3GPP TSG-RAN WG2 Meeting #118-e ***R2-22xxxxx***

Electronic Meeting, May 9 – 20, 2022

**Agenda item:** 6.11.1 / 6.11.2.8

**Source:** Qualcomm Incorporated

**Title:** [AT118-e][624][POS] 37355 positioning CR (Qualcomm)

**Document for:**  Discussion

# 1. Introduction

This document summarizes the following email discussion:

* [AT118-e][624][POS] 37355 positioning CR (Qualcomm)

Scope: Review and update the rapporteur CR (R2-2205829), taking into account decisions of this meeting. Discussion should coordinate with the handling of agenda item summaries.

Intended outcome: Agreeable CR in R2-2206247

Deadline: Tuesday 2022-05-17 1800 UTC

##### References:

[1] R2-2205828, "Summary of LPP Updates and Open Issues".

[2] R2-2205829, "LPP Updates".

[3] R2-2206326, "Rel-17 LPP RIL".

[4] R2-2206327, "Rel-17 LPP ASN1 Review File".

[5] R2-2206328, "LPP Updates and ASN.1 Review".

# 2. Discussion

Please provide your comments on "**Update\_of\_R2-2206328\_(draft CR 37355 LPP Updates).docx**" located in the same folder as this discussion document in the Table below.

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| --- | --- | --- | --- |
| Company | LPP Section / IE | RIL# (if applicable) | Comments |
| Huawei, HiSilicon | 6.4.3 |  | NR-DL-PRS-ExpectedLOS-NLOS-AssistancePerTRP-r17 ::= SEQUENCE {  dl-PRS-ID-r17 INTEGER (0..255),  nr-PhysCellID-r17 NR-PhysCellID-r16 OPTIONAL, -- Need ON  nr-CellGlobalID-r17 NCGI-r15 OPTIONAL, -- Need ON  nr-ARFCN-r17 ARFCN-ValueNR-r15 OPTIONAL, -- Need ON  nr-los-nlos-indicator-r17 CHOICE {  perTrp-r17 LOS-NLOS-Indicator-r17,  perResource-r17 SEQUENCE (SIZE (1..nrMaxSetsPerTrpPerFreqLayer-r16)) OF  NR-DL-PRS-ExpectedLOS-NLOS-AssistancePerResource-r17  } OPTIONAL, -- Cond Mandatory  ...  }  NR-DL-PRS-ExpectedLOS-NLOS-AssistancePerResource-r17 ::=  SEQUENCE (SIZE (1..nrMaxResourcesPerSet-r16)) OF  LOS-NLOS-Indicator-r17  -- ASN1STOP   | Conditional presence | Explanation | | --- | --- | | *Mandatory* | The field is mandatory present in this Release of the specification. |   Not sure why we need this conditional presence tag. if it is mandatory in this release, we only need to make it mandatory? |
| Huawei, HiSilicon | 6.5.10.3 |  | – *NR-DL-TDOA-ProvideLocationInformation* The IE *NR-DL-TDOA-ProvideLocationInformation* is used by the target device to provide NR DL-TDOA location measurements to the location server. It may also be used to provide NR DL-TDOA positioning specific error reason.  -- ASN1START  NR-DL-TDOA-ProvideLocationInformation-r16 ::= SEQUENCE {  nr-DL-TDOA-SignalMeasurementInformation-r16  NR-DL-TDOA-SignalMeasurementInformation-r16  OPTIONAL,  nr-dl-tdoa-LocationInformation-r16 NR-DL-TDOA-LocationInformation-r16  OPTIONAL,  nr-DL-TDOA-Error-r16 NR-DL-TDOA-Error-r16 OPTIONAL,  ...,  [[  nr-DL-TDOA-SignalMeasurementInstances-r17  SEQUENCE (SIZE (1..maxMeasInstances-r17)) OF  NR-DL-TDOA-SignalMeasurementInformation-r16  OPTIONAL,  nr-DL-TDOA-LocationInformationInstances-r17  SEQUENCE (SIZE (1..maxMeasInstances-r17)) OF  NR-DL-TDOA-LocationInformation-r16  OPTIONAL  ]]  }  it should be clarified when the fields nr-DL-TDOA-SignalMeasurementInstances-r17 and nr-DL-TDOA-LocationInformationInstances-r17 are present, the r16 fields should be absent. |
| CATT | 6.4.3  – Area-ID-CellList |  | The idea of camped/connected cell in the updated LPP doesn’t work smoothly. When the camped/connected cell doesn’t support DL-PRS (for some reason), but the neighbour cells support DL-PRS. Usually, LMF still may configure the DL-PRS of the neighbour cells which support DL-PRS without this camped/connected cell. Positioning still work smoothly in this scenario. In this case, the camped/connected cell which does not support DL-PRS will not be the reference cell in LMF.  But if we take the camped/connected cell id in the areaID-Celllist which indicates the valid DL-PRS cells, it won’t work smoothly. UE won’t take the cell8/6/5 as valid DL-PRS when the connected cell3 is not in the cell list. But obviously cell3 won’t be in the valid cell list because it doesn't support DL-PRS. So CATT suggest to fix this issue at this meeting or delete the cell list in asn.1 and think it over at the next meeting, considering NBC issue introduced at this meeting. |
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