CLAIMS

What is claimed is:

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

a transceiver and a processor, the processor configured to:

receive a sidelink positioning reference signal (SL-PRS) transmission request from a second WTRU;

send, via the transceiver in response to the SL-PRS transmission request from the second WTRU, a request to a network for an allocation of SL-PRS resources, a priority associated with the SL-PRS transmission request, and a bandwidth associated with the SL-PRS transmission request; and

receive, via the transceiver from the network, the allocation of SL-PRS resources for the SL-PRS transmission associated with the first WTRU.

2. The first WTRU of claim 1, wherein the processor is further configured to:

receive an indication from the second WTRU, the indication comprising information associated with the priority associated with the SL-PRS and the bandwidth associated with the SL-PRS.

3. The first WTRU of claim 2, wherein the processor is further configured to:

determine, based on the indication, the priority associated with the SL-PRS and the bandwidth associated with the SL-PRS.

4. The first WTRU of claim 2, wherein the indication further comprises information associated with one or more of a latency associated with the SL-PRS or a periodicity associated with the SL-PRS.

5. The first WTRU of claim 4, wherein the processor is configured to:

send, to the network, via the transceiver in response to the SL-PRS transmission request from the second WTRU, the latency associated with the SL-PRS or the periodicity associated with the SL-PRS.

6. The first WTRU of claim 1, wherein the request to the network for the allocation of SL-PRS resources is sent via one or more of a scheduling request (SR), a medium access control (MAC) control element (CE) transmission, a radio resource control (RRC) transmission, or a location positioning protocol (LPP) transmission.

7. The first WTRU of claim 1, wherein the request to the network for the allocation of SL-PRS resources is sent via a medium access control (MAC) control element (CE), and wherein the request to the network for the allocation of SL-PRS resources comprises a request for an aperiodic SL-PRS resource transmission.

8. The first WTRU of claim 1, wherein the request to the network for the allocation of SL-PRS resources is sent via a radio resource control (RRC) transmission, and wherein the request to the network for the allocation of SL-PRS resources comprises a request for a periodic SL-PRS resource transmission.

9. The first WTRU of claim 1, wherein the processor is further configured to:

send, to the network, via the transceiver in response to the SL-PRS transmission request from the second WTRU, an indication of availability of a sidelink positioning service.

10. The first WTRU of claim 1, wherein the processor is configured to:

send, to the network, via the transceiver in response to the SL-PRS transmission request from the second WTRU, a latency associated with the SL-PRS and a periodicity associated with the SL-PRS.

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

receiving a sidelink positioning reference signal (SL-PRS) transmission request from a second WTRU;

sending, in response to the SL-PRS transmission request from the second WTRU, a request to a network for an allocation of SL-PRS resources, a priority associated with the SL-PRS transmission request, and a bandwidth associated with the SL-PRS transmission request; and

receiving, from the network, the allocation of SL-PRS resources for the SL-PRS transmission associated with the first WTRU.

12. The method of claim 11, further comprising:

receiving an indication from the second WTRU, the indication comprising information associated with the priority associated with the SL-PRS and the bandwidth associated with the SL-PRS.

13. The method of claim 12, further comprising:

determining, based on the indication, the priority associated with the SL-PRS and the bandwidth associated with the SL-PRS.

14. The method of claim 12, wherein the indication further comprises information associated with one or more of a latency associated with the SL-PRS or a periodicity associated with the SL-PRS.

15. The method of claim 14, further comprising:

sending, to the network, in response to the SL-PRS transmission request from the second WTRU, the latency associated with the SL-PRS or the periodicity associated with the SL-PRS.

16. The method of claim 11, wherein the request to the network for the allocation of SL-PRS resources is sent via one or more of a scheduling request (SR), a medium access control (MAC) control element (CE) transmission, a radio resource control (RRC) transmission, or a location positioning protocol (LPP) transmission.

17. The method of claim 11, wherein the request to the network for the allocation of SL-PRS resources is sent via a medium access control (MAC) control element (CE), and wherein the request to the network for the allocation of SL-PRS resources comprises a request for an aperiodic SL-PRS resource transmission.

18. The method of claim 11, wherein the request to the network for the allocation of SL-PRS resources is sent via a radio resource control (RRC) transmission, and wherein the request to the network for the allocation of SL-PRS resources comprises a request for a periodic SL-PRS resource transmission.

19. The method of claim 11, further comprising:

sending, to the network, in response to the SL-PRS transmission request from the second WTRU, an indication of availability of a sidelink positioning service.

20. The method of claim 11, further comprising:

sending, to the network, in response to the SL-PRS transmission request from the second WTRU, a latency associated with the SL-PRS and a periodicity associated with the SL-PRS.