

CLAIMS

What is claimed is:

CLAIMS

1. A method for wireless communication, comprising:
 - ~~determining~~transmitting a user equipment (UE) capability of the UE message comprising a first capability indication for at least one modulation order associated with a first transmission time interval (TTI) and a second capability indication for at least one modulation order associated with a second TTI that is shorter than the first TTI;
 - ~~transmitting a UE capability message based at least in part on determining the UE capability;~~
 - receiving a configuration message comprising a parameter ~~and a modulation coding scheme (MCS) index~~ based at least in part on the UE capability message, wherein the UE capability message parameter is associated with channel quality indicator (CQI) reporting for the second TTI; and
 - selecting a modulation table for ~~communicating, to a base station, a~~ transmission associated with the ~~first TTI and the second TTI~~ based at least in part on ~~receiving the~~ configuration message.
2. The method of claim 1, further comprising:
 - determining whether the parameter is enabled or disabled, wherein selecting the modulation table is based at least in part on determining whether the parameter is enabled.
3. The method of claim 1, further comprising:
 - receiving the configuration message via a shortened physical downlink control channel (sPDCCH), wherein the configuration message further comprises an allocation of resources, or configuration information for one or more physical channels, or ~~channel quality indicator (CQI) reporting, or any combination thereof,~~
 - wherein the configuration information comprises a transmission configuration for the first TTI and the second TTI, and the CQI reporting is based at least in part on the configuration information.

4. The method of claim 3, further comprising:
determining a downlink control information (DCI) format associated with the sPDCCH; and

determining that a cyclic redundancy check (CRC) associated with the sPDCCH is scrambled with a cell radio network temporary identifier (C-RNTI) of the UE.

5. The method of claim 4, further comprising:
determining that the DCI format is an acceptable DCI format from a list of DCI formats based at least in part on determining that the parameter is enabled;
determining that the CRC is scrambled with the C-RNTI of the UE; and
determining a modulation order in the modulation table based at least in part on ~~the MCS~~ a modulation coding scheme (MCS) index, wherein selecting the modulation table is based at least in part on determining that the parameter is enabled, or the DCI format is the acceptable DCI format, or that the CRC is scrambled with the C-RNTI, or any combination thereof.

6. The method of claim 3, further comprising:
determining a modulation order in the selected modulation table based at least in part on ~~the~~ a modulation coding scheme (MCS) index, wherein selecting the modulation table is based at least in part on determining that the parameter is disabled.

7. The method of claim 1, wherein the second TTI is a shortened TTI (sTTI).

8. The method of claim 1, further comprising:
transmitting a second UE capability message separate from the UE capability message indicating capability of the UE for the second TTI.

9. The method of claim 1, wherein the UE capability message comprises UE capability for both the first TTI and the second TTI.

10. The method of claim 1, wherein the second TTI comprises a plurality of shortened TTIs (sTTIs), and wherein the UE capability message is associated with the plurality of sTTIs.

11. The method of claim 10, further comprising:
transmitting a UE capability message for at least some sTTIs of the plurality of sTTIs, wherein the parameter and ~~the MCS~~ a modulation coding scheme (MCS) index is associated with the plurality of sTTIs or each sTTI is associated with a separate parameter

and MCS index.

12. The method of claim 10, wherein at least a subset of the sTTIs comprise variable lengths.

13. The method of claim 1, wherein the UE is configured with a default modulation table for the transmission associated with the first TTI and the second TTI.

14. The method of claim 1, further comprising:
receiving a downlink control information (DCI) comprising an information element (IE) field for a modulation table indicator; and
identifying the modulation table based at least in part on a bit value of the IE field, wherein selecting the modulation table is based at least in part on the identifying.

15. The method of claim 1, further comprising:
monitoring a downlink control channel for a message comprising a C-RNTI associated with the UE, wherein selecting the modulation table is further based at least in part on the message comprising the C-RNTI.

16. The method of claim 1, further comprising:
determining a modulation order in the selected modulation table based at least in part on ~~the MCS~~ a modulation coding scheme (MCS) index; and
selecting a channel quality indicator (CQI) table based at least in part on a CQI reporting configuration,
wherein the CQI reporting configuration associated with CQI reporting indicates that the CQI table applies to the first TTI or the second TTI, or both.

17. The method of claim 1, wherein the ~~parameter~~ second capability indication comprises an indication of UE capability for a 64QAM, a 256QAM, or a 1024QAM.

18. The method of claim 1, wherein the transmission is a downlink transmission or an uplink transmission.

19. The method of claim 18, further comprising:
selecting the modulation table for the uplink transmission based at least in part on ~~the received MCS~~ a modulation coding scheme (MCS) index; and
determining a modulation order in the selected modulation table for the uplink transmission based at least in part on the MCS index and a downlink control information (DCI) format associated with the received configuration message.

20. The method of claim 1, further comprising:
determining the modulation order for the uplink transmission based at least in part on semi-persistent scheduling or a random access response grant.

21. The method of claim 1, wherein the parameter is a higher layer parameter.

22. The method of claim 1, further comprising:
transmitting a second UE capability message separate from the UE capability message,
wherein the UE capability message is for uplink and the second UE capability message is for downlink.

23. The method of claim 1, further comprising:
receiving downlink control information (DCI) having a DCI format for
scheduling the transmission associated with the second TTI, wherein selecting the modulation
table is based at least in part on the DCI having the DCI format.

~~23~~24. A method for wireless communication, comprising:
receiving a user equipment (UE) capability message comprising a first
capability indication for at least one modulation order associated with a first transmission
time interval (TTI) and a second capability indication for at least one modulation order
associated with a second TTI that is shorter than the first TTI;

configuring a parameter associated with a modulation table and channel
quality indicator (CQI) reporting for the second TTI based at least in part on the UE
capability message;

~~determining a modulation coding scheme (MCS) index based at least in part~~
~~on the UE capability message; and~~

transmitting a configuration message comprising the parameter ~~and the MCS~~
~~index.~~

2425. The method of claim ~~23~~24, further comprising:
enabling the parameter based at least in part on the UE capability message,
wherein configuring the parameter comprises the enabling.

2526. The method of claim ~~23~~24, further comprising:
disabling the parameter based at least in part on the UE capability message,

wherein configuring the parameter comprises the disabling.

2627. The method of claim 2324, further comprising:

transmitting the configuration message via a shortened physical downlink control channel (sPDCCH), wherein the configuration message further comprises an allocation of resources, or configuration information for one or more physical channels, or ~~channel quality indicator (CQI) reporting, or any combination thereof,~~

wherein the configuration information comprises a transmission configuration for the first TTI and a second TTI, and the CQI reporting is based at least in part on the configuration information.

2728. The method of claim 2324, further comprising:

receiving a second UE capability information message separate from the UE capability message indicating capability for the second TTI.

~~28. The method of claim 23, further comprising:~~

~~receiving a second UE capability message separate from the UE capability message,~~

~~wherein the UE capability message is for uplink and the second UE capability message is for downlink.~~

29. An apparatus for wireless communication, comprising:

~~means for determining a capability of~~

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:

transmit a user equipment (UE) capability message comprising a first capability indication for at least one modulation order associated with a first transmission time interval (TTI) and a second capability indication for at least one modulation order associated with a second TTI that is shorter than the first TTI;

~~means for transmitting~~receive a UE capability configuration message comprising a parameter based at least in part on determining the UE capability;

~~means for receiving a message comprising a,~~ wherein the parameter is

associated with channel quality indicator (CQI) reporting for the second TTI; and a modulation coding scheme (MCS) index based at least in part on the UE capability message; and

~~means for selecting~~select a modulation table for communicating, to a base station, a transmission associated with the first TTI and the second TTI based at least in part on receiving the message.

30. An apparatus for wireless communication, comprising:

~~means for receiving~~

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 a user equipment (UE) capability message comprising a first capability indication for at least one modulation order associated with a first transmission time interval (TTI) and a second capability indication for at least one modulation order associated with a second TTI that is shorter than the first TTI;

~~means for configuring~~configure a parameter associated with a modulation table ~~based at least in part on~~ and channel quality indicator (CQI) reporting for the UE capability message;

~~means for determining a modulation coding scheme (MCS)~~
~~index~~second TTI based at least in part on the UE capability message; and

~~means for transmitting a~~transmit a configuration message comprising the parameter ~~and the MCS index.~~