

CLAIMS

1. A method for supporting positioning of a user equipment, UE, performed by the UE, comprising:

receiving (1502) assistance data for downlink positioning reference signals from a plurality of transmission reception points, TRPs;

receiving (1504) a plurality of downlink positioning reference signals from the plurality of TRPs;

receiving (1506) a positioning reference signal preemption indication, PRS PI, from a serving TRP indicating that one or more downlink positioning reference signals associated with one or more TRPs have been preempted;

performing (1508) positioning measurements using received downlink positioning reference signals from the plurality of TRPs based at least on the PRS PI indication;

wherein performing positioning measurements using received downlink positioning reference signals from the plurality of TRPs based at least on the PRS PI indication comprises excluding the preempted downlink positioning reference signals from the positioning measurements; the method characterized by

further comprising receiving replacement downlink positioning reference signals from the one or more TRPs, wherein performing positioning measurements uses the received downlink positioning reference signals from the plurality of TRPs and the replacement downlink positioning reference signals from the one or more TRPs.

2. The method of claim 1, wherein the downlink positioning reference signals associated with the one or more TRPs have been preempted by another transmission that has higher priority than preempted downlink positioning reference signals.

3. The method of claim 1, wherein the PRS PI contains a set of bits associated with an identifier for the one or more TRPs.

4. The method of claim 1, wherein the PRS PI contains a set of bits associated with time domain and frequency domain for the preempted downlink positioning reference signals.

5. The method of claim 4, wherein the set of bits associated with the time domain and the frequency domain for the preempted downlink positioning reference signals identifies a time of the preempted downlink positioning reference signals based on a number of PRS symbols between two monitoring occasions, wherein only PRS symbols that contain downlink positioning reference signals associated with the one or more TRPs are counted.

6. The method of claim 5, wherein the monitoring occasions comprise physical downlink control channel, PDCCH, or medium access control control element, MAC CE.

7. The method of claim 4, wherein the set of bits associated with the time domain and the frequency domain for the preempted downlink positioning reference signals identifies at least one frequency sub-band of the preempted downlink positioning reference signals, wherein the preempted downlink positioning reference signals are divided into four or more frequency sub-bands.

8. The method of claim 7, wherein the set of bits identifies only one frequency sub-band of the preempted downlink positioning reference signals.

9. The method of claim 8, wherein the set of bits contains K bits and the preempted downlink positioning reference signals are divided into 2^K frequency sub-bands.

10. The method of claim 7, wherein the set of bits identifies one or more frequency bandwidths of the preempted downlink positioning reference signals.

11. The method of claim 10, wherein the set of bits contains K bits and the downlink positioning reference signals are divided into K frequency sub-bands.

12. The method of claim 1, wherein the UE is configured with a plurality of groups of TRPs, each group of TRPs comprising one or more TRPs, wherein the PRS PI identifies one of the plurality of groups of TRPs.

13. A user equipment, UE, capable of supporting positioning for the UE, the UE comprising:

means for receiving assistance data for downlink positioning reference signals from a plurality of transmission reception points, TRPs;

means for receiving a plurality of downlink positioning reference signals from the plurality of TRPs;

means for receiving a positioning reference signal preemption indication (PRS PI) from a serving TRP indicating that one or more downlink positioning reference signals associated with one or more TRPs have been preempted; and

means for performing positioning measurements using received downlink positioning reference signals from the plurality of TRPs based at least on the PRS PI indication;

wherein the means for performing positioning measurements using received downlink positioning reference signals from the plurality of TRPs based at least on the PRS PI indication comprises means for excluding the preempted downlink positioning reference signals from the positioning measurements; the UE characterized by

further comprising means for receiving replacement downlink positioning reference signals from the one or more TRPs, wherein performing positioning measurements uses the received downlink positioning reference signals from the plurality of TRPs and the replacement downlink positioning reference signals from the one or more TRPs.

14. A user equipment, UE, according to claim 13, comprising means for undertaking the method of any of claims 2 to 12.

15. A non-transitory storage medium including program code stored thereon, the program code is operable to configure at least one processor in a user equipment, UE, to undertake the method of any of claims 1 to 12.