# CLAIMS

**1.** An apparatus comprising:

a processor; and

a memory coupled to the processor, the processor configured to cause the apparatus to:

receive one or more machine learning positioning configuration requests; and

transmit, based at least in part on the one or more machine learning positioning configuration requests, one or more machine learning positioning configuration responses that include one or more positioning reference signal configurations associated with measurement at respective reference locations and with one or more associated validity criteria.

**2.** The apparatus of claim 1, wherein the processor is configured to cause the apparatus to:

receive the one or more machine learning positioning configuration requests from one or more of network nodes or user equipment (UE); and

transmit the one or more machine learning positioning configuration responses to the one or more of the network nodes or the UE.

**3.** The apparatus of claim 1 or 2, wherein the one or more machine learning positioning configuration responses comprises artificial intelligence configuration for the one or more positioning reference signal configurations.

**4.** The apparatus of any preceding claim, wherein the processor is configured to cause the apparatus to transmit the one or more machine learning positioning configuration responses independent of the one ore more machine learning positioning configuration requests.

**5.** The apparatus of any preceding claim, wherein the one or more machine learning positioning configuration requests comprise a request for one or more of a training type, a ground truth location request, a machine learning method, a machine learning on-demand positioning reference signal request, or pre-configured machine learning assistance data.

**6.** The apparatus of any preceding claim, wherein the processor is configured to cause the apparatus to transmit or receive machine learning positioning assistance data or an error cause,

wherein the error cause comprises one or more of:

an error cause related to a misconfiguration of a positioning reference signal configuration,

a missing parameter within the positioning reference signal configuration

an error in a reception a machine learning positioning configuration response,

a measurement error related to a machine learning positioning measurement,

an invalid machine learning training model, or

an invalid machine learning inference model.

**7.** The apparatus of any preceding claim, wherein the apparatus comprises at least one of a location server, a next generation radio access network (NG-RAN), a positioning reference unit (PRU), a user equipment (UE) an anchor UE, or a target UE.

**8.** The apparatus of any preceding claim, wherein:

the measurement comprises a received signal strength indicator measurement for one or more of downlink, uplink, or sidelink; and

the received signal strength indicator measurement for one or more of downlink, uplink, or sidelink is defined as comprising a linear average of a total received power observed in resource elements of a slot that carry positioning reference signals.

**9.** A user equipment (UE) for wireless communication, comprising:

at least one memory; and

at least one processor coupled with the at least one memory and configured to cause the UE to:

transmit a machine learning positioning configuration request;

receive a machine learning positioning configuration response that comprises a positioning reference signal configuration associated with measurement at one or more respective reference locations and with one or more associated validity criteria; and

perform, based at least in part on the positioning reference signal configuration, one or more machine learning position measurements.

**10.** The UE of claim 9, wherein the machine learning positioning configuration response comprises an artificial intelligence configuration for the positioning reference signal configuration.

**11.** The UE of claim 9 or 10, wherein the machine learning positioning configuration request comprises a request for one or more of a training type, a ground truth location request, a machine learning method, a machine learning on-demand positioning reference signal request, or pre-configured machine learning assistance data.

**12.** The UE of any one of claims 9 to 11, wherein the processor is configured to cause the UE to transmit or receive machine learning positioning assistance data or an error cause,

wherein the error cause comprises one or more of:

an error cause related to a misconfiguration of a positioning reference signal configuration,

a missing parameter within the positioning reference signal configuration

an error in a reception a machine learning positioning configuration response,

a measurement error related to a machine learning positioning measurement,

an invalid machine learning training model, or

an invalid machine learning inference model.

**13.** The UE of any one of claims 9 to 12, wherein:

the measurement comprises a received signal strength indicator measurement for one or more of downlink, uplink, or sidelink; and

the received signal strength indicator measurement for one or more of downlink, uplink, or sidelink is defined as comprising a linear average of a total received power observed in resource elements of a slot that carry positioning reference signal.

**14.** A method for wireless communication, comprising:

receiving one or more machine learning positioning configuration requests; and

transmitting, based at least in part on the one or more machine learning positioning configuration requests, one or more machine learning positioning configuration responses that include one or more positioning reference signal configurations associated with measurement at respective reference locations and with one or more associated validity criteria.

**15.** A method for wireless communication, comprising:

transmitting a machine learning positioning configuration request;

receiving a machine learning positioning configuration response that comprises a positioning reference signal configuration associated with measurement at one or more respective reference locations and with one or more associated validity criteria; and

performing, based at least in part on the positioning reference signal configuration, one or more machine learning position measurements.