CLAIMS

1. A communication apparatus, comprising:

circuitry, which in operation, generates a sidelink positioning reference signal (SL-PRS); and

a transmitter, which in operation, transmits the SL-PRS based on a signaling.

2. The communication apparatus of claim 1, wherein the signaling indicates a periodicity of the SL-PRS, and the transmitter is further configured to transmit the SL-PRS periodically based on the signaling.

3. The communication apparatus of claim 1, wherein the transmitter is further configured to transmit the SL-PRS with a resource reservation, the resource reservation being a one-to-one reservation or a one-to-multiple reservation.

4. The communication apparatus of claim 3, wherein when the resource reservation is the one-to-multiple reservation, the multiple is configurable.

5. The communication apparatus of claim 3, wherein the signaling is a 1st stage sidelink control information (SCI), and the resource reservation is based on the 1st stage SCI.

6. The communication apparatus of claim 1, wherein the transmitter is further configured to transmit the SL-PRS within a window or a counter.

7. The communication apparatus of claim 1, wherein the signaling comprises one or more parameters associated with the SL-PRS, and the transmitter is configured to transmit the SL-PRS based on the one or more parameters.

8. The communication apparatus of claim 1, wherein the signaling is a higher layer signaling associated with the communication apparatus.

9. The communication apparatus of claim 1, wherein further comprising a receiver, which in operation, receives the signaling from another communication

apparatus, the signaling being a 1st stage sidelink control information (SCI), a Physical Downlink Control Channel (PDCCH), or a higher layer signaling associated with the another communication apparatus.

10. A communication apparatus, comprising:

a receiver, which in operation, receives a sidelink positioning reference signal (SL-PRS) based on a signaling; and

circuitry, which in operation, decodes the SL-PRS.

11. The communication apparatus of claim 10, wherein the receiver is further configured to receive the SL-PRS within a window.

12. The communication apparatus of claim 10, wherein the signaling is a higher layer signaling associated with the communication apparatus, or wherein the receiver is further configured to receive the signaling from another communication apparatus, the signaling being a 1st stage sidelink control information (SCI), a Physical Downlink Control Channel (PDCCH), or a higher layer signaling associated with the another communication apparatus.

13. The communication apparatus of claim 1, wherein a priority of the SL-PRS is indicated by a physical layer (PHY) signaling or a higher layer signaling.

14. The communication apparatus of claim 13, wherein the priority of the SL-PRS is set from eight values.

15. The communication apparatus of claim 1, wherein the signaling further indicates a time resource for transmitting the SL-PRS.

16. The communication apparatus of claim 1, wherein the transmitter is further configured to transmit the signaling periodically via a unicast, groupcast or broadcast.

17. The communication apparatus of claim 1, wherein the transmitter is configured to transmit the signaling via groupcast or broadcast when triggered by another communication apparatus.

18. A communication method, comprising:

generating a sidelink positioning reference signal (SL-PRS); and
transmitting the SL-PRS based on a signaling.

19. An integrated circuitry, comprising:
circuitry, which in operation:
generates a sidelink positioning reference signal (SL-PRS); and
transmits the SL-PRS based on a signaling.

20. An integrated circuitry, comprising:
circuitry, which in operation, receives a sidelink positioning reference signal (SL-PRS) based on a signaling; and
decodes the SL-PRS.