CLAIMS

1. A method of performing location determination by a user equipment (UE), the method comprising:

receiving Vehicle-to-Everything (V2X) information from a V2X entity in a wireless network that provides V2X services, the V2X services comprising services for at least one of Vehicle-to-Vehicle (V2V), Vehicle-to-Pedestrian (V2P), Vehicle-to-Infrastructure (V2I), Vehicle-to-Network (V2N) or a combination thereof, wherein the V2X information comprises a location of the V2X entity, wherein the V2X entity is not a cellular base station or access point;

transmitting the location of the V2X entity to a location server to obtain positioning assistance data from the location server;

receiving positioning assistance data from the location server in response to the location of the V2X entity, the positioning assistance data comprising position information, identification, and Positioning Reference Signal (PRS) information for neighbor cellular base stations and the V2X entity or a different V2X entity, the PRS information comprising at least one of PRS bandwidth, a PRS Configuration Index, a number of PRS downlink (DL) frames, or muting information;

receiving PRS signals from the neighbor cellular base stations and PRS signals from the V2X entity or the different V2X entity using the positioning assistance data; and

performing position determination for the UE using the PRS signals from the neighbor cellular base stations and the PRS signals from the V2X entity or the different V2X entity;

wherein the location of the V2X entity is transmitted to the location server but an identity of a serving base station is not transmitted to the location server.

2. The method of claim 1, wherein the V2X information further comprises an identity of the V2X entity.

3. The method of claim 1, wherein the V2X entity is a road side unit.

4. The method of claim 1, wherein the location of the V2X entity is transmitted to the location server in a Provide Capability Message.

5. The method of claim 1, wherein the positioning assistance data from the location server further comprises expected Received Signal Time Difference (RSTD) and expected RSTD uncertainty for the V2X entity or the different V2X entity.

6. A user equipment (UE) that performs location determination, the UE comprising:

at least one wireless transceiver configured to wirelessly communicate with Vehicle-to-Everything (V2X) entities in a first wireless network that provides V2X services comprising services for at least one of Vehicle-to-Vehicle (V2V), Vehicle-to-Pedestrian (V2P), Vehicle-to-Infrastructure (V2I), Vehicle-to-Network (V2N), or a combination thereof, wherein the V2X entity is not a cellular base station or access point, and configured to wirelessly communicate with cellular base stations in a second wireless network; and

at least one processor coupled to the at least one wireless transceiver and configured to receive with the at least one wireless transceiver V2X information from V2X entity in the wireless network that provides V2X services, wherein the V2X information comprises a location of the V2X entity, transmit with the at least one wireless transceiver the location of the V2X entity to a location server to obtain positioning assistance data from the location server, receive with the at least one wireless transceiver positioning assistance data from the location server in response to the location of the V2X entity, the positioning assistance data comprising position information, identification, and Positioning Reference Signal (PRS) information for neighbor cellular base stations and the V2X entity or a different V2X entity, the PRS information comprising at least one of PRS bandwidth, a PRS Configuration Index, a number of PRS downlink (DL) frames, or muting information, receive PRS signals from the neighbor cellular base stations and PRS signals from the V2X entity or a different V2X entity, using the positioning assistance data, and perform position determination for the UE using the PRS signals from the neighbor cellular base stations and the PRS signals from the V2X entity or the different V2X entity, wherein the location of the V2X entity is transmitted to the location server but an identity of a serving base station is not transmitted to the location server.

7. The UE of claim 6, wherein the V2X information further comprises an identity of the V2X entity.

8. The UE of claim 6, wherein the V2X entity is a road side unit.

9. The UE of claim 6, wherein the location of the V2X entity is transmitted to the location server in a Provide Capability Message.

10. A method of performing location determination for a user equipment (UE), the method comprising:

receiving Vehicle-to-Everything (V2X) information from the UE to obtain positioning assistance data, the V2X information is from a V2X entity in a wireless network that provides V2X services to the UE, the V2X services comprising services for at least one of Vehicle-to-Vehicle (V2V), Vehicle-to-Pedestrian (V2P), Vehicle-to-Infrastructure (V2I), Vehicle-to-Network (V2N), or a combination thereof, wherein the V2X information comprises a location of the V2X entity, wherein the V2X entity is not a cellular base station or access point;

determining a coarse position of the UE using the location of the V2X entity;

generating the positioning assistance data using the coarse position of the UE; and

transmitting the positioning assistance data to the UE, the positioning assistance data comprising position information, identification, and Positioning Reference Signal (PRS) information for neighbor cellular base stations and identification of a V2X entity in the wireless network that provides V2X services that transmits PRS signals and PRS information for PRS signals transmitted by the V2X entity that transmits PRS signals, the PRS information comprising at least one of PRS bandwidth, a PRS Configuration Index, a number of PRS downlink (DL) frames, or muting information, wherein the location of the V2X entity is transmitted to the location server but an identity of a serving base station is not transmitted to the location server.

11. The method of claim 10, wherein the V2X information further comprises an identity of the V2X entity that provides V2X services.

12. The method of claim 10, wherein the V2X entity that provides V2X services is a road side unit.

13. The method of claim 10, wherein the location of the V2X entity is received from the UE in a Provide Capability Message.

14. A location server for location determination for a user equipment (UE), the location server comprising:

an external interface configured to wirelessly communicate with the UE in a wireless network; and

at least one processor coupled to the external interface and configured to receive with the external interface Vehicle-to-Everything (V2X) information from the UE to obtain positioning assistance data, the V2X information is from a V2X entity in a wireless network that provides V2X services to the UE, the V2X services comprising services for at least one of Vehicle-to-Vehicle (V2V), Vehicle-to-Pedestrian (V2P), Vehicle-to-Infrastructure (V2I), Vehicle-to-Network (V2N), or a combination thereof, wherein the V2X information comprises a location of the V2X entity, wherein the V2X entity is not a cellular base station or access point, determine a coarse position of the UE using the location of the V2X entity, generate the positioning assistance data using the coarse position of the UE, and transmit with the external interface the positioning assistance data to the UE, the positioning assistance data comprising position information, identification, and Positioning Reference Signal (PRS) information for neighbor cellular base stations and identification of a V2X entity in the wireless network that provides V2X services that transmits PRS signals and PRS information for PRS signals transmitted by the V2X entity that transmits PRS signals, the PRS information comprising at least one of PRS bandwidth, a PRS Configuration Index, a number of PRS downlink (DL) frames, or muting information, wherein the location of the V2X entity is transmitted to the location server but an identity of a serving base station is not transmitted to the location server.

15. The location server of claim 14, wherein the V2X information further comprises an identity of the V2X entity that provides V2X services.

16. The location server of claim 14, wherein the V2X entity that provides V2X services is a road side unit.

17. The location server of claim 14, wherein the location of the V2X entity is received from the UE in a Provide Capability Message.