3GPP TSG RAN WG 2 Meeting #121bis electronic TDoc R2-23yyyyy

17th - 26th April, 2023

**Title: [Draft] Reply LS on** **PDCCH ordered RACH for LTM**

**Response to: LS R2-2302412/R1-2302194 on L1 measurement RS configuration and PDCCH ordered RACH for LTM from RAN1**

**Release: Release 18**

**Work Item: NR\_mob\_enh2-Core**

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

**To: RAN1, RAN3**

**Cc: RAN4**

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

**Attachments:**

# 1 Overall description

RAN2 thanks RAN1 for their LS on L1 measurement RS configuration and PDCCH ordered RACH for LTM.

Based on the discussion in RAN2, RAN2 would like to provide the following feedback for RAN1’s question on PDCCH ordered RACH:

*RAN 1 respectfully asks RAN2 and RAN3 to check the feasibility and potential impact on specs of RAN2 and RAN 3 of all options, i.e. with RAR (from serving or candidate cell) and without RAR, in the agreement described in section B.*

1. From RAN2 perspective, the following options are feasible:
* PDCCH ordered-RACH without RAR
* PDCCH ordered-RACH with RAR and the RAR is received from the serving cell
1. For early TA acquisition, RAN2 achieves the following agreements in RAN2#121bis-e meeting.
* From RAN2 perspective, to enable shared preamble resource among multiple UEs, it is beneficial that the information that identifies the allocated CFRA resource (i.e., SS/PBCH index, RACH occasion, and Random Access Preamble index) can be indicated in the PDCCH order (as legacy intra-cell PDCCH order).
* RRC RACH configuration for early TA acquisition (e.g., including whether RAR needs to be received) is specific per target cell and is signalled separately (separate IEs) from the candidate cell configuration (the part that need to be applied at cell switch).
* R2 assumes that Early TA RACH option 3 (with RAR from candidate cell) is not needed in Rel-18.

# 2 Actions

**To RAN1 and RAN3 groups**

**ACTION:** RAN2 kindly asks RAN1 and RAN3 to take the above feedback into consideration.

# 3 Dates of next TSG RAN WG 2 meetings

TSG RAN WG2 Meeting #122 22 – 26 May 2023 Incheon, KR

TSG RAN WG2 Meeting #123 21 – 25 August 2023 Toulouse, FR