**3GPP TSG-RAN WG2 Meeting#131 R2-2506658**

**Bengaluru, India, August 25-29, 2025**

**Title: LS on the implicit indication of TRP location coordinates via "Associated ID"**

**Response to:**

**Release:** **Rel-19**

**Work Item: NR\_AIML\_air-Core**

Source: RAN2

To: RAN1

Cc:

**Contact Person:**

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**Send any reply LS to:** 3GPP Liaisons Coordinator, mailto:3GPPLiaison@etsi.org

Attachments: None

1. Overall Description

RAN2 has been working on the support of the following RAN1 parameter in LPP (TS 37.355):

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Sub-feature group** | **RAN2 Parent IE** | **Parameter name in the spec** | **New or existing?** | **Description** | **Value range** | **Per (UE, cell, TRP, …)** |
| **Associated ID for Info #7** | UE-based positioning Case 1 | FFS for RAN2 | AssociatedID-TRP-LocationInfo | New | The associated ID (optional) provides implicit indication of Info #7. For given TRP(s), the same associated ID implies that geographical coordinates of the TRP(s) can be understood as consistent by the UE. The associated ID is not expected to provide the real value of Info #7 (i.e., geographical coordinates of the TRP(s) are not disclosed). An associated ID is configured per-cell (e.g., NCGI-r15).Note: Info #7 can be provided explicitly (as in legacy UE-based DL-TDOA) or implicitly by Associated ID. | FFS for RAN2(e.g., 0..255) | Per cell |

which is related to the following agreement from RAN1#121:

|  |
| --- |
| **Agreement**For AI/ML based positioning Case 1, regarding Info #7 in the assistance information from legacy UE-based DL-TDOA,* If implicitly provided, the implicit indication of Info #7 is via associated ID.
	+ For given TRP(s), same associated ID implies that geographical coordinates of the TRP(s) can be understood as consistent by the UE.
	+ The associated ID is not expected to provide the real value of Info #7 (i.e., geographical coordinates of the TRP(s) are not disclosed).
	+ an associated ID is configured per-cell (e.g., NCGI-r15)
		- UE does not expect to receive different values of associated ID for TRPs belonging to the same NCGI-r15
	+ Associated ID can be realized by an identifier of N bits (e.g., 8 bits)
 |

RAN2 understand that "info#7" in the above parameter and agreement refers to the following row in Table 8.12.2.1.0-1 of TS 38.305:

|  |
| --- |
| Geographical coordinates of the TRPs served by the gNB (include a transmission reference location for each DL-PRS Resource ID, reference location for the transmitting antenna of the reference TRP, relative locations for transmitting antennas of other TRPs) |

This "Info#7" is currently supported by the LPP IE *NR-TRP-LocationInfo.*

During the development of LPP support for the aforementioned parameter, several questions have emerged that require feedback from RAN1.

Question 1:
Does a single *Associated ID* correspond to the location coordinates of one specific TRP within a cell, or does it represent the location information of a group of TRPs in the same cell, each having distinct location coordinates?

Question 2:

Is the *Associated ID* in any way related to the identification of the location of Antenna Reference Points (ARPs) associated with DL-PRS Resource Sets and DL-PRS Resources?

Question 3:

Are *Associated IDs* unique across different cells? Can cells belonging to different Positioning Frequency Layers (PFLs) share the same *Associated ID*? Furthermore, if a single cell is part of multiple PFLs, should it be assigned a distinct *Associated ID* for each PFL?

Question 4:

RAN2 observes that an *Associated ID* is configured "per-Cell". However, NR DL-PRS Assistance Data support also PRS-only Transmission Points (TPs), which are not associated to any specific cell (i.e., have no NCGI). Can an *Associated ID* also implicitly indicate the location coordinates of such PRS-only TPs?

2. Actions

**To RAN1:**

RAN2 respectfully asks RAN1 to provide answers to the above questions.

3. Date of Next TSG-RAN2 Meetings

TSG RAN WG2 Meeting #131bis October 13 – 17, 2025 Prague, CZ

TSG RAN WG2 Meeting #132 November 17 – 21, 2025 Dallas, US