

CLAIMS

1. A method for information transmission, performed by a base station, comprising:
 - sending system information, wherein the system information carries candidate positioning reference signal (PRS) configurations, the candidate PRS configurations are configured for a user equipment (UE) to select a recommended PRS configuration, a configuration identifier is carried in each candidate PRS configuration, and the candidate PRS configurations are carried in the same type of the system information;
 - receiving a first request message carrying the recommended PRS configuration from a location management function (LMF);
 - determining a target PRS configuration according to the recommended PRS configuration;
 - and
 - sending a PRS to the UE using the target PRS configuration.
2. The method as claimed in claim 1, wherein receiving the first request message carrying the recommended PRS configuration from the LMF comprises:
 - receiving the first request message carrying a configuration identifier of the recommended PRS configuration.
3. The method as claimed in claim 1 or 2, wherein the candidate PRS configurations are carried in a type 6 of the system information.
4. The method as claimed in any one of claims 1 to 3, further comprising:
 - sending the target PRS configuration to the UE in response to the first request message, wherein the target PRS configuration is configured to indicate the UE to receive the PRS.
5. The method as claimed in any one of claims 1 to 3, wherein the first request message comprises:
 - a first information element (IE) comprising the recommended PRS configuration; and
 - a second IE comprising a request of triggering system information.
6. The method as claimed in any one of claims 1 to 3, wherein receiving the first request message carrying the recommended PRS configuration from the LMF comprises:

receiving the first request message carrying the recommended PRS configuration, sent by the UE in an on-demand manner.

7. The method as claimed in claim 6, wherein receiving the first request message carrying the recommended PRS configuration, sent by the UE in the on-demand manner, comprises one of the following:

receiving a dedicated system information block request (DedicatedSIBRequest) carrying the recommended PRS configuration; or

receiving a dedicated radio resource control system information request (RRCSysInfoRequest) carrying the recommended PRS configuration.

8. A method for information transmission, performed by a user equipment (UE), comprising:

receiving system information, wherein the system information carries candidate positioning reference signal (PRS) configurations;

sending a first request message carrying a recommended PRS configuration to a location management function (LMF); wherein the recommended PRS configuration is configured to determine a target PRS configuration; and

receiving a PRS from the base station using the target PRS configuration;

wherein a configuration identifier is carried in each candidate PRS configuration, and the candidate PRS configurations are carried in the same type of the system information.

9. The method as claimed in claim 8, wherein prior to sending the first request message carrying the recommended PRS configuration to the LMF, the method further comprises:

selecting the recommended PRS configuration from the candidate PRS configurations.

10. The method as claimed in claim 9, wherein sending the first request message carrying the recommended PRS configuration to the LMF comprises:

sending the first request message carrying a configuration identifier of the recommended PRS configuration to the LMF.

11. The method as claimed in claim 9 or 10, wherein the candidate PRS configurations are carried in a type 6 of the system information.

12. The method as claimed in any one of claims 9 to 11, further comprising:
determining a predetermined PRS configuration as the recommended PRS configuration in response to not receiving the system information.

13. The method as claimed in any one of claims 8 to 12, wherein receiving the PRS from the base station using the target PRS configuration comprises:

receiving the target PRS configuration, that is sent by the base station in response to the first request message, and receiving the PRS from the base station using the target PRS configuration.

14. The method as claimed in any one of claims 8 to 12, wherein the first request message comprises:

a first information element (IE) comprising the recommended PRS configuration; and
a second IE comprising a request of triggering system information.

15. The method as claimed in any one of claims 8 to 12, wherein sending the first request message carrying the recommended PRS configuration to the LMF comprises:

sending the first request message carrying the recommended PRS configuration in an on-demand manner to the LMF.

16. The method as claimed in claim 15, wherein sending the first request message carrying the recommended PRS configuration in the on-demand manner to the LMF comprises one of the following:

sending a dedicated system information block request (DedicatedSIBRequest) carrying the recommended PRS configuration to the LMF; or

sending a dedicated radio resource control system information request (RRCSysInfoRequest) carrying the recommended PRS configuration to the LMF.

17. An apparatus for information transmission, applicable to a base station, comprising:

a first receiving module, configured to receive a first request message carrying a recommended positioning reference signal (PRS) configuration from a location management function (LMF);

a first determining module, configured to determine a target PRS configuration according to the recommended PRS configuration; and

a first sending module, configured to send a PRS to a user equipment (UE) using the target PRS configuration;

wherein the apparatus further comprises:

a second sending module, configured to send system information, wherein the system information carries candidate PRS configurations, and the candidate PRS configurations are configured for the UE to select the recommended PRS configuration;

wherein a configuration identifier is carried in each candidate PRS configuration, and the candidate PRS configurations are carried in the same type of the system information.

18. An apparatus for information transmission, applicable to a user equipment (UE), comprising:

a third receiving module, configured to receive system information, wherein the system information carries candidate positioning reference signal (PRS) configurations;

a fourth sending module, configured to send a first request message carrying a recommended PRS configuration to a location management function (LMF); wherein the recommended PRS configuration is configured to determine a target PRS configuration; and

a second receiving module, configured to receive a PRS from the base station using the target PRS configuration;

wherein a configuration identifier is carried in each candidate PRS configuration, and the candidate PRS configurations are carried in the same type of the system information.

19. A communication device, comprising a processor, a transceiver, a memory, and an executable program stored on the memory and capable of being executed by the processor, wherein the processor is configured to perform actions of the method for information transmission as claimed in any one of claims 1 to 7 or claims 8 to 16 when executing the executable program.

20. A storage medium on which an executable program is stored, wherein when the executable program is executed by a processor, actions of the method for information transmission as claimed in any one of claims 1 to 7 or claims 8 to 16 are performed.