**3GPP TSG-RAN WG4 Meeting #104-e R4-2214362**

**Electronic Meeting, Aug 15 – Aug 26, 2022**

**Title:** LS on CRS-IM network assistance signalling

**Release:** Rel-17

**Work Item:** NR\_demod\_enh2-Perf

**Source:** RAN WG4

**To:** RAN WG2

**Cc:**

**Contact Person:**

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**Attachments:**

**1. Overall Description:**

In the past RAN4#102-e and RAN4#103-e meetings, RAN4 has agreed the UE capability and network assistant signalling for CRS interference mitigation (CRS-IM), and the corresponding LSs R4-2207238, R4-2210435 were sent to RAN2.

In this RAN4#104-e meeting, the network assistance signalling for CRS interference mitigation (CRS-IM) has been discussed further and following agreements are reached by RAN4:

* From the RAN4 perspective, a new network assistance signalling is agreed to be defined for CRS-IM according to the following
* Optional indication on default network assumption validity, and common across all neighbour cells.
* When the indication is provided and *LTE-NeighCellsCRS-AssistInfoList-r17* is not provided, network either does not know whether default network configuration assumptions (as provided in LSs R4-2207238 and R4-2210435) are applicable or network knows that default network configuration assumptions are not applicable. Based on this, UE may either disable CRS-IM or apply enhanced processing such that at least the performance without applying any interference mitigation is maintained.
* When the indication is provided and *LTE-NeighCellsCRS-AssistInfoList-r17* is also provided, the information provided in *LTE-NeighCellsCRS-AssistInfoList-r17* overrides the default network configuration assumptions.
* When the indication is not provided, the default network configuration assumptions are applicable, and UE is expected to apply CRS-IM based on default network configuration assumptions.
* Regarding the content of Rel-17 network assistance signalling in *LTE-NeighCellsCRS-AssistInfoList-r17*, RAN4 has agreed on following interpretation by the UE:
  + If a single entry of network assistance signalling *LTE-NeighCellsCRS-AssistInfoList-r17* is provided by the network:
    - If an entry without cell ID information is provided, it is applicable to all neighbouring cells.
    - If an entry with cell ID information is provided, it is applicable only to the neighbouring cell with that cell ID.
  + If multiple entries of network assistance signalling *LTE-NeighCellsCRS-AssistInfoList-r17* are provided by the network:
    - Either Cell ID or v-shift information should be provided in each entry. Entry with vshift is not used by the UE if it conflicts with an entry with Cell ID. If both cell ID and v-shift information are not included in any of the entries, UE is not expected to make use of the network assistance signalling provided in that entry.

**2. To RAN WG2 group.**

**ACTION:** RAN4 respectfully request RAN2 to take the above information into account and make changes to the corresponding network assistance signalling for CRS-IM in scenario with overlapping spectrum for LTE and NR.

**3. Date of Next TSG-RAN WG4 Meetings:**

TSG-RAN WG4 Meeting #104-bis-e 10 Oct - 19 Oct 2022 Online

TSG-RAN WG4 Meeting #105 14 Nov - 18 Nov 2022 EU