

CLAIMS

What is claimed is:

- 1 1. A method for wireless communication, comprising:
2 determining a capability of the UE for at least one modulation order associated
3 with a first transmission time interval (TTI) and a second TTI that is shorter than the first
4 TTI;
5 transmitting a UE capability message based at least in part on determining the
6 UE capability;
7 receiving a message comprising a parameter and a modulation coding scheme
8 (MCS) index based at least in part on the UE capability message; and
9 selecting a modulation table for communicating, to a base station, a
10 transmission associated with the first TTI and the second TTI based at least in part on
11 receiving the message.
- 1 2. The method of claim 1, further comprising:
2 determining whether the parameter is enabled or disabled, wherein selecting
3 the modulation table is based at least in part on determining whether the parameter is enabled.
- 1 3. The method of claim 1, further comprising:
2 receiving the message via a shortened physical downlink control channel
3 (sPDCCH), wherein the message further comprises an allocation of resources, or
4 configuration information for one or more physical channels, or channel quality indicator
5 (CQI) reporting, or any combination thereof,
6 wherein the configuration information comprises a transmission configuration for the first
7 TTI and the second TTI, and the CQI reporting is based at least in part on the configuration
8 information.
- 1 4. The method of claim 3, further comprising:
2 determining a downlink control information (DCI) format associated with the
3 sPDCCH; and
4 determining that a cyclic redundancy check (CRC) associated with the
5 sPDCCH is scrambled with a cell radio network temporary identifier (C-RNTI) of the UE.

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

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

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

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

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

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

1 11. The method of claim 10, further comprising:
2 transmitting a UE capability message for at least some sTTIs of the plurality
3 of sTTIs, wherein the parameter and the MCS index is associated with the plurality of sTTIs
4 or each sTTI is associated with a separate parameter and MCS index.

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

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

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

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

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

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

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

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

1 20. The method of claim 1, further comprising:

2 determining the modulation order for the uplink transmission based at least in
3 part on semi-persistent scheduling or a random access response grant.

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

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

1 23. A method for wireless communication, comprising:
2 receiving a UE capability message for at least one modulation order associated
3 with a first transmission time interval (TTI) and a second TTI that is shorter than the first
4 TTI;
5 configuring a parameter associated with a modulation table based at least in
6 part on the UE capability message;
7 determining a modulation coding scheme (MCS) index based at least in part
8 on the UE capability message; and
9 transmitting a message comprising the parameter and the MCS index.

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

1 25. The method of claim 23, further comprising:
2 disabling the parameter based at least in part on the UE capability message,
3 wherein configuring the parameter comprises the disabling.

1 26. The method of claim 23, further comprising:
2 transmitting the message via a shortened physical downlink control channel
3 (sPDCCH), wherein the message further comprises an allocation of resources, or
4 configuration information for one or more physical channels, or channel quality indicator
5 (CQI) reporting, or any combination thereof,

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

1 27. The method of claim 23, further comprising:
2 receiving a second UE capability information message separate from the UE
3 capability message indicating capability for the second TTI.

1 28. The method of claim 23, further comprising:
2 receiving a second UE capability message separate from the UE capability
3 message,
4 wherein the UE capability message is for uplink and the second UE capability
5 message is for downlink.

1 29. An apparatus for wireless communication, comprising:
2 means for determining a capability of the apparatus for at least one modulation
3 order associated with a first transmission time interval (TTI) and a second TTI that is shorter
4 than the first TTI;
5 means for transmitting a UE capability message based at least in part on
6 determining the UE capability;
7 means for receiving a message comprising a parameter and a modulation
8 coding scheme (MCS) index based at least in part on the UE capability message; and
9 means for selecting a modulation table for communicating, to a base station, a
10 transmission associated with the first TTI and the second TTI based at least in part on
11 receiving the message.

1 30. An apparatus for wireless communication, comprising:
2 means for receiving a UE capability message for at least one modulation order
3 associated with a first transmission time interval (TTI) and a second TTI that is shorter than
4 the first TTI;
5 means for configuring a parameter associated with a modulation table based at
6 least in part on the UE capability message;
7 means for determining a modulation coding scheme (MCS) index based at
8 least in part on the UE capability message; and

9 means for transmitting a message comprising the parameter and the MCS
10 index.
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