CLAIMS

What is claimed:

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

a processor configured to:

receive configuration information for reporting Global Navigation Satellite System (GNSS) assistance information;

after a change in radio resource control (RRC) state of the WTRU, send a first report comprising GNSS assistance information via RRC signaling, wherein the GNSS assistance information comprises a GNSS acquisition time and a GNSS validity duration;

receive a measurement gap configuration associated with GNSS reporting, wherein the measurement gap configuration comprises an indication of time resources for performing GNSS acquisition;

acquire GNSS during the time resources indicated by the measurement gap configuration; and

send a second report via medium access control (MAC) control element (CE), wherein the second report indicates a remainder of the GNSS validity duration.

2. The WTRU of claim 1, wherein the processor is configured to send the first report upon completion of an RRC connection establishment or upon resuming an RRC connection.

3. The WTRU of claim 1, wherein the processor is configured to send the second report during a random access procedure.

4. The WTRU of claim 1, wherein the GNSS validity duration comprises an indication of a time duration associated with a validity of a GNSS acquisition, and the remainder of the GNSS validity duration comprises an indication of a time duration associated with an expiration of the GNSS acquisition.

5. The WTRU of claim 1, wherein the GNSS validity duration indicates an explicit time duration associated with a validity of a GNSS acquisition.

6. The WTRU of claim 5, wherein the remainder of the GNSS validity duration indicates an explicit time duration associated with an expiration of the GNSS acquisition.

7. The WTRU of claim 1, wherein the GNSS acquisition time comprises a time to acquire a GNSS position.

8. The WTRU of claim 1, wherein the processor is configured to perform location-based measurements to acquire the GNSS during the time resources indicated by the measurement gap configuration.

9. The WTRU of claim 1, wherein the processor is configured to determine a GNSS position associated with the WTRU to acquire the GNSS.

10. The WTRU of claim 1, wherein GNSS acquisition is based on capability information associated with the WTRU or a speed of the WTRU.

11. The WTRU of claim 1, wherein the WTRU is an internet of things (IOTs) device.

12. The WTRU of claim 1, wherein the WTRU is a reduced capability (RedCap) device.

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

receiving configuration information for reporting Global Navigation Satellite System (GNSS) assistance information;

after a change in radio resource control (RRC) state of the WTRU, sending a first report comprising GNSS assistance information via RRC signaling, wherein the GNSS assistance information comprises a GNSS acquisition time and a GNSS validity duration;

receiving a measurement gap configuration associated with GNSS reporting, wherein the measurement gap configuration comprises an indication of time resources for performing GNSS acquisition;

acquiring GNSS during the time resources indicated by the measurement gap configuration; and

sending a second report via medium access control (MAC) control element (CE), wherein the second report indicates a remainder of the GNSS validity duration.

14. The method of claim 13, further comprising sending the first report upon completion of an RRC connection establishment or upon resuming an RRC connection.

15. The method of claim 13, further comprising sending the second report during a random access procedure.

16. The method of claim 13, wherein the GNSS validity duration comprises an indication of a time duration associated with a validity of a GNSS acquisition, and the remainder of the GNSS validity duration comprises an indication of a time duration associated with expiration of the GNSS acquisition.

17. The method of claim 13, wherein the GNSS validity duration indicates an explicit time duration associated with a validity of a GNSS acquisition.

18. The method of claim 17, wherein the remainder of the GNSS validity duration indicates an explicit time duration associated with expiration of the GNSS acquisition.

19. The method of claim 13, wherein the GNSS acquisition time comprises a time to acquire a GNSS position.

20. The method of claim 13, further comprising performing location-based measurements to acquire the GNSS during the time resources indicated by the measurement gap configuration.