CLAIMS

1. A wireless transmit/receive unit (WTRU) comprising a processor configured to:

receive a radio resource control (RRC) message, the RRC message indicating a plurality of radio resource subsets;

receive a physical downlink control channel transmission, wherein the physical downlink control channel transmission comprises downlink control information (DCI), the DCI comprises a field indicating at least one radio resource subsets indicated by the RRC message, the at least one radio resource subset corresponding to a subset of radio resources allocated to the WTRU for a downlink transmission; and

receive data associated with the downlink transmission, wherein the data is received using a portion of the radio resources allocated to the WTRU for the downlink transmission, the portion of the radio resources used to receive the data excluding the at least one radio resource subset indicated using the field comprised in the DCI.

2. The WTRU of claim 1, wherein each of the plurality of radio resource subsets indicated by the RRC message comprises periodically repeating patterns of radio resources.

3. The WTRU of claim 1, wherein the RRC message indicates which resource elements correspond to each of the plurality of radio resource subsets.

4. The WTRU of claim 1, wherein the data corresponds to a transport block, and the processor is configured to determine that the at least one radio resource subset indicated using the field comprised in the DCI does not include bits of the transport block.

5. The WTRU of claim 2, wherein the RRC message comprises an indication of a respective periodicity associated with each of the plurality of radio resource subsets.

6. The WTRU of claim 5, wherein the indication of the periodicity is associated with a transmission time interval (TTI).

7. The WTRU of claim 1, wherein the field comprised in the DCI indicates each of the plurality of radio resource subsets indicated by the RRC message, and the portion of the radio resources used to receive the data excludes each of the plurality of radio resource subsets associated indicated by the field comprised in the DCI.

8. The WTRU of claim 1, wherein the at least one radio resource subset corresponds to a radio resource allocation region (RRAR).

9. The WTRU of claim 1, wherein the DCI indicates the radio resources allocated to the WTRU for the downlink transmission.

10. The WTRU of claim 6, wherein the TTI corresponds to at least one of:

a subframe, slot, or mini-slot;

a period of time starting from a transmission of downlink control information scheduling one or more transport blocks and ending before or at a transmission of downlink control information scheduling one or more subsequent transport blocks; or

a number of Orthogonal Frequency Division Multiplexing (OFDM) symbols in a reference numerology or in a numerology used for a transmission of control information.

11. The WTRU of claim 1, wherein each of the plurality of radio resource subsets indicated by the RRC message comprises an indication of a subcarrier spacing.

12. The WTRU of claim 11, wherein the field comprised in the DCI indicates which radio resource subsets of the plurality of radio resource subsets indicated in the RRC message should not be used for receiving the data associated with the downlink transmission.

13. A method implemented by a wireless transmit/receive unit (WTRU), the method comprising:

receiving a radio resource control (RRC) message, the RRC message indicating a plurality of radio resource subsets;

receiving a physical downlink control channel transmission, wherein the physical downlink control channel transmission comprises downlink control information (DCI), the DCI comprises a field indicating at least one radio resource subset indicated by the RRC message, the at least one radio resource subset corresponding to a subset of radio resources allocated to the WTRU for a downlink transmission;

receiving data associated with the downlink transmission, wherein the data is received using a portion of the radio resources allocated to the WTRU for the downlink transmission, the portion of the radio resources used to receive the data excluding the at least one radio resource subset indicated using the field comprised in the DCI.

14. The method of claim 13, wherein each of the plurality of radio resource subsets indicated by the RRC message comprises periodically repeating patterns of radio resources.

15. The method of claim 13, wherein the RRC message indicates which resource elements correspond to each of the plurality of radio resource subsets.

16. The method of claim 13, wherein data corresponds to a transport block, and the method comprises determining that the at least one radio resource subset indicated using the field comprised in the DCI does not include bits of the transport block.

17. The method of claim 14, wherein the RRC message comprises an indication of a respective periodicity associated with each of the plurality of radio resource subsets.

18. The method of claim 13, wherein the DCI indicates the radio resources allocated to the WTRU for the downlink transmission.

19. The method of claim 13, wherein the field comprised in the DCI indicates each of the plurality of radio resource subsets indicated by the RRC message, and the portion of the radio resources used to receive the data excludes each of the plurality of radio resource subsets associated indicated by the field comprised in the DCI.

20. The method of claim 13, wherein the field comprised in the DCI indicates which radio resource subsets of the plurality of radio resource subsets indicated in the RRC message should not be used for receiving the data associated with the downlink transmission.