first reference signal density configuration;

means for receiving a second downlink data burst including reference signals

~~and data in accordance with the second reference signal density configuration; and~~

~~means for decoding the second downlink data burst based at least in part on the second reference signal density configuration.~~

~~52. The apparatus of claim 44, further comprising:~~

~~means for transmitting, by the UE, an indication of a suggested reference signal density configuration.~~

~~53. The apparatus of claim 44, wherein the means for receiving, by the UE, the indication of the first reference signal density configuration comprises: receiving, via a signaling radio bearer channel, the indication of the first reference signal density configuration.~~

~~54. The apparatus of claim 44, wherein the means for receiving, by the UE, the indication of the first reference signal density configuration comprises: receiving, via a resource grant from the base station, the indication of the first reference signal density configuration~~processing timeline.