3GPP TSG RAN WG2 Meeting #127bis R2-2409377

Hefei, China, 14th - 18th October, 2024

**Title:** **LS on the fast RRC processing for LTM**

**Response to:**

**Release: Rel-18**

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

**Source: RAN2**

**To: RAN4**

**Cc:**

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

# 1 Overall description

According to the RAN4 feature list, two components are included in the LTM fast RRC processing capability ltm-FastProcessingConfig-r18:

* *maxNumberStoredConfigCells*, indicates the maximum number of serving cell(s) and candidate cell(s), including serving SpCell(s), serving SCell(s) in MCG and SCG, SpCell in LTM candidate configurations and Scell(s) in LTM candidate configurations for MCG and SCG, that UE can store the configurations.
* *maxNumberConfigs-r18*, represents the maximum number of LTM candidate configuration for which the UE can perform early ASN.1 decoding and validity check, as described in TS 38.133.

During the discussion, RAN2 have reached a consensus that the number of LTM candidate configurations and the number of serving cell(s) + SpCell/SCell(s) in LTM candidate configurations may exceed the UE capability.

Currently, only the number of LTM candidate configurations is visible in *LTM-config*, while the number of SpCell/SCell(s) in LTM candidate configurations is not visible until the UE decodes LTM candidate configurations. RAN2 is discussing whether to explicitly indicate the number of SpCell/SCell(s) of the LTM candidate configuration.

RAN2 would like to know if the UE needs to know the number of SpCell/SCell(s) in LTM candidate configurations in advance to determine whether is capable to perform LTM fast RRC processing (i.e., early ASN.1 decoding and validity check) of LTM candidate configurations indicated in *maxNumberConfigs* or not.

Specifically, there are two options in RAN2:

* Option 1: Only the number of LTM candidate configurations in *LTM-config* needs to be explicitly indicated to the UE. In this option, the UE needs to ASN.1 decode LTM candidate configurations to find out the number of SpCell/SCell(s) in LTM candidate configurations, in order to determine whether to perform fast RRC processing or not. If the UE finds the number of serving cell(s) + SpCell/SCell(s) in LTM candidate configurations exceeds the UE capability after ASN.1 decoding of LTM candidate configurations, it is up to the UE implementation to drop the ASN.1 decoded LTM candidate configurations.
* Option 2: In addition to the information provided in Option 1, RAN2 would also like to know whether to explicitly indicate the number of SpCell/SCell(s) in each LTM candidate configurations to UE in advance. In this option, the UE does not need to ASN.1 decode LTM candidate configurations to determine whether to perform fast RRC processing or not.

RAN2 understands that both options are workable but would like to know which option is preferred from RAN4 perspective.

# 2 Actions

**To RAN4**

**ACTION:** RAN2 kindly asks RAN4 to discuss the above question and provide the answer.

# 3 Dates of next TSG RAN WG 2 meetings

TSG RAN WG2 Meeting #128 18 – 22 November 2024 Orlando, USA

TSG RAN WG2 Meeting #129 17 – 21 February 2025 Athens, Greece