3GPP TSG-RAN WG2 Meeting #124 R2-2313705

Chicago, USA, Nov. 13th – 17th, 2023

**Title: [DRAFT] Reply LS on network assistant signalling for advanced receivers**

**Response to: R4-2316980**

**Release: Release 18**

**Work Item: NR\_demod\_enh3-Core**

**Source: CATT (to be RAN2)**

**To: RAN4**

**Cc: RAN1**

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**Attachments:** **-**

# 1 Overall description

RAN2 thanks RAN4 for the LS on network assistant signalling for advanced receivers. And the RRC CR capturing the requested assistant information is agreed in R2-2313704.

This RRC CR is implemented with the following assumptions:

**1. On granularity:**

Since the advanced receiver is for the improvement of PDSCH performance, RAN2 assumes the granularity of these network RRC signallings is per BWP as current PDSCH configuration is provided for each BWP.

**2. On independency:**

RAN2 assumes the RRC assistant signalling (for precoding and resource allocation, time domain resource assignment for PDSCH symbols, MCS table and DMRS power boosting configurations) is independent to the RRC signalling of informing the UE the existence of MU-MIMO DCI signalling, which means they can be configured separately. And RAN2 also assumes all these RRC assistant signallings are for advanced receiver, so they can be grouped together within the same IE.

**3. On how to interpret “whether the target UE can assume the scheduling information of co-scheduled UEs is the same as the target UE”:**

RAN2 assumes RAN4 intends for the network to explicitly signal to the UE both cases, i.e., "the UE can assume" and "the UE cannot assume", rather than that it’s only signalled by the network for the case when "the UE can assume".

**Question 1**: RAN2 would like to check with RAN4 whether the assumptions above (from 1 to 3) are feasible.

**4. On DMRS power boosting configurations:**

The DMRS power boosting information is indicated to UE in agreed CR (i.e., following RAN4 LS R4-2316980), despite the following RAN1 agreement:

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| --- | --- |
| **Continuation of discussions triggered by R1-2307902 (rejected) from RAN1#114** **R1-2310120         Clarify number of CDM groups without data for DMRS              Qualcomm Incorporated**ConclusionThe following specification in TS 38.214 is interpreted as the UE may assume that “CDM groups without data” are not used for data transmission for any co-scheduled user in the same serving cell.

|  |
| --- |
| When receiving PDSCH scheduled by DCI format 1\_1, the UE shall assume that the CDM groups indicated in the configured index from Tables 7.3.1.2.2-1, 7.3.1.2.2-2, 7.3.1.2.2-3, 7.3.1.2.2-4 of [5, TS. 38.212] contain potential co-scheduled downlink DM-RS and are not used for data transmission, where "1", "2" and "3" for the number of DM-RS CDM group(s) in Tables 7.3.1.2.2-1, 7.3.1.2.2-2, 7.3.1.2.2-3, 7.3.1.2.2-4 of [5, TS. 38.212] correspond to CDM group 0, {0,1}, {0,1,2}, respectively. |

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**Question 2**: But RAN2 would like to check with RAN4 whether the DMRS power boosting information for advanced receiver is still needed.

Further update to RRC spec can be made if RAN4 provides corresponding/additional clarifications.

# 2 Actions

**To RAN4**

**ACTION:** RAN2 respectfully asks RAN4 to take the above information into account and provide feedback if necessary.

# 3 Dates of next TSG-RAN WG4 meetings

3GPP TSG RAN WG2#125 26 February - 1 March 2024 Athens, Greece

3GPP TSG RAN WG2#125bis 15 April - 19 April 2024 China (TBC), CN