**3GPP TSG RAN WG2 Meeting #127bis R2-24xxxxx**

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

**Agenda Item: 7.4.3**

**Source: Huawei, HiSilicon**

**Title: [AT127b][108][MOB] (Huawei)**

**Document for: Discussion and Decision**

# 1 Introduction

This document is a summary of

* [AT127b][108][MOB] (Huawei)

**Scope:** 1) To discuss and capture R2-2409138, R2-2408297, R2-2408784, and 1st change in R2-2408755 in MAC CR rapporteur’s miscellaneous CR. 2) To discuss 2nd change in R2-2408755 and R2-2408817.

**Intended outcome:** 1) MAC CR in R2-2409361 to be in principle agreed. Email approval. 2) Discussion summary in R2-2409362. Comeback in Thursday CB session

**Deadline:** 1)Thursday 10:00am, 2) Thursday CB session

# 2 Discussion

Companies providing comments are invited to indicate the name and email address of the delegate:

|  |  |  |
| --- | --- | --- |
| Company | Name | Email |
| Huawei, HiSilicon | David Lecompte | david.lecompte@huawei.com |
| Ericsson | Antonino Orsino | antonino.orsino@gmail.com |
| MediaTek | Xiaonan Zhang | xiaonan.zhang@mediatek.com |

A revision of the following CR is provided:

|  |  |  |
| --- | --- | --- |
| R2-2409138 | Miscellaneous corrections for LTM | Huawei, HiSilicon |

Companies are invited to check the revision and can provide comments in the draft CR or below:

|  |  |
| --- | --- |
| Company | Comments |
| Ericsson | The changes look fine for us |
|  |  |

There were additional proposals not captured:

R2-2408755 and R2-2408817 propose to initiate RA explicitly when RACH-less LTM cell switch is not initiated in 19.35 upon reception of the LTM cell switch MAC CE.

|  |  |  |
| --- | --- | --- |
| Company | Change needed? | Comments |
| Huawei, HiSilicon | No | For the SCG case, the RA is already initiated in TS 38.331 clause 5.3.5.3.  For the MCG case, the RA is initiated in TS 38.321 clause 5.4.4 because a SR is pending for the RRCReconfigurationComplete to be transmitted on SRB1. |
| Ericsson | Yes | We think the change is needed.  When the TA is not available, even if the RRCReconfigurationComplete message is pending the SR will not be triggered because in legacy procedure the UE triggers the random access and there receives a grant which is big enough to send the complete message.  Also, in section of 5.4.4 of 38.321 we have the following:  As long as at least one SR is pending, the MAC entity shall for each pending SR:  1> if the MAC entity has no valid PUCCH resource configured for the pending SR; and  1> if there is no ongoing RACH-less LTM cell switch; and  1> if rach-LessHO is not configured:  2> initiate a Random Access procedure (see clause 5.1) on the SpCell and cancel the pending SR.  The problem with this text is that it works only if the SR is already pending at the time this procedure is executed, which is not the case for LTM. This text works only when DG is used as the UE may triggered the BSR, which will trigger the SR. |
| MediaTek | No | We tend to agree with Rapporteur’s observation |

R2-2408784 proposes

1) to add *ssb-PerRACH-Occasion* in 5.1.1 to the list of parameters for the Random Access procedures, and capture that this is "the number of SSBs mapped to each PRACH occasion for the Random Access procedure initiated by the PDCCH order for an LTM candidate cell". The motivation is that "Currently in the random access procedure initialization, the UE initializes *ssb-perRACH-OccasionAndCB-PreamblesPerSSB* for 4-step RA type. However, for the Random Access procedure initiated by the PDCCH order for an LTM candidate cell, *ssb-PerRACH-Occasion* in *EarlyUL-SyncConfig* should be used instead of *ssb-perRACH-OccasionAndCB-PreamblesPerSSB*."

|  |  |  |
| --- | --- | --- |
| Company | Change needed? | Comments |
| Huawei, HiSilicon | No | 5.1.1 also applies to reconfiguration with sync and there is a field that has this name in *rach-ConfigDedicated*, also not listed in 38.321, so the proposed text may be confusing.  The change to add "for early UE synchronization" should make it clear that the field to use is in EarlyUL\_SyncConfig. |
| Ericsson | No | Agree with Huawei |
| MediaTek | No strong view |  |

2) to change "preamble initial transmission" to " a Random Access Preamble for the first time for the LTM candidate cell" and "the same Random Access Preamble as the last Random Access Preamble transmission". The motivation is that in 38.212, there is no such description matching with current text in 38.321.

|  |  |  |
| --- | --- | --- |
| Company | Change needed? | Comments |
| Huawei, HiSilicon | No | 38.212 describes a field called "PRACH association indicator" as "This field indicates initial transmission or retransmission of PRACH", which seems more aligned with the existing than with the proposed description. |
| Ericsson | No | Agree with Huawei |
| MediaTek | No |  |

R2-2408817 proposes, in the reception of the LTM cell switch command MAC CE:

1) to add a condition that "Timing Advance Command value (hexa-decimal) is set as FFF" for the UE to apply the TA autonomously acquired by the UE

|  |  |  |
| --- | --- | --- |
| Company | Change needed? | Comments |
| Huawei, HiSilicon | No | When the UE is configured with UE-based Timing Advance measurement and has acquired the TA, the proposal requires the UE to perform RA if the network sends a value that is not FFF for the TA command. RAN2 already discussed a proposal to allow the network to trigger RA in this case and that proposal was not agreed, so the TP contradicts with the previous RAN2 agreement. |
| Ericsson | Yes | In RAN2 we made the following agreement:   * Procedure assumptions: At LTM cell switch: UE uses TA from the network if it is provided (target TA or TA=0 or TA=same as src). If not provided and the UE is configured for UE based TA, then UE based TA is used. If the UE does not have/cannot derive the TA for target, the cell switch uses RACH. (FFS if more details need to be considered).   Our proposal capture the case on when the TA value in the MAC CE is set to FFF and the UE, even configured with UE-based TA, is not able to estimate any TA. |
| MediaTek | No | It seems not needed because the 2> is “else if”. So the condition of 1> is already excluded. |

3 Conclusion

4 References

1. R2-2408297 MAC corrections for LTM, Samsung Electronics Co., Ltd
2. R2-2408755 Clarification to 38.321 on LTM Cell Switch UP Aspect, ZTE Corporation
3. R2-2408784 Clarification on random access procedure initialization for early UL synchronization, Google
4. R2-2408817 MAC corrections for feMob, Ericsson
5. R2-2409138 Miscellaneous corrections for LTM, Huawei, HiSilicon