3GPP TSG-RAN WG2 Meeting #131bis R2-250xxxx
Prague, Czech Republic, October 13th – 17th, 2025

Agenda Item: 11.1

Source: Session Chair (Ericsson)

Title: Report from session on R18 and R19 Mobility

Document for: Approval

Time Schedule
Please refer to the latest schedule in the RAN2 inbox on the public 3GPP servers.

## List and Status of Offline/Email Discussions

**POST Email discussion:**

* [Post131bis][109][MOB] MAC corrections (vivo)

 **Scope:** Capture agreements from the meeting and update issues list.

 **Intended outcome:** Agreeable in principle CR in R2-2507728.

 **Deadline:** Short.

* [Post131bis][110][MOB] RRC corrections (Ericsson)

 **Scope:** Capture agreements from the meeting and update RILs list.

 **Intended outcome:** Agreeable in principle CR in R2-2507729 and update of RILs list in R2-2507730 (RIL Comments file) and R2-2507881 (Excel sheet).

 **Deadline:** Short.

**AT Email discussion:**

* [AT131bis][101][MOB] LS to RAN3 of L2 reset (Ericsson)

 **Scope:** Discuss working of the reply LS to send to RAN3 about L2 reset.

 **Intended outcome:** Agreeable LS in R2-2507711.

 **Deadline:** CB on Wednesday.

* [AT131bis][105][MOB] Capabilities (CATT)

 **Scope:** Discuss open issues in R2-2506816, RIL V400, and P2 and P3 of R2-2507550.

 **Intended outcome:** Discussion summary in R2-2507720 and CRs (if possible) in R2-2507721 (331) and R2-2507722.

 **Deadline:** CB onThursday.

* [AT131bis][108][MOB] MAC corrections (vivo)

 **Scope:** Discuss MAC-V03, MAC-O02, MAC-S02, MAC-H03, MAC-H04 (II Part), MAC-O01, MAC-O03, MAC-M01, MAC-K02. If there is time, other issues also can be included but only if there is good support.

 **Intended outcome:** Report in R2-2507726.

 **Deadline:** Offline on Tuesday Oct 14th (10:00-11:00, main room).

## Approved outgoing LSs

R2-2507727 Reply LS on the handling of inter-DU L2 reset for LTM LSout To: RAN3 Rel-18 NR\_Mob\_enh2-Core

# 7 NR Rel-18

#### 7.0.2.22 Further NR mobility enhancements

(NR\_Mob\_enh2-Core; leading WG: RAN2; REL-18; WID:RP-233970)

R2-2506726 LS on the handling of inter-DU L2 reset for LTM (R3-255907; contact: Ericsson) RAN3 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2

R2-2507400 Handling of inter-DU L2 reset for LTM Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

R2-2507386 On inter-DU Layer 2 Reset in LTM Nokia discussion Rel-18 NR\_Mob\_enh2-Core

Discussion

- ZTE shares same view with Nokia that L2 reset is always done for inter-DU

- Ericsson thinks that network control this and if there are network implementations which can support this we should not restrict it.

- Xiaomi thinks that RAN3 should decide it

- Huawei thinks we do not need to prevent network implementation, but we are not asking RAN3 to do any new signalling

- Nokia still thinks some work needs to be done in RAN3

- CATT thinks network implementation can do this but without any RAN3 impact.

- Samsung shares Nokia’s view

* RAN2 understanding is that in case of inter-DU L2 reset is always done
* [AT131bis][101][MOB] LS to RAN3 of L2 reset (Ericsson)

 **Scope:** Discuss working of the reply LS to send to RAN3 about L2 reset.

 **Intended outcome:** Agreeable LS in R2-2507711.

 **Deadline:** CB on Wednesday.

R2-2507711 Draft Reply LS to RAN3 on L2 reset Ericsson

* The LS is approved in R2-2507727

R2-2507727 Reply LS to RAN3 on L2 reset Ericsson

R2-2507616 Correction on the execution of SCG LTM CATT CR Rel-18 38.331 18.7.0 5554 - F NR\_Mob\_enh2-Core

R2-2507630 Correction on the execution of SCG LTM CATT CR Rel-19 38.331 19.0.0 5558 - A NR\_Mob\_enh2-Core

Discussion

- Huawei think change is okay but CR coverpage needs some work

- Xiaomi supports the change

* For Rel-19 CR change to be added in section about SCG
* CR coverpage should clarify better the consequence if not approved

R2-2507712 Correction on the execution of SCG LTM CATT CR Rel-18 38.331 18.7.0 5554 1 F NR\_Mob\_enh2-Core

R2-2507713 Correction on the execution of SCG LTM CATT CR Rel-19 38.331 19.0.0 5558 1 A NR\_Mob\_enh2-Core

* The CRs are in principle agreed

R2-2507026 Correction on stop of cg-RRC-RetransmissionTimer upon configuredGrantTimer expiration vivo CR Rel-18 38.321 18.7.0 2124 - F NR\_Mob\_enh2-Core

R2-2507027 Correction on stop of cg-RRC-RetransmissionTimer upon configuredGrantTimer expiration vivo CR Rel-19 38.321 19.0.0 2125 - A NR\_Mob\_enh2-Core

Discussion

- Ericsson thinks this current text is not a problem and that that field is used also for other cases

- CATT thinks this is not correct

- Huawei wonders what is the effect of the change

- Nokia agree with Huawei and Ericsson that change is not needed

* CR is not pursued

R2-2507220 Corrections on validation of reported idle/inactive and reselection measurements Samsung CR Rel-18 38.331 18.7.0 5519 - F NR\_Mob\_enh2-Core

Discussion

- Samsung clarify that EMR is applicable to both NR and LTE

- Huawei points that tab are not used in ASN.1 but rather spaces.

* Style in ASN.1 should be fixed and coverpage has a sentence which is not completed

R2-2507714 Corrections on validation of reported idle/inactive and reselection measurements Samsung CR Rel-18 38.331 18.7.0 5519 1 F NR\_Mob\_enh2-Core

R2-2507715 Corrections on validation of reported idle/inactive and reselection measurements Samsung CR Rel-19 38.331 19.0.0 XXXX - A NR\_Mob\_enh2-Core

* The CRs are agreed in principle.

R2-2507381 Corrections on Rel-18 UE capabilities for LTM Huawei, HiSilicon CR Rel-18 38.306 18.7.0 1363 - F NR\_Mob\_enh2

R2-2507382 Corrections on Rel-18 UE capabilities for LTM Huawei, HiSilicon CR Rel-19 38.306 19.0.0 1364 - A NR\_Mob\_enh2

Discussion

- MTK is fine with the CR but example in the CR coverpage is wrong

- Nokia is okay with most of changes but ltm-MAC-CE-JointTCI-r18 implies that “joint” TCI are only used for the serving cell and this is not correct

R2-2507716 Corrections on Rel-18 UE capabilities for LTM Huawei, HiSilicon CR Rel-18 38.306 18.7.0 1363 1 F NR\_Mob\_enh2

R2-2507717 Corrections on Rel-18 UE capabilities for LTM Huawei, HiSilicon CR Rel-19 38.306 19.0.0 1364 1 A NR\_Mob\_enh2

* The CRs are in principle agreed

R2-2507526 Miscellaneous corrections on mobility enhancements ZTE Corporation, Sanechips CR Rel-18 38.331 18.7.0 5540 - F NR\_Mob\_enh2-Core

R2-2507527 Miscellaneous corrections on mobility enhancements ZTE Corporation, Sanechips CR Rel-19 38.331 19.0.0 5541 - A NR\_Mob\_enh2-Core

Discussion

- Nokia thinks that change to procedural text is fine but maybe change in field desciptions are not needed

- Huawei is okay to add field descriptions but most of time are not needed.

* Changes related to LTM+Sidelink, LTM+MBS, and LTM+QoE are removed from the CR.
* CRs are agreed in principle unseen in R2-2507718 (R18) and R2-2507719 (R19)

*Withdrawn*

R2-2506812 Correction on the execution of SCG LTM CATT CR Rel-18 38.331 18.6.0 5490 - F NR\_Mob\_enh2-Core Withdrawn

R2-2506813 Correction on the execution of SCG LTM CATT CR Rel-19 38.331 18.6.0 5491 - A NR\_Mob\_enh2-Core Withdrawn

# 8 NR Rel-19

## 8.6 Mobility Enhancement Ph4

(NR\_Mob\_Ph4-Core; leading WG: RAN2; REL-19; WID: [RP-252111](https://www.3gpp.org/ftp/tsg_ran/TSG_RAN/TSGR_109/Docs/RP-252111.zip))

Time budget: 0 TU

Tdoc Limitation: 2 tdocs

### 8.6.1 Organizational

Incoming LS, CR rapporteurs’ inputs, etc.

R2-2506740 LS on definition of CSI-RS based L1 intra/inter-frequency measurement (R4-2512334; contact: Apple) RAN4 LS in Rel-19 NR\_Mob\_Ph4-Core To:RAN2 Cc:RAN1

* Noted

R2-2506816 Report of [POST131][115][MOB] Open issues on UE capability (CATT) CATT discussion Rel-19 NR\_Mob\_Ph4-Core

* [AT131bis][105][MOB] Capabilities (CATT)

 **Scope:** Discuss open issues in R2-2506816, RIL V400, and P2 and P3 of R2-2507550.

 **Intended outcome:** Discussion summary in R2-2507720 and CRs (if possible) in R2-2507721 (331) and R2-2507722.

 **Deadline:** CB onThursday.

R2-2507720 Summary of Capability offliine CATT

Proposal 1: (Ericsson-1)For cltm-ExecutionConditionL1-r19, UE supporting this feature shall also indicate support of intraFreqL1-MeasConfig-r18 for at least one band combination.

Proposal 2: (Samsung-1) A separate UE capability is introduced for MCG LTM with the SCG change or SCG addition.

Proposal 3: (Samsung-2)Leave it to RAN4 on whether to define a new UE capability for the supported maximum number of LTM Event configurations.

Proposal 4: [V400] NO separate indicator to enable Rel19 MCG LTM recovery is introduced in the RRC specification, i.e., we reuse the existing attemptLTM-Switch IE.

* All above proposals are agreed

R2-2507721 CR 38.331 on Capabilities CATT

R2-2507722 CR 38.306 on Capabilities CATT

* The CRs are endorsed to be merged in capability Rapporteur’s CR

R2-2507170 38.300 open issue list for R19 mobility Apple discussion Rel-19 NR\_Mob\_Ph4-Core

Discussion

- Apple thinks that there is no need for offline

Comeback

- QC would like this to not be for the same cell. NEC, MTK agree.

- ZTE thinks that we can go with what we have agreed in Rel-18.

* CLTM and CHO can be configured together (no specification changes are required)

R2-2507121 Miscellaneous corrections for stage-2 in Rel-19 Mobility Enhancements Apple Inc CR Rel-19 38.300 19.0.0 1040 - F NR\_Mob\_Ph4-Core

Discussion

- ZTE thinks that changes about security description should also apply to intra-CU case. We can just remove inter-CU.

* Remove the “inter-gNB” from the changes about security
* The CR is agreed in principle unseen in R2-2507723

R2-2507012 Miscellaneous corrections on MAC for Mob Ph4 vivo (Rapporteur) CR Rel-19 38.321 19.0.0 2123 - F NR\_Mob\_Ph4-Core

* Noted. Will be updated in post email discussion.

R2-2507013 List of MAC open issues for R19 mobility vivo discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507014 Discussion on MAC open issues for R19 mobility vivo discussion Rel-19 NR\_Mob\_Ph4-Core

* Tdocs above noted.
* [Post131bis][109][MOB] MAC corrections (vivo)

 **Scope:** Capture agreements from the meeting and update issues list.

 **Intended outcome:** Agreeable in principle CR in R2-2507728.

 **Deadline:** Short.

R2-2507401 Mobility Review file Ericsson report Rel-19 NR\_Mob\_Ph4-Core

R2-2507402 Mobility Comments file Ericsson report Rel-19 NR\_Mob\_Ph4-Core

=> Revised in R2-2507658

R2-2507658 Mobility Comments file Ericsson report Rel-19 NR\_Mob\_Ph4-Core

R2-2507403 Mobility RILs conclusions Ericsson report Rel-19 NR\_Mob\_Ph4-Core

* Tdocs above noted. RILs status will be updated in post email discussion.

R2-2507404 Corrections on RRC for mobility enhancements Phase 4 Ericsson CR Rel-19 38.331 19.0.0 5529 - F NR\_Mob\_Ph4-Core

* Noted. Will be updated in post email discussion.
* [Post131bis][110][MOB] RRC corrections (Ericsson)

 **Scope:** Capture agreements from the meeting and update RILs list.

 **Intended outcome:** Agreeable in principle CR in R2-2507729 and update of RILs list in R2-2507730 (RIL Comments file) and R2-2507881 (Excel sheet).

 **Deadline:** Short.

**Agreements**

- For cltm-ExecutionConditionL1-r19, UE supporting this feature shall also indicate support of intraFreqL1-MeasConfig-r18 for at least one band combination.

- A separate UE capability is introduced for MCG LTM with the SCG change or SCG addition.

- Leave it to RAN4 on whether to define a new UE capability for the supported maximum number of LTM Event configurations.

- No separate indicator to enable Rel19 MCG LTM recovery is introduced in the RRC specification, i.e., we reuse the existing attemptLTM-Switch IE.

- V400 is marked as PropReject.

- CLTM and CHO can be configured together (no specification changes are required)

### 8.6.2 Control plane

Essential RRC corrections (including the issues related to RILs), stage-2, and UE capability corrections. Note stage-2 corrections may be handled with lower priority.

**1. [E005] Handling of radio bearers during LTM cell switch**

R2-2507405 Issue with handling of radio bearers during the LTM cell switch [E005] Ericsson, MediaTek Inc., Samsung, Huawei, HiSilicon, ZTE Corporation, Sanechips discussion Rel-19 NR\_Mob\_Ph4-Core

=> Revised in R2-2507659

R2-2507659 Issue with handling of radio bearers during the LTM cell switch [E005] Ericsson, MediaTek Inc., Samsung, NEC, Huawei, HiSilicon, ZTE Corporation, Sanechips, Nokia discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 1: RAN2 to agree on one of these two solutions to solve the problem with the bearer handling in LTM:

a. Solution 1: It is clarified in the procedural text that, upon the execution of an LTM cell switch procedure, the UE releases all RLC bearers (configurations and bearers itself).

b. Solution 2: A new field is introduced within the LTM candidate configuration (which is set by the candidate cell) which indicates to the UE to release all RLC bearers (configurations and bearers itself).

Discussion

- QC wonder if this changes the handling for the RLC bearers

- CATT think that target needs to anyway read the container to provide a delta

- Huawei explains that handling for radio bearer configuration is different because some fields of the configuration cannot be changed

- MTK clarify that is clear in the spec that change of some parameters of the RLC radio bearer configuration is forbiden

- Apple is fine with solution 1

- MTK is also fine with solution 1

* It is clarified in the procedural text that, upon the execution of an LTM cell switch procedure with security key change, the UE releases all RLC bearers (configurations and bearers itself).
* We capture the agreement in the RRC Rapporteur’s CR
* The RIL E005 is marked as PropAgree

**2. [M202] Handling report configuration for early CSI acquisition**

R2-2506814 [M202] control plane issues for LTM CATT discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 1 [M202]: To support early CSI reporting for subsequent LTM, UE should maintain the ltm-CSI-ReportConfig-r19 for early CSI reporting associated with the LTM candidate.

R2-2506924 [B110] [B111] [M202] Maintenance of CSI resource and CSI report configuration after cell switch Lenovo discussion Rel-19 Late

Proposal 1: UE releases LTM-CSI-ReportConfig IE in LTM-candidate IE e.g., after CSI reporting at the target cell after or during cell switch triggered by LTM.

Discussion

- CATT suggest to configure the IE to setupRelease and let the network to handle what the UE should do

- MTK agree with CATT

- Huawei also agree with CATT

* The field ltm-CSI-ReportConfig-r19 within LTM-Candidate IE is changed to SetupRelease
* We capture the agreement in the RRC Rapporteur’s CR
* The RIL M202 is marked as PropAgree

**3. [H150] Configuration of execution conditions**

R2-2507378 RRC issues for LTM Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core Late

Proposal 1: Use a single field for execution conditions i.e.,

- in LTM-Candidate, remove ltm-ExecutionCondition;

- remove the corresponding procedure text in 5.8.5.18.6;

- in the RRCReconfiguration message contained in ltm-CandidateConfig, allow including ltm-Config but with ltm-ServingCellExecutionCondition as the only present field.

Discussion

- Ericsson clarify that serving conditions are for the case on when serving cell is not a candidate cell

- Huawei clarify that we can only have in one place and UE apply what it receives

- MTK think that Huawei solution is not very clean. Huawei mentions that we can have a UE variable.

- Nokia same view as MTK

R2-2507724 TP for execution conditions for LTM Huawei, HiSilicon

* The TP in R2-2507724 can be taken as baseline in RRC post email discussion.
* The RIL H150 is marked as PropAgree.

**4. [H151] Configuration of L1 event-trigger report & execution condition**

R2-2507378 RRC issues for LTM Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core Late

Proposal 3a: Create a new ToAddModList and ToReleaseList in MAC-CellGroupConfig for LTM L1 event-triggered reports.

Proposal 3b: Create a new ToAddModList and ToReleaseList in MAC-CellGroupConfig for L1 events used for execution conditions.

Discussion

- Nokia understand that this needs also to be part of servingCellConfig of the SpCell

- QC agrees with Nokia

- Samsung agree with Nokia

* We clarify in field description that ltm-CSI-ReportConfig and ltm-CSI-ResourceConfig can only be configured within ServingCellConfig of the SpCell.
* We capture the agreement in the RRC Rapporteur’s CR
* The RIL H151 is marked as PropAgree

**5. [X153][X152] Configuration of L1 event-trigger report & execution condition**

R2-2507434 [X153] [X152] Discussion on RILs X153 and X152 Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 1: Regarding issues pointed out in observation 1 (X153) and observation 2 (X152), following corrections can be considered and the proposed TP in Annex can be agreed:

- Change the bullet number of the procedure for whether to perform RLC re-establishment and PDCP data recovery (AM DRB) based on the Rel-18 ID (i.e., the corresponding L2 reset operation as defined in Rel-18) to the next level bullet of the conditions about Rel-19 ID, rather than the same level bullet.

- Replace the condition “else if the field ltm-NoSecurityChangeID is not configured for the LTM-Candidate IE in ltm-Config or ltm-ConfigNRDC indicated by lower layers and if the UE does not have any value stored of ltm-ServingCellNoSecurityChangeID within VarLTM-ServingCellNoSecurityChangeID; or” with "1> else:".

- Change the procedure for the update of Rel-18 ID of serving cell to the first level bullet (i.e., “1>”).

Discussion

- Huawei thinks the TP is okay but for the first bullet (1>) we need to also check whether there is a value (on top of whether the Rel-19 IDs are different).

- MTK agree with Xiaomi and change proposed by Huawei

* TP in R2-2507434 is agreed to be merged in the RRC Rapporteur’s CR with the change proposed by Huawei (check in first 1> whether there is a value (on top of whether the Rel-19 IDs are different)
* RIL X153 and X152 are marked as PropAgree

**5. [Z155] The missing description for VarLTM-ServingCellNoSecurityChange**

R2-2507528 Discussion on RIL issue [Z155][Z157] ZTE Corporation, Sanechips discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 1a: [Z155] RAN2 to confirm that the NW can configure MCG LTM with NoSecurityChangeID in ltm-Config and SCG LTM with NoSecurityChangeID in ltm-ConfigNRDC simultaneously, for the coexistence of Intra-CU MCG/SCG LTM and Inter-CU SCG/MCG LTM.

Proposal 1b: [Z155] The UE can maintain two independent VarLTM-ServingCellNoSecurityChange, one associated with the ltm-Config and one associated with the ltm-ConfigNRDC, if both are configured.

Discussion

- Nokia understand that security key change at both MCG and SCG is not allowed

- Xiaomi shares the same view as Nokia

- MTK think that ZTE analysis is correct

- Vivo asks whether network is in control of the IDs

* The TP proposed in R2-2507528 is agreed to be merged in the RRC Rapporteur’s CR
* The RIL Z155 is marked as PropAgree

**6. [Z157] Release SCG configuration in case of MCG LTM with SCG configuration**

R2-2507528 Discussion on RIL issue [Z155][Z157] ZTE Corporation, Sanechips discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 2: [Z157] RAN2 to discuss how to handle the release of the current SCG configuration in case of MCG LTM with SCG configuration:

• Option 1: The network does not set mrdc-ReleaseAndAdd for MCG LTM with SCG configuration, and the UE autonomously release the SCG part of the current UE configuration upon LTM cell switch execution, i.e. follow the same actions as LTM cell switch triggered on the SCG (see TP2-1 in the Annex).

• Option 2: The network always sets mrdc-ReleaseAndAdd for MCG LTM with SCG configuration, but the UE shall not release the LTM configuration for the SCG if MR-DC release is triggered due to LTM cell switch execution for MCG LTM with SCG configuration (see TP2-2 in the Annex).

Discussion

- Huawei is okay with Option 2 but TP is not ok. We need to clarify what is released depending on which case.

- MTK slightly prefer Option 1.

R2-2507725 TP on release on current SCG configuration in case of MCG LTM with SCG configuration ZTE Corporation

* The TP in R2-2507725 is endorsed to be merged in the Rapporteur’s RRC CR.
* The RIL Z157 is marked as PropAgree.

**7. [S036] Release SCG configuration in case of MCG LTM with SCG configuration**

R2-2507238 [S036][S037]Discussion on Mobility RILs Samsung discussion Late

Proposal 1: [S036] Update L1-MeasConfigNRDC to include CSI-RS measurement related capabilities.

* We add capability for CSI-RS measurements (and potentially new capabilities coming from RAN1 or RAN4) in INM
* We capture the agreement in the RRC Rapporteur’s CR
* The RIL S036 is marked as PropAgree

**8. [S037] Mandatory LTM information in inter-node RRC message**

R2-2507238 [S036][S037]Discussion on Mobility RILs Samsung discussion Late

Proposal 2: [S037] Absence of LTM configuration and Reference configuration in in CG-Config and CG-ConfigInfo means that the receiver maintains the values informed via the previous message.

Discussion

- ZTE is fine for the reference configuration but for the ltm-Config we can wait in case it should be removed due to RAN3.

* We add ltm-ReferenceConfigurationSCG, ltm-Config, ltm-ReferenceConfigurationMCG in the exeption list in section 11.2.3 of TS 38.331.
* We capture the agreement in the RRC Rapporteur’s CR
* The RIL S037 is marked as PropAgree

**9. [N101] Description of reference configuration**

R2-2507436 Remaining Open Issues for RRC Nokia discussion

Proposal 4: The description of reference configuration is modified to reflect the changes corresponds to Inter-CU SCG LTM. The proposed changes are given in Annexure.A.3

Discussion

- Huawei think that what is apply for what is already clear from the procedural text. We can clarify that it is used to provide a configuration which is used for a set of non-completed LTM candidate configurations.

- Nokia is fine with Huawei proposal

* In the description ReferenceConfig IE it is clarified that this is a configuration which is used for a set of non-completed LTM candidate configurations.
* We capture the agreement in the RRC Rapporteur’s CR
* The RIL N101 is marked as PropAgree

**10. [N102] Field description of ltm-ConfigurationSCG**

R2-2507436 Remaining Open Issues for RRC Nokia discussion

Proposal 5: The restrictions on inclusion of ltm-configurationSCG in RRC-Configuration for certain cases should be moved to the top-level structure LTM-Config-NRDC. TP provided in A.4

Discussion

- MTK agree with the change

- Huawei is also okay with the change

* The restriction which is now in ltm-ConfigurationSCG is moved to field description of ltm-ConfigNRDC.
* We capture the agreement in the RRC Rapporteur’s CR
* The RIL N102 is marked as PropAgree

**Agreements**

- It is clarified in the procedural text that, upon the execution of an LTM cell switch procedure with security key change, the UE releases all RLC bearers (configurations and bearers itself).

- The RIL E005 is marked as PropAgree

- The field ltm-CSI-ReportConfig-r19 within LTM-Candidate IE is changed to SetupRelease.

- The RIL M202 is marked as PropAgree

- The TP in R2-2507724 can be taken as baseline in RRC post email discussion.

- The RIL H150 is marked as PropAgree.

- We clarify in field description that ltm-CSI-ReportConfig and ltm-CSI-ResourceConfig can only be configured within ServingCellConfig of the SpCell.

- We capture the agreement in the RRC Rapporteur’s CR

- The RIL H151 is marked as PropAgree

- TP in R2-2507434 is agreed to be merged in the RRC Rapporteur’s CR with the change proposed by Huawei (check in first 1> whether there is a value (on top of whether the Rel-19 IDs are different)

- RIL X153 and X152 are marked as PropAgree

- The TP proposed in R2-2507528 is agreed to be merged in the RRC Rapporteur’s CR

- The RIL Z155 is marked as PropAgree

- The TP in R2-2507725 is endorsed to be merged in the Rapporteur’s RRC CR.

- The RIL Z157 is marked as PropAgree.

- We add capability for CSI-RS measurements (and potentially new capabilities coming from RAN1 or RAN4) in INM.

- The RIL S036 is marked as PropAgree

- We add ltm-ReferenceConfigurationSCG, ltm-Config, ltm-ReferenceConfigurationMCG in the exeption list in section 11.2.3 of TS 38.331.

- The RIL S037 is marked as PropAgree

- In the description ReferenceConfig IE it is clarified that this is a configuration which is used for a set of non-completed LTM candidate configurations.

- The RIL N101 is marked as PropAgree

- The restriction which is now in ltm-ConfigurationSCG is moved to field description of ltm-ConfigNRDC.

- The RIL N102 is marked as PropAgree

R2-2507093 RRC open issues for R19 mobility OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2506814 [M202] control plane issues for LTM CATT discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2506924 [B110] [B111] [M202] Maintenance of CSI resource and CSI report configuration after cell switch Lenovo discussion Rel-19 Late

R2-2507015 Discussion on RRC open issues for R19 mobility vivo discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507238 [S036][S037]Discussion on Mobility RILs Samsung discussion Late

R2-2507378 RRC issues for LTM Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core Late

R2-2507434 [X153] [X152] Discussion on RILs X153 and X152 Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507436 Remaining Open Issues for RRC Nokia discussion

R2-2507528 Discussion on RIL issue [Z155][Z157] ZTE Corporation, Sanechips discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507550 Remaining CP issues in R19 mobility MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

### 8.6.3 User plane

Essential MAC corrections.

* [AT131bis][108][MOB] MAC corrections (vivo)

 **Scope:** Discuss MAC-V03, MAC-O02, MAC-S02, MAC-H03, MAC-H04 (II Part), MAC-O01, MAC-O03, MAC-M01, MAC-K02. If there is time, other issues also can be included but only if there is good support.

 **Intended outcome:** Report in R2-2507726.

 **Deadline:** Offline on Tuesday Oct 14th (10:00-11:00, main room).

R2-2507726 Summary of MAC corrections vivo

(MAC-V03) If an ltm-CSI-ReportConfig or an ltm-CSI-ResourceConfig associated with that ltm-CSI-ReportConfig is modified or removed, RRC layer should trigger MAC layer to remove the measurement reporting entry, stop the periodical reporting timer, and reset the associated information (e.g. timeToTrigger) for this ltm-CSI-ReportConfigId.

(MAC-O02) The SR resource for (truncated) MR MAC CE has the same priority as the SR resource for BFR MAC CE.

(MAC-O02) If the SR resource for (truncated) MR MAC CE overlaps with SR resource for BFR MAC CE (for an SCell or a BFD-RS set), it’s up to UE implementation which SR resource to be selected. Update the Note in the current MAC specification.

(MAC-S02) Not agree to move beams from the BEAM\_ENTERING\_LIST and BEAM\_LEAVING\_LIST when they are reported in a truncated measurement report. Keep the current MAC spec. as it is.

(MAC-H03) Proponent companies to comment the CR during post-meeting email discussion. Rapporteur will consider them accordingly.

For MAC-H04 (2nd Part), take the below change as the starting point:

 Text in the current CR:

 1> for each ltm-CSI-ReportConfigId included in the LTM-CSI-ReportConfig:

 is changed as:

 1> for each ltm-CSI-ReportConfigId included in the SpCell for L1 measurement and event-triggered report:

(MAC-O01) Agree the TP in R2-2507094.

(MAC-O03) The UE releases the stored TA value and stops the corresponding CLTM TAT if the NW releases the execution condition for the LTM candidate cell.

(MAC-M01) The case that“UE can only perform RACH-based LTM for CLTM recovery”should be captured in the specification.

(MAC-K02) UE will not perform any report for the case: if the UE receives more TAs beyond its capability, UE releases some TA by UE implementation. No spec change is needed.

Discussion

- MTK for M01 the CFRA case should also be valid. Vivo is fine and thinks we can remore the (CBRA)

- Lenovo think that legacy in Rel-18 is only for CBRA. Nokia agree and don’t want to optimize. Samsung explains that in current spec UE will only do CBRA.

* All proposals above are agreed

**1. MAC-V01 RACH based LTM with MIMO 2TA**

R2-2507014 Discussion on MAC open issues for R19 mobility vivo discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 1: [MAC-V01] RAN2 selects from the following three options to address the mismatch issue that the TCI state ID indicated in the LTM Cell Switch Command MAC CE and TA value in the RAR within the RACH-based LTM procedure are associated with different TAGs:

- Option 2: Target DU sends a new TCI state in RACH Msg 4.

- Option 3: If the mismatch issue occurs, UE follows the TCI state associated with the RACH-based LTM procedure. Otherwise, UE follows the indicated TCI state in the LTM cell switch command.

- Option 4: UE selects the SSB associated with the same TAG ID as the TAG ID associated with the indicated TCI state in LTM Cell Switch Command MAC CE during the RACH-based LTM procedure.

R2-2507573 User Plane issues for CLTM and event triggered L1 MR Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 1: (MAC-V01) Rel-18 agreement and solution can be applied to Rel-19 inter-CU LTM, i.e., no spec impact is needed.

Discussion

- LG prefers to have the same as Rel-18

- Xiaomi agree with LG. Oppo agree. Nokia agree.

- Vivo think that in Rel-18 there was no time and maybe now we can solve it. Samsung explains that Rel-18 solution is also fine for Rel-18.

* For the RACH based LTM with MIMO 2TA, Rel-18 agreement and solution can be applied to Rel-19 inter-CU LTM, i.e., no spec impact is needed.
* MAC-V01 is closed

**2. MAC-V02 CFRA resource in LTM Cell Switch Command MAC CE**

R2-2507014 Discussion on MAC open issues for R19 mobility vivo discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 3: [MAC-V02] For inter-CU LTM, a target cell specific CFRA resource pool could be provided by target gNB-DU to source gNB-DU, and the CFRA resource are assigned by S-DU in the LTM cell switch command MAC CE.

R2-2507078 Handling of MAC open issues on C(LTM) Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 2: No need to discuss and specify anything in R19 for MAC-V02.

Discussion

- Ericsson agree is fine with Samsung proposal. LG agree. CATT agrees.

* For MAC-V02 we do not specify any special handling, and we rely on what is already specified in Rel-18.
* MAC-V02 is closed

**3. MAC-V04 TA update of CLTM TAT**

R2-2507014 Discussion on MAC open issues for R19 mobility vivo discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 7: [MAC-V04] Upon receiving an LTM Cell switch Command MAC CE with valid TA, UE shall store the TA value for the target cell and start or restart the CLTM TAT of the target cell.

R2-2507573 User Plane issues for CLTM and event triggered L1 MR Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 5: (MAC-V04) When the UE receives LTM cell switch command including a TA value and this command indicate one LTM candidate cell, the UE does NOT maintain this TA value as a TA value for a candidate cell and does NOT start associated TAT for CLTM.

Discussion

- Xiaomi supports vivo proposal. Nokia, MTK are also fine.

- Oppo support sharp proposal.

- LG things vivo proposal is just an optimization

- ZTE thinks this if we maintain TAT for candidate than UE needs to maintain 2 TATs

- Huawei thinks vivo proposal may create issue if not many TAs are supported

- Samsung has similar view as LG. CATT is also fine

- Ericsson has no strong view but agree with Huawei and the others.

* If network wants the UE to store the TA in the LTM cell switch command for a CLTM candidate cell, the TA MAC CE (for CLTM) can be sent from the target after the LTM cell switch procedure is completed.
* MAC-V04 is closed

**4. MAC-O03 Handling of TA when CLTM candidate is released (TA in LTM CSC MAC CE)**

R2-2507094 MAC open issues for R19 mobility OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 3: Upon release of the CLTM execution condition, the UE stops CLTM TAT if running even if the corresponding LTM candidate configuration is kept.

R2-2507457 Discussion on remaining User Plane issues Ericsson discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 7: (MAC-O03) The UE keeps any TA validity timer for an LTM candidate which has its execution conditions removed.

Discussion

- Samsung supports Oppo proposal.

- Nokia thinks that we don’t need to specify anything. But if we specify something then Oppo proposal is fine.

* Upon release of the CLTM execution condition, the UE stops CLTM TAT if running even if the corresponding LTM candidate configuration is kept.
* MAC-O03 is closed

**5. MAC-V05/MAC-K01/MAC-N01 Handling of TA when CLTM candidate is released (TA in RAR and TA MAC CE)**

R2-2507014 Discussion on MAC open issues for R19 mobility vivo discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 8: [MAC-V05] Upon receiving an (Absolute) Timing Advance Command MAC CE or a RAR, UE shall store the TA value and start or restart the CLTM TAT of the candidate cell(s) that share the same PCI as the serving cell(s) of the TAG.

R2-2507573 User Plane issues for CLTM and event triggered L1 MR Sharp discussion Rel-19 NR\_Mob\_Ph4-Core

Proposal 6. (MAC-V05, MAC-K01, MAC-N01) When the UE receives a TAC MAC CE for a serving cell, UE does NOT store a valid TA value for a CLTM candidate cell and update its CLTM TAT of the source cell for possible RACH-less CLTM back to the source cell.

Discussion

- Samsung think that since the UE releases the TA then this RILs are not an issue anymore.

* For issues MAC-V05/MAC-K01/MAC-N01 we do not any enhancements.
* MAC-V05/MAC-K01/MAC-N01 are closed

**6. MAC-F02 Threshold for beam selection**

R2-2507190 [MAC-F02] Threshold for beam selection Ofinno discussion Rel-19 NR\_Mob\_Ph4

Proposal 1. For beam selection for L3-based RACH-less CLTM based on a configured threshold, RAN2 to agree the configured threshold is one of:

ALT1: Reusing existing Rel-18 threshold (cg-RRC-RSRP-ThresholdSSB), according to TP1 for ALT1;

ALT2: Introduce new Rel-19 threshold (cg-LTM-RSRP-ThresholdSSB), according to TP2 for ALT2.

Discussion

- Samsung prefer to re-use existing threshold. Xiaomi agrees.

* For beam selection for L3-based RACH-less CLTM based on a configured threshold, the existing cg-RRC-RSRP-ThresholdSSB is re-used.
* MAC-F02 is closed

**Agreements**

- (MAC-V03) If an ltm-CSI-ReportConfig or an ltm-CSI-ResourceConfig associated with that ltm-CSI-ReportConfig is modified or removed, RRC layer should trigger MAC layer to remove the measurement reporting entry, stop the periodical reporting timer, and reset the associated information (e.g. timeToTrigger) for this ltm-CSI-ReportConfigId.

- (MAC-O02) The SR resource for (truncated) MR MAC CE has the same priority as the SR resource for BFR MAC CE.

- (MAC-O02) If the SR resource for (truncated) MR MAC CE overlaps with SR resource for BFR MAC CE (for an SCell or a BFD-RS set), it’s up to UE implementation which SR resource to be selected. Update the Note in the current MAC specification.

- (MAC-S02) Not agree to move beams from the BEAM\_ENTERING\_LIST and BEAM\_LEAVING\_LIST when they are reported in a truncated measurement report. Keep the current MAC specification as it is.

- (MAC-H03) This issue will be addressed during the MAC CR post-meeting email discussion.

- For MAC-H04 (2nd Part), take the below change as the starting point:

 Text in the current CR:

 1> for each ltm-CSI-ReportConfigId included in the LTM-CSI-ReportConfig:

 is changed as:

 1> for each ltm-CSI-ReportConfigId included in the SpCell for L1 measurement and event-triggered report:

- (MAC-O01) Agree the TP in R2-2507094.

- (MAC-O03) The UE releases the stored TA value and stops the corresponding CLTM TAT if the NW releases the execution condition for the LTM candidate cell.

- (MAC-M01) The case that“UE can only perform RACH-based LTM for CLTM recovery”should be captured in the specification.

- (MAC-K02) UE will not perform any report for the case: if the UE receives more TAs beyond its capability, UE releases some TA by UE implementation. No spec change is needed.

- For the RACH based LTM with MIMO 2TA, Rel-18 agreement and solution can be applied to Rel-19 inter-CU LTM, i.e., no spec impact is needed.

- MAC-V01 is closed

- For MAC-V02 we do not specify any special handling, and we rely on what is already specified in Rel-18.

- MAC-V02 is closed

- If network wants the UE to store the TA in the LTM cell switch command for a CLTM candidate cell, the TA MAC CE (for CLTM) can be sent from the target after the LTM cell switch procedure is completed.

- MAC-V04 is closed

- Upon release of the CLTM execution condition, the UE stops CLTM TAT if running even if the corresponding LTM candidate configuration is kept.

- MAC-O03 is closed

- For issues MAC-V05/MAC-K01/MAC-N01 we do not any enhancements.

- MAC-V05/MAC-K01/MAC-N01 are closed

- For beam selection for L3-based RACH-less CLTM based on a configured threshold, the existing cg-RRC-RSRP-ThresholdSSB is re-used.

- MAC-F02 is closed

R2-2506815 Discussion on SP CSI-RS and CSI-IM for early CSI acquisition CATT discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507304 Collision between PUSCH for early CSI and measurement gap NEC discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507078 Handling of MAC open issues on C(LTM) Samsung discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507094 MAC open issues for R19 mobility OPPO discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507190 [MAC-F02] Threshold for beam selection Ofinno discussion Rel-19 NR\_Mob\_Ph4

R2-2507379 MAC issues for LTM Huawei, HiSilicon discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507435 Discussion on mobility MAC open issues Xiaomi discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507457 Discussion on remaining User Plane issues Ericsson discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507462 On the open MAC issues for Rel-19 LTM Nokia discussion Rel-19 NR\_Mob\_Ph4

R2-2507485 LTM MAC remaining issues Qualcomm Incorporated discussion

R2-2507529 Discussion on MAC open issues ZTE Corporation, Sanechips discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507537 Discussion on MAC open issues for CLTM ASUSTeK discussion Rel-19 38.321 NR\_Mob\_Ph4-Core

R2-2507551 Remaining MAC issues in R19 mobility MediaTek Inc. discussion Rel-19 NR\_Mob\_Ph4-Core

R2-2507573 User Plane issues for CLTM and event triggered L1 MR Sharp discussion Rel-19 NR\_Mob\_Ph4-Core