3GPP TSG-RAN WG2 #121 R2-23xxxxx

Athens, Greece, 27th February – 3rd March 2023

**Agenda item: 6.7**

**Source: Ericsson**

**Title:** **[AT121][403][POS] Network control for MG activation/deactivation UL MAC CE**

**Document for: Discussion and Agreement**

# 1 Introduction

This document is to kick off the following email discussion:

* [AT121][403][POS] Network control for MG activation/deactivation UL MAC CE (Ericsson)

Scope: Discuss the proposals in R2-2301303, R2-2301829, and R2-2301828 and conclude on the expected behaviour.

Intended outcome: Report and agreeable CR if necessary

Deadline: Wednesday 2023-03-01 1900 EET

# 2 Contact Information

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| --- | --- |
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# 3 Discussions

## 3.1 Motivation of CRs

* The feature UL MAC CE is optional for gNB
* UL MAC CE is implemented fully but not partially (i.e NW if implements would implement both the decoding and necessary action to act on the MAC CE)
* The MAC subheader associated with the content generated by MAC layer does not have an L field as opposed to data generated by upper layers which are indicated with the L field. Hence, there is a risk of packet discard when UE sends content which NW does not understand.

Do company agree to the RRC CR as provided in the RRC CR in R2-2301304 to provide the configuration for UL MAC CE?

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| --- | --- | --- |
| Company | Yes/No | Comments |
| CATT | Yes |  |
| ZTE | No | As clearly stated at the session, there are 3 options on the table:   1. assume the network always supports it, (2) assume the network can decode the MAC PDU anyway, (3) the network may be unable to decode the MAC PDU and an RRC indication is needed.   We suggest to go with (1) to avoid any misunderstanding and NBC change |
| Samsung | Yes | We think this is rather curing the broken principle not NBC case. |
| vivo | No | NBC concern is not addressed. If the UE is implemented according to the CR while the network is not, the UE can never send the UL MAC CE to request the pre-MG.  If the gNB already spends a lot of effort to support the RRC configuration of pre-MG, it should be able to decode the UL MAC CE with less effort. |
| Lenovo | Yes with comment | In general, we don’t mandate the NW to support a certain functionality. So, if UL MAC CE is optional for the NW then it’s good for the UE to know whether it can send UL MAC CE or not. This would also avoid any interoperability issues. Some minor comments to the CR:   * Cover page: “Clauses affected” is empty. * We prefer to change the value of posMG-Request-r17 from “allowed” to “enabled”. |
| Xiaomi | No | If UE supports UL MAC CE for pre-configured MG activation request but gNB doesn’t provide the configuration for UL MAC CE, LMF may not trigger the gNB to activate the preconfigured MG since the LMF assume UE will trigger it, thus the pre-configured MG doesn’t work. |
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Do company agree to the MAC CR as provided in R2-2301828?

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| Company | Yes/No | Comments |
| CATT | Yes with comments | #1.  TS 38.331 CRxx is missed  TS 37.355 CR  #2.  If the UE is configured with pre-configured measurement gap and the parameter *posMG-Request* in TS 38.331[5] is indicated as” allowed” |
| ZTE | No | Same as Q1 |
| Samsung | Yes with comments | As indicated by CATT, the sentence should be modified. |
| vivo | No |  |
| Lenovo | Yes | CATT’s suggestion looks ok but instead of “allowed” we prefer saying “enabled”. |
| Xiaomi | No |  |
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LPP

Motivation for LPP CR is to align with RRC signaling of UE capability for this feature where it is optional for UE to support UL MAC CE. But in LPP capability it says AND

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| ***mg-ActivationRequest***  This field, if present, indicates that the target device supports low latency measurement gap activation request for DL-PRS measurements. The UE can include this field only if the UE supports *mg-ActivationRequestPRS-Meas* **and** *mg-ActivationCommPRS-Meas* defined in TS 38.331 [35]. |

Do company agree to the LPP CR as provided in R2-2301829?

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| --- | --- | --- |
| Company | Yes/No | Comments |
| CATT | Yes with comments | #1. Update the cover sheet below  Other specs X Other core specifications TS/TR ... CR ... |
| Qualcomm | No | The current LPP text is in agreement with RAN1 feature list in R1-2212895 for FG 27-10a.  A location server needs to know whether the target device supports the "Low latency MG activation request". If the target device does not support the "MG activation request", an LMF may have to activate pre-configured MGs.  The CR changes the "MG activation request" capability into a "MG pre-configuration" capability. It is then unclear how the location server should know whether the target device supports the "MG activation request".  If the motivation for the LPP CR is to align with RRC signaling of UE capability for this feature, then a new capability for pre-configured MGs needs to be added and the pre-requisites in LPP capability removed. |
| ZTE | No | Separate UE capability needs to be known by LMF, i,e. LMF needs to know whether UE supports the UL MAC CE or not, then LMF can decide to trigger LMF initiated MG request. We agree with QC that the current text is inline with R1’s feature list. No change is needed |
| Samsung | See the comments. | Motivation seems ok to us. However, as QC commented, the change seems to remove the existing functional capability. Then, it is better to make a new signaling to capture what is wanted. |
| vivo | Yes, see the comments | The Note associated with the capability indicates that it’s up to RAN2 to decide the dependency.  Note: RAN1 understands that FG 27-10a is intended only for the LMF to know, and that the current prerequisite FGs of FG 27-10a are capabilities only for the gNB to know. It is up to RAN2 to decide whether such a FG dependency is meaningful from signaling description perspective, and whether and how it can be captured in RAN2 specifications.  If the UE only supports *mg-ActivationCommPRS-Meas, i.e., does not support mg-ActivationRequestPRS-Meas,* the UE still needs to indicate it to the LMF, otherwise, the LMF will not trigger the configuration of pre-MG.  Another option is to add a separate capability to align with the RRC capability.  LS to RAN1 to confirm if any option is agreed |
| Lenovo | See comment | We think it’s better to introduce a separate capability. |
| Xiaomi | See comment | Current UE capability is correct and a new UE capability is needed. |
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