CLAIMS

What is claimed is:

1. A method performed by a wireless transmit receive unit (WTRU), the method comprising:

monitoring, by the WTRU, downlink short transmission time intervals (sTTIs) for a sTTI physical downlink control channel (sPDCCH) region, wherein a downlink sTTI length is different than an uplink (UL) sTTI length;

determining, by the WTRU, the sPDCCH region from a set of candidate sPDCCH regions for an uplink grant, wherein the sPDCCH is determined based on a WTRU-specific parameter;

receiving, by the WTRU, the uplink grant in the determined sPDCCH region; and

transmitting, by the WTRU, data using the uplink grant.

2. The method of claim 1, wherein a downlink sTTI gap is between the sPDCCH region and an uplink sTTI.

3. The method of claim 1, wherein the downlink sTTI length is shorter than the UL sTTI length.

4. The method of claim 1, wherein the WTRU-specific parameter is a WTRU identification (WTRU-ID).

5. The method of claim 1, wherein the downlink sTTI partially overlaps with a downlink TTI.

6. The method of claim 1, wherein the set of candidate sPDCCH regions includes a plurality of sTTIs.

7. The method of claim 1, further comprising:

transmitting, by the WTRU, first information on an uplink (UL) sTTI substantially concurrently with second information on an UL TTI.

8. The method of claim 7, wherein the UL sTTI partially overlaps with the UL TTI.

9. The method of claim 7, wherein a power headroom (PH) report or power control information is sent concurrently on the UL sTTI and the UL TTI.

10. The method of claim 7, wherein the UL sTTI is one of plurality of UL sTTIs that overlaps with the UL TTI.

11. A wireless transmit receive unit (WTRU) comprising:

a processor configured to monitor downlink short transmission time intervals (sTTIs) for a sTTI physical downlink control channel (sPDCCH) region, wherein a downlink sTTI length is different than an uplink (UL) sTTI length;

the processor configured to determine the sPDCCH region from a set of candidate sPDCCH regions for an uplink grant, wherein the sPDCCH is determined based on a WTRU-specific parameter;

a transceiver configured to receive the uplink grant in the determined sPDCCH region; and

the transceiver configured to transmit data using the uplink grant.

12. The WTRU of claim 11, wherein a downlink sTTI gap is between the sPDCCH region and an uplink sTTI.

13. The WTRU of claim 11, wherein the downlink sTTI length is shorter than the UL sTTI length.

14. The WTRU of claim 11, wherein the WTRU-specific parameter is a WTRU identification (WTRU-ID).

15. The WTRU of claim 11, wherein the downlink sTTI partially overlaps with a downlink TTI.

16. The WTRU of claim 11, wherein the set of candidate sPDCCH regions includes a plurality of sTTIs.

17. The WTRU of claim 11, further comprising:

the transceiver configured to transmit first information on an uplink (UL) sTTI substantially concurrently with second information on an UL TTI.

18. The WTRU of claim 17, wherein the UL sTTI partially overlaps with the UL TTI.

19. The WTRU of claim 17, wherein a power headroom (PH) report or power control information is sent concurrently on the UL sTTI and the UL TTI.

20. The WTRU of claim 17, wherein the UL sTTI is one of plurality of UL sTTIs that overlaps with the UL TTI.