**3GPP TSG-RAN WG3 #127 R3-250831**

Athens, Greece, February 17th – 21**st**, 2025

**Agenda Item:** 12.2

**Source:**  ZTE Corporation, Nokia, Nokia Shanghai Bell, Ericsson, Qualcomm, Lenovo, CATT, Samsung, Huawei

**Title:**  (TP to 38.305) Support of Location Service Involving WAB-Nodes

**Document for:** Discussion

# Introduction

This paper provides the TP to BL CR for TS 38.305 to support location service involving WAB-nodes.

# Annex: TP to BL CR for TS 38.305

-------------------------------------------Start of changes-------------------------------------------

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

As used in this document, the suffixes "-based" and "-assisted" refer respectively to the node that is responsible for making the positioning calculation (and which may also provide measurements) and a node that provides measurements (but which does not make the positioning calculation). Thus, an operation in which measurements are provided by the UE to the LMF to be used in the computation of a position estimate is described as "UE-assisted" (and could also be called "LMF-based"), while one in which the UE computes its own position is described as "UE-based". For sidelink positioning, an operation in which measurements are provided by a SL Target UE to a server (SL Server UE or LMF) to be used in the computation of a position estimate is described as "SL Target UE-assisted" (and could also be called "server-based"), while one in which the SL Target UE computes its own position is described as "SL Target UE-based".

**Alert Limit (AL)**: The maximum allowable positioning error for the purpose of integrity. If the positioning error is beyond this limit, the integrity results of the calculated location may not meet the integrity requirement.

**Mobile TRP:** a TRP belonging to a mobile IAB-node or integrated into a WAB-node as defined in TS 38.401 [38].

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#### 8.10.2.3 Information that may be transferred from the gNB to LMF

The assistance data that may be transferred from gNB to the LMF is listed in Table 8.10.2.3-1.

Table 8.10.2.3-1: Assistance data that may be transferred from gNB to the LMF

|  |
| --- |
| Information  |
| PCI, GCI, ARFCN and TRP IDs of the TRPs served by the gNB |
| Timing information of TRPs served by the gNB |
| DL-PRS configuration of the TRPs served by the gNB |
| Indication of which DL-PRS Resource Sets across DL-PRS positioning frequency layers are linked for DL-PRS bandwidth aggregation |
| SSB information of the TRPs (the time/frequency occupancy of SSBs) |
| Spatial direction information of the DL-PRS Resources of the TRPs served by the gNB |
| Geographical coordinates information of the DL-PRS Resources of the TRPs served by the gNB |
| TRP type |
| On-demand DL-PRS information, possibly together with information on which configurations are available for DL-PRS bandwidth aggregation |
| TRP Tx TEG association information |
| Common TA parameters of TRPs |
| Mobile TRP Location Information |
| Mobile IAB-MT UE ID NOTE 1 |
| WAB-MT UE ID NOTE 2 |
| NOTE 1: If TRP Type is Mobile TRP.NOTE 2: If TRP Type is Mobile TRP in WAB-gNB. |

The configuration data for a target UE that may be transferred from the serving gNB to the LMF is listed in Table 8.10.2.3-2.

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#### 8.11.2.3 Information that may be transferred from the gNB to LMF

The assistance data that may be transferred from gNB to the LMF is listed in Table 8.11.2.3-1.

Table 8.11.2.3-1: Assistance data that may be transferred from gNB to the LMF

|  |
| --- |
| Information  |
| PCI, GCI, ARFCN, and TRP IDs of the TRPs served by the gNB |
| Timing information of TRPs served by the gNB |
| DL-PRS configuration of the TRPs served by the gNB |
| SSB information of the TRPs (the time/frequency occupancy of SSBs) |
| Spatial direction information of the DL-PRS Resources of the TRPs served by the gNB |
| Geographical coordinates information of the DL-PRS Resources of the TRPs served by the gNB |
| TRP type |
| On-demand DL-PRS information |
| TRP beam antenna information |
| Mobile TRP Location Information |
| Mobile IAB-MT UE ID NOTE 1 |
| WAB-MT UE ID NOTE 2 |
| NOTE 1: If TRP Type is Mobile TRP.NOTE 2: If TRP Type is Mobile TRP in WAB-gNB. |

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##### 8.12.2.3.0 General

The assistance data that may be transferred from gNB to the LMF is listed in Table 8.12.2.3.0-1.

Table 8.12.2.3.0-1: Assistance data that may be transferred from gNB to the LMF

|  |
| --- |
|  Information  |
| PCI, GCI, ARFCN, and TRP IDs of the TRPs served by the gNB |
| Timing information of TRPs served by the gNB |
| DL-PRS configuration of the TRPs served by the gNB |
| Indication of which DL-PRS Resource Sets across DL-PRS positioning frequency layers are linked for DL-PRS bandwidth aggregation |
| SSB information of the TRPs (the time/frequency occupancy of SSBs) |
| Spatial direction information of the DL-PRS Resources of the TRPs served by the gNB |
| Geographical coordinates information of the DL-PRS Resources of the TRPs served by the gNB |
| TRP type |
| On-demand DL-PRS information, possibly together with information on which configurations are available for DL-PRS bandwidth aggregation |
| TRP Tx TEG association information |
| Mobile TRP Location Information |
| Mobile IAB-MT UE ID NOTE 1 |
| WAB-MT UE ID NOTE 2 |
| NOTE 1: If TRP Type is Mobile TRP.NOTE 2: If TRP Type is Mobile TRP in WAB-gNB. |

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#### 8.13.2.0 Assistance Data that may be transferred from the gNB to the LMF

The assistance data that may be transferred from the gNB to the LMF is listed in Table 8.13.2.0-1.

Table 8.13.2.0-1: Assistance data that may be transferred from gNB to the LMF

|  |
| --- |
| Information |
| PCI, GCI, and TRP IDs of the TRPs served by the gNB |
| SSB information of the TRPs (the time/frequency occupancy of SSBs) |
| Geographical coordinates information of the DL-PRS Resources of the TRPs served by the gNB |
| TRP type |
| Mobile TRP Location Information |
| Mobile IAB-MT UE ID NOTE 1 |
| WAB-MT UE ID NOTE 2 |
| NOTE 1: If TRP Type is Mobile TRP.NOTE 2: If TRP Type is Mobile TRP in WAB-gNB. |

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#### 8.14.2.0 Assistance Data that may be transferred from the gNB to the LMF

The assistance data that may be transferred from the gNB to the LMF is listed in Table 8.14.2.0-1.

Table 8.14.2.0-1: Assistance data that may be transferred from gNB to the LMF

|  |
| --- |
| Information |
| PCI, GCI, and TRP IDs of the TRPs served by the gNB |
| SSB information of the TRPs (the time/frequency occupancy of SSBs) |
| Geographical coordinates information of the DL-PRS Resources of the TRPs served by the gNB |
| TRP type |
| Mobile TRP Location Information |
| Mobile IAB-MT UE ID NOTE 1 |
| WAB-MT UE ID NOTE 2 |
| NOTE 1: If TRP Type is Mobile TRP.NOTE 2: If TRP Type is Mobile TRP in WAB-gNB. |

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