3GPP TSG RAN WG 4 Meeting #109 R4-232xxxx

Chicago, USA, 13 Nov. 2023 – 17 Nov. 2023

**Title:** Reply LS on L1 measurements for LTM

**Response to:** R2-2311333

**Release:** Rel-18

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

**Source:** RAN4

**To:** RAN2

**Cc:** RAN1

**Contact person:** Venkatarao Gonuguntla

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

**Attachments:** NA

# 1 Overall description

RAN4 would like to thank RAN2 for the LS R2-2311333. RAN4 discussed whether SMTC needs to be conveyed in RS configuration or not and made following agreements.

RAN4 agreed to define requirements only for known cell measurements in Rel-18 and the relevant agreements are given below.

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| --- |
| * + *UE is not required to perform L1 measurements on unknown cell.*   *Known cell definition:*   * + *In L1-RSRP measurement for neighbour cell, target cell is considered as known if the following conditions are met in this requirement:*     - *The UE has performed L3 measurement on the target cell, and*       * *FFS whether to add time constraint e.g., during the last [5] seconds*     - *The SSB from the target cell configured for L1 measurement**remains detectable according to the cell identification requirements specified in clause 9.2 and 9.3.*   + *Otherwise, it is unknown* |

Based on the above agreement, UE needs at least L3 measurement object for the LTM target cell, which already includes SMTC. If the UE is not provided with the L3 measurement object, LTM RRM requirements are not applied in Rel-18. It is RAN4 understanding that LTM UE needs SMTC information of the target cell, but there is, in RAN4, no agreed set of parameters and configurations to make the requirement applicable when L3 measurement object for the LTM cell is not configured.

~~when the L1 measurements are performed, UE has already performed L3 measurement and know the SMTC of the cell. Since RAN4 assumes same SMTC for L1 and L3 measurement, RS configuration does not need to contain SMTC as UE can obtain it from the L3 MO.~~

~~RAN4 is not defining requirements for unknown cell (i.e., UE has not performed the L3 measurement or NW do not configure the L3 MO) in Rel-18. If RAN2 considers configuring LTM candidates without L3 MO is valid configuration, it is up to RAN2 to include SMTC in LTM RS configuration or not.~~

# 2 Actions

**To RAN2**

**ACTION:** RAN4 respectfully asks RAN2 to take the above into their work

# 3 Dates of next TSG RAN WG 4 meetings

TSG RAN WG4 meeting #110 26 Feb. 2023 to 01 Mar. 2023 Athens, Greece

TSG RAN WG4 meeting #111 15 Apr. 2023 to 19 Apr. 2023 TBA, China