3GPP TSG-RAN WG2 Meeting #125 R2-2401545

Athens, Greece, Feb. 26th – Mar. 1st, 2024

Title Report from session on Mobility Enh and Mobile IAB

Source Session Chair (MediaTek Johan)

Agenda 8.5

Brief Report

feMob

- Intention that WI can be considered completed from R2 point of view:   
Cat-B CRs for Obj7 for short post email discussion

- Major effort on Maintenance, all RILs except 2 handled. In addition some tdocs not treated. Status is Good.

mIAB

- All Maintenance points handled, not many docs. Status is Very Stable.

Post meeting email discussions

* [Post125][512][feMob] 38300 (MediaTek)

Scope: Treat and review R2-2400543, R2-2401381, R2-2401061, R2-2400140. Include agreeable parts, include additional impact due to meeting progress (if any).

Intended outcome: Agreed 38300 CR

Deadline: Short

* [Post125][513][feMob] 37340 (ZTE)

Scope: Treat and review R2-2400310, R2-2401140, R2-2401170. Include agreeable parts, include additional impact due to meeting progress (if any).

Intended outcome: Agreed 37340 CR

Deadline: Short

* [Post125][514][feMob] 38331 (Ericsson)

Scope: Review R2-2401382. Include progress of current meeting, treat remaining points needing further discussion (if any). Include agreeable parts.

Intended outcome: Agreed 38331 CR

Deadline: Short

* [Post125][515][feMob] 38321 (Huawei)

Scope: Review R2-2400139. Include progress of current meeting, treat remaining points needing further discussion (if any), Include agreeable parts.

Intended outcome: Agreed 38321 CR

Deadline: Short

* [Post125][516][feMob] UE capabilities (Intel)

Scope: Include progress of current meeting. Treat remaining points needing further discussion. Include agreeable parts. Review resulting TPs.

Intended outcome: Endorsed 38306 and 38331 CR

Deadline: Short (for Merge)

* [Post125][517][feMob] CRs for Obj7 (Nokia)

Scope: Include progress of current meeting. Treat remaining points needing further discussion. Include agreeable parts. Review resulting CRs.

Intended outcome: Agreed RRC Cat-B CR. Agreed or Endorsed-for-merge UE caps 38306 and 38331 Cat-B CRs

Deadline: Short

* [Post125][518][mIAB] 38331 (Ericsson)

Scope: Review R2-2401371, Include progress of current meeting.

Intended outcome: Agreed 38331 CR

Deadline: Short

* [Post125][519][feMob] LS to RAN3 on SCPAC inter node agreements (Ericsson)

Scope: LS to inform R3 about agreements on SCPAC inter node agreements

Intended outcome: Approved LS out

Deadline: Short (not for RP)

AT meeting Offlines (closed)

* [AT125][501][feMob] Offline on Obj7 (Nokia)

Scope: Progress further necessary points, identify agreements, and CB discussion points. Draft CR.

Deadline: CB acc to Meeting schedule

* [AT125][502][feMob] SCPAC execution conditions (CATT)

Scope: progress to arrive at Agreeable TP. Can include clarifications etc also from the non-treated proposals.

Deadline: CB acc to Meeting schedule

* [AT125][503][feMob] TP L2 reset etc (OPPO)

Deadline: CB acc to Meeting schedule

* [AT125][504][feMob] SCPAC inter-node issues (Ericsson)

Scope: Progress and check offline

Deadline: CB acc to Meeting schedule

* [AT125][505][feMob] Reply LS on n-TimingAdvanceOffset for PDCCH order RACH (Huawei)

Deadline: CB acc to Meeting schedule

* [AT125][506][mIAB] Reply LS to R3 (ZTE)

Scope: determine if reply LS is needed, and if so converge on an LS

Deadline: CB acc to Meeting schedule

* [AT125][507][mIAB] Introduction of Mobile TRP location info (Ericsson)

Scope: Introduction of Mobile TRP location info, review offline, determine way forward.

Deadline: CB acc to Meeting schedule

* [AT125][508][mIAB] 306 clarification (QC)

See if anything is agreeable

Deadline: CB acc to Meeting schedule

* [AT125][509][feMob] MAC offline (Huawei)

Scope: Address two offline points above. Address remaining MAC corrections. Identify agreements and discussion points. Can pre-exclude some items better treated on-line. (and can choose to treat simple corrections in CR post meeting disc instead).

Intended outcome: Report, TP or Draft TP, partial or full, when applicable.

Deadline: CB acc to Meeting schedule

* [AT125][510][feMob] LTM RRC issues (Ericsson)

Scope: Address remaining LTM RRC corrections. Identify agreements and discussion points. Can pre-exclude some items better treated on-line. (and can choose to treat simple corrections in CR post meeting disc instead).

Intended outcome: Report, TP or Draft TP, partial or full, if applicable.

Deadline: CB acc to Meeting schedule

* [AT125][511][feMob] Reply LS on MAC CE to activate/deactivate semi-persistent PUCCH report for LTM (Fujitsu)

Intended outcome: Draft Reply LS. Will decide if to send LS or not at CB.

Deadline: CB acc to Meeting schedule

## 7.4 Further NR mobility enhancements

(NR\_Mob\_enh2-Core; leading WG: RAN2; REL-18; WID:RP-223970, Exception Sheet: RP-233969)

Time budget: 2 TU

### 7.4.1 Maintenance

Tdoc Limitation: 5 tdocs

#### 7.4.1.1 Organizational

Including LSs.

LS in

[R2-2400015](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400015.zip) Reply LS on L1 measurements for LTM (R1-2312443; contact: Ericsson) RAN1 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2 Cc:RAN4

* Noted

[R2-2400050](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400050.zip) Reply LS on L1 measurements for LTM (R4-2321388; contact: Ericsson) RAN4 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2 Cc:RAN1

- Ericsson think RAN4 are discussing whether L1 measurements can be done without MO, e.g. MO can be removed.

- MTK hope this can be resolved by Network configuration.

* Noted

[R2-2400029](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400029.zip) LS on MAC CE to activate/deactivate semi-persistent PUCCH report for LTM (R1-2312642; contact: Fujitsu) RAN1 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2

- There are tdocs on this. Will take this into account.

* Noted
* [AT125][511][feMob] Reply LS on MAC CE to activate/deactivate semi-persistent PUCCH report for LTM (Fujitsu)

Intended outcome: Draft Reply LS, taking meeting progress into account. Will decide if to send LS or not at CB.

Deadline: CB acc to Meeting schedule

[R2-2401954](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401954.zip) [Draft] Reply LS on MAC CE to activate/deactivate semi-persistent PUCCH report for LTM Fujitsu LS out

* LS is approved in R2-2401814

[R2-2400051](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400051.zip) LS on n-TimingAdvanceOffset for PDCCH order RACH (R4-2321389; contact: Huawei) RAN4 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2 Cc:RAN1

- HW think that this is already in the RAN2 TS, but think the description may be inconsistent with RAN4, and suggest to send an LS to check.

* Reply LS to check R2 TS description
* [AT125][505][feMob] Reply LS on n-TimingAdvanceOffset for PDCCH order RACH (Huawei)

Deadline: CB acc to Meeting schedule

[R2-2401958](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401958.zip) Reply LS on n-TimingAdvanceOffset for PDCCH order RACH RAN2 LS out

* LS out is Approved

[R2-2400039](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400039.zip) Reply LS on subsequent CPAC (R3-237949; contact: ZTE) RAN3 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2

- ZTE reports that R3 modification is already in the TS. Update in Rapporteur CR.

* Noted

RRC

[R2-2401382](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401382.zip) Miscellaneous corrections on further mobility enhancements in NR Ericsson CR Rel-18 38.331 18.0.0 4606 - F NR\_Mob\_enh2-Core

- will be updated based on discussions, and TPs etc.

* Treated in RRC post meeting email discussion

[R2-2401385](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401385.zip) RILs conclusions for feMob Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

S-CPAC (after first round)

- Ericsson think all proposed RILs are being addressed.

- Samsung think there is one RIL on SRB3. Session Chair: Will be addressed

* Noted

[R2-2401386](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401386.zip) Discussion on RILs conclusion Mobillity Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

* Noted
* [Post125][514][feMob] 38331 (Ericsson)

Scope: Review R2-2401382. Include progress of current meeting, treat remaining points needing further discussion (if any). Include agreeable parts.

Intended outcome: Agreed 38331 CR

Deadline: Short

#### 7.4.1.2 Stage-2 Corrections

Corrections to 38300 and 37340 and stage-2 centric issues (including tdocs on stage-2 centric issue that also impact other TS).

38300

[R2-2400543](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400543.zip) Miscellaneous Corrections to LTM MediaTek Inc., vivo CR Rel-18 38.300 18.0.0 0786 - F NR\_Mob\_enh2-Core

[R2-2401381](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401381.zip) Stage-2 corrections for Rel-18 mobility enhancements Ericsson, Vodafone draftCR Rel-18 38.300 18.0.0 F NR\_Mob\_enh2-Core

[R2-2401061](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401061.zip) TA validity check for UE based TA measurement Fujitsu discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400140](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400140.zip) Discussion on stage-2 corrections for Rel-18 LTM Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

* [Post125][512][feMob] 38300 (MediaTek)

Scope: Treat and review R2-2400543, R2-2401381, R2-2401061, R2-2400140. Include agreeable parts, include additional impact due to meeting progress (if any).

Intended outcome: Agreed 38300 CR

Deadline: Short

37340

[R2-2400310](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400310.zip) Miscellaneous corrections for NR further mobility enhancements in TS 37.340 ZTE Corporation, Sanechips CR Rel-18 37.340 18.0.0 0381 - F NR\_Mob\_enh2-Core

[R2-2401140](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401140.zip) Discussion on S-CPAC and TP for TS 37.340 CMCC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401470](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401470.zip) Stage-2 corrections for SCPAC OPPO discussion Rel-18 NR\_Mob\_enh2-Core Late

* Post meeting email discussion for the 37340 CRs.
* [Post125][513][feMob] 37340 (ZTE)

Scope: Treat and review R2-2400310, R2-2401140, R2-2401170. Include agreeable parts, include additional impact due to meeting progress (if any).

Intended outcome: Agreed 37340 CR

Deadline: Short

Further Enhancements

[R2-2400576](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400576.zip) TA acquisition red open issues Rakuten Mobile, Inc discussion Rel-1

[R2-2400577](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400577.zip) Delayed Resource Reservation for inter gNB-DU LTM Rakuten Mobile, Inc discussion Rel-18

[R2-2400578](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400578.zip) Remaining open issues of L1/L2 Triggered Mobility Rakuten Mobile, Inc discussion Rel-18

#### 7.4.1.3 RRC Corrections

RRC corrections and Control Plane Centric Issues (including tdocs on control plane centric issue that also impact other TS). Including ASN.1 review issues and their resolutions.

##### 7.4.1.3.1 L1L2 Triggered Mobility

* [AT125][510][feMob] LTM RRC issues (Ericsson)

Scope: Address remaining LTM RRC corrections. Identify agreements and discussion points. Can pre-exclude some items better treated on-line. (and can choose to treat simple corrections in CR post meeting disc instead).

Intended outcome: Report, TP or Draft TP, partial or full, if applicable.

Deadline: CB acc to Meeting schedule

[R2-2401926](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401926.zip) Summary of [AT125][510][feMob] LTM RRC issues Ericsson

DISCUSSION

P4

- Lenovo wonder what happens T316 is running and T304 expires. Ericsson think then reestablishment.

- Nokia think we should send LS to R3 to inform. HW and Eri think not needed.

- Session Chair: For this case, Rely on the network to sort out such situation if it occurs.

* P1 Clarify that UE should if the received ID does not have a corresponding RRC configuration, handle this MAC CE similar to invalid Scell Activation MAC CE. To be checked if capture this in RRC or MAC spec or both, covered both in MAC and RRC post email discussions.
* P2 Use reestablishRLC in the LTM candidate cell configurations for RLC entities serving SRBs.
* P3 Postpone RIL [E068] to the next meeting
* P4 Don’t forbid in the TS SCG LTM switch while MCG failure recovery procedure is ongoing.
* P5 Simplify LTM procedures by considering fields of the LTM configuration to be part of "the UE configuration" and completely remove VarLTM-Config.

Coexistence

Default assumptions (a reminder): Unless there are issues, assume there is co-existence, i.e. no particular limitations. For cases where limitations are needed, they should be explicitly captured (somewhere). Enhancements to simultaneously fullfill expectations for multiple features (when combined) can be considered but are not automatic and require explicit decisions.

Treat on-line

LTM – CHO CPAC (Xiaomi, ZTE, vivo, QC, Ericsson, Mediatek, LGE)

LTM – DAPS (ZTE, vivo, QC, Ericsson, Mediatek, Samsung)

LTM – L3 HO, ServingCell IDs (Lenovo, mediatek, Samsung)

LTM in NR-DC, MCG/SCG (ZTE, Nokia, Samsung)

LTM Early TA – NR-U (vivo, Ericsson)

LTM – eIAB (QC)

LTM – SL Relay (QC)

LTM RACHless – NES Cell DTX DRX (Sharp)

LTM - CHO recovery (IDT, MediaTek, ..)

LTM - L3 Relaxed measurements (Samsung)

Lower prio, enhancements

LTM – CHO configuration enh (Nokia)

LTM - L3 HO, Measurment Enh (IDT)

The following coex are handled in the MAC AI:

LTM – mTRP multiple TA (vivo, Xiaomi, Docomo, Ericsson, Mediatek)

LTM – CovE, repetition CFRA (MediaTek)

[R2-2400184](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400184.zip) Coexistence of LTM with other features Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core

DISCUSSION

P3

- Ericsson think we can leave this to network impl. Think it can work. Think current procedure text works.

- CATT also think this is not needed.

- MTK agrees with Ericsson and CATT and think the UE behaviour at recovery can be up to UE impl.

- Nokia also think we don’t need to restrict. Think the recovery issue is a different one.

- ZTE think there is a network issue, would like to agree to P3. Otherwise have a default rule so that the network knows.

- Apple think if we allow this we should restrict the discussion to R16 CHO.

- MTK think there will be a transaction ID or similar so the network should know.

- vivo think that if we support flexibility, how to specify the UE action. Session chair think this could be a significant discussion.

- HW think we can leave the TS as is. No behaviour enhancement.

- Lenovo think we can allow.

- Samsung think there is a race condition that network may trigger LTM but UE performs CHO.

- OPPO think we can just specify to prioritize network commands. This is specified for CHO / L3 HO. Ericsson think it is ok to align

* No restriction, LTM and conditional reconfiguration can be configured for the same candidate cell (as current TS). Assume that there will be differentiation in the RRC reconfig confirm, so that the target network can know whether CHO or LTM is used.
* Align with CHO text regarding CHO L3 HO, on priority of LTM cell switch cmd vs execution of CHO.

[R2-2400222](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400222.zip) UE measured TA and No L2 reset in coexistence case of L3 handover and LTM Lenovo discussion Rel-18

DISCUSSION

- Ericsson agrees there is an issue, think that the target cell shall include these fields if needed at L2 HO.

- Apple are concerned about mixing these things.

* Issues on updating at L3 HO, the ltm-ServingCellUE-MeasuredTA-ID ltm-ServingCellNoResetID shall be addressed, details offline (CR review)

[R2-2400311](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400311.zip) Discussion on coexistence of LTM and other features ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

DISCUSSION P8 P9

* The coexistence of LTM and DAPS HO is not supported in Rel-18.
* The LTM configuration should be released by the source cell before the handover command is sent to the UE and are not configured by the target cell until the DAPS HO has completed.

DISCUSSION P1

- Ericsson think we don’t need to restrict. Samsung agrees. Nokia agrees. CATT agrees. ZTE think we need inter-node coord to avoid simultaneous trigger. Nokia think we can avoid specifying this coordination.

- Apple think from UE point of view this is a waste of power. Support this proposal.

* No restriction of configuring MCG LTM and SCG LTM. No intention to further work in R2 on network interaction to better enable this.

[R2-2400441](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400441.zip) Coexistence of LTM and other features vivo discussion Rel-18 NR\_Mob\_enh2-Core

DISCUSSION

P6 NR-U Coex

- Xiaomi think there are other issues, CG timers for RACH-less need to be addressed if supporting NR-U. HW think this will require a lot of time. Think we already agreed to not address NR-U coex. LG agrees there is more impacts.

- QC think we should have coex with NR-U.

- Ericsson think we can postpone to next meeting.

- CATT think NR-U is not important.

* P6: No agreement (for now)

[R2-2401179](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401179.zip) Discussion on fast recovery and co-existence with other features Qualcomm Incorporated discussion

DISCUSSION

mIAB

- If there are RAN3 restrictions, then those can be addressed in RAN3

SL relay:

- OPPO think that LTM cell switch is also a handover so current notification applied at HO should handle also the LTM case.

- Session Chair: There are Stage-2 proposals for this meeting to clarify that LTM shall be considered a handover.

* IAB/mIAB: no restriction to using LTM for IAB-MT / mIAB-MT from R2 point of view.

[R2-2400806](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400806.zip) On the interworking of LTM with L3 Mobility and Dual Connectivity Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

- NE-DC issue handled above

* Noted

[R2-2400492](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400492.zip) Discussion on remaining issues for LTM Samsung discussion

- Session Chair: it seems no other company has considered this, may be some impact.

- HW think this can be checked by the rapporteur.

* Can address relaxed measurement impact at next meeting, if any issue

DISCUSSION

Issue 7 [S796]

- Ericsson think RAN4 has discussed this, and the current signalling is sufficient. If concerns we can send LS to R4.

- Samsung think that the MN does not know that the SN has configured LTM.

- ZTE think that L1 measurements require L3 measurements so there are already gaps, for the L3 measurements. Xiaomi agrees.

- Samsung think that R4 are also considering measurements without gaps.

* RAN2 assumes that gaps for L3 measurements are sufficient for LTM L1 measurements (and it is clear from R4 LS that L3 measurements are required). No need to do anything.

[R2-2400835](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400835.zip) Coexistence of LTM and other features Interdigital, Inc. discussion Rel-18 NR\_Mob\_enh2-Core

DISCUSSION

P1

- Ericsson think this is already covered in the TS.

* If both *attemptLTM* and *attemptCHO* are configured it is up to UE impl which one to use (for RLF recovery)

[R2-2401054](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401054.zip) Coexistence of LTM and other features Sharp discussion Rel-18 NR\_Mob\_enh2-Core

* Coex with NES cell DTX, assume treated for NES AI. Any potential remaining issue is postponed to next meeting.

[R2-2400509](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400509.zip) Remaining issue for LTM NTTDOCOMO, INC. discussion Rel-18

[R2-2400574](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400574.zip) Discussion on coexistence of LTM with other features China Telecom discussion Rel-18 NR\_Mob\_enh2-Cor

[R2-2400956](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400956.zip) Coexistence of LTM and Other Mobility Procedures and Features MediaTek Inc. discussion Rel-18 NR\_Mob\_enh2 Coexistence of LTM and other mobility procedures

[R2-2401379](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401379.zip) Co-existence of LTM with other features Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401471](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401471.zip) Discussion on cross-feature issues for LTM OPPO discussion Rel-18 NR\_Mob\_enh2-Core Late

* 5 tdoc Noted

In the NES Agenda Item (listed for info)

[R2-2401199](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401199.zip) Coexistence of Cell DTX/DRX and RACH-less LTM/handover Sharp discussion

Keystream reuse

Allow, Possibly Send LS to SA3 (Xiaomi, Lenovo, Interdigital, QC)

Issue applicability (SRB: intel, SRB and DRB: vivo, NEC, HW …)

Continue Count (Samsung, intel, NEC, Panasonic, interdigital)

Change Keys (vivo, Mediatek)

Continue Count at LTM failure, Change Keys at Other failures (Fujitsu, Mediatek, ZTE)

DISCUSSION

- Ericsson think this is an issue and SA3 will not accept to do nothing.

- intel think there is also a protocol issue, and that in some situation same SN will lead to discard.

- LG Ericsson Intel think we should continue count. LG think the network can know about this so not complex.

- CATT also think this need to be addressed.

- Fujitsu think count continuation is not legacy beh for recovery of L3 HO and CHO ..

- Xiaomi think this issue appears in other situations and we don’t fix those.

- ZTE also think count continuation could work. Think there could be data lost ofr UM DRB but should be ok.

- OPPO also think we use count continuation.

- NEC also support Count continue.

- Samsung think this is only for SRB

- Fujitsu think this is an issue also for DRB. CATT think that the first data to transmit in the new cell could be new, and may be affected.

- LGE think that DRB transmission will be after SRB RRC Complete, so no issue.

- Intel think that we could skip DRB. Ericsson agrees.

- Lenovo think the PDCP retransmission will handle any loss of data

* Continue Count for SRB at LTM recovery (if issues are found for non-LTM-failure cases can revisit), Stage-3 impact offline in CR discussion.

[R2-2400165](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400165.zip) Tolerable key stream re-use Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400197](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400197.zip) Handling keystream reuse at recovery Samsung Electronics Co., Ltd discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400209](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400209.zip) Discussion on key stream reuse during LTM fast recovery Transsion Holdings discussion Rel-18

[R2-2400312](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400312.zip) Consideration on remaining issues for LTM ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400391](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400391.zip) [FeMob][Issue 4] Handling of key stream re-used in case of fast LTM recovery Intel Corporation discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400442](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400442.zip) Discussion on the key stream reuse issue for LTM vivo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400496](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400496.zip) Analysis of Keystream reuse issue Lenovo, Motorola Mobility discussion NR\_Mob\_enh2-Core

Moved from 7.4.2

[R2-2400603](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400603.zip) Discussion on security issue of LTM NEC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400796](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400796.zip) PDCP keystream handling for LTM fast recovery Panasonic discussion Rel-18

[R2-2400839](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400839.zip) Security issues during LTM failure recovery Interdigital, Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400840](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400840.zip) Draft LS on Key Stream Reuse during fast LTM recovery Interdigital, Inc. LS out Rel-18 NR\_Mob\_enh2-Core To:SA3

[R2-2400872](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400872.zip) Solutions for keystream reuse issue caused by fast LTM recovery Fujitsu discussion Rel-18

[R2-2401123](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401123.zip) Keystream Reuse Issue in LTM Fast Recovery MediaTek Inc. discussion Rel-18 NR\_Mob\_enh2

[R2-2401284](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401284.zip) Discussion on keystream reuse issue at LTM fast recovery NTT DOCOMO, INC. discussion Rel-18

* 13 tdocs are Noted

RILs and specific issues

Specific items

[R2-2400444](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400444.zip) [V121][V122]Unknown target configuration ID in LTM cell switch command vivo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401364](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401364.zip) Discussion on LTM candidate ID value range (G001) Google Inc. discussion Rel-18 38.331

[R2-2400817](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400817.zip) [H020] SRB L2 behaviour Huawei, HiSillicon discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401383](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401383.zip) Clarify presence of securityConfig in case of LTM [E068] Ericsson draftCR Rel-18 38.331 18.0.0 F NR\_Mob\_enh2-Core

[R2-2401384](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401384.zip) Corrections on UE-based TA measurements [C113, Z051, B105, B202, C114, M002, B106, L005, Z030, C116, A702, Z059] Ericsson draftCR Rel-18 38.331 18.0.0 F NR\_Mob\_enh2-Core

- Lenovo: Q whether UE based TA can be used for LTM recovery, because then there are several other aspects.

* Confirm that LTM recovery is RACH based (should be explicitly captured somewhere, e.g. at least in Stage-2).
* TP is endorsed.

LTM initiation at MCG recovery

[R2-2400221](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400221.zip) [B100] SCG LTM with fast MCG link recovery Lenovo, Samsung discussion Rel-18

See also Fujitsu tdoc further below

DISCUSSION

- CATT prefers to just allow. No need to discuss enhancement. HW agrees Ericsson as well.

- Nokia think nothing is needed from UE

- Apple think that we can just rely on the network.

- Lenovo think if we allow this, there will anyway be a need to reset everything to sort out the situation and UE re-establishment is a very robust solution, and fast.

* Postpone this issue, consider:   
  Alt1: Don’t forbid in the TS SCG LTM switch while MCG failure recovery procedure is ongoing. Rely on the network to sort out such situation if it occurs.   
  Alt2: UE initiates reestablishment procedure if SCG LTM cell switch is triggered while T316 is running.

Early RACH Network coord

[R2-2400815](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400815.zip) Early RACH for inter-DU LTM Huawei, HiSillicon discussion Rel-18 NR\_Mob\_enh2-Core

RRC structure

[R2-2400668](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400668.zip) On Reference Configuration in Rel-18 LTM Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400816](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400816.zip) [H018][H035] LTM configuration Huawei, HiSillicon discussion Rel-18 NR\_Mob\_enh2-Core

TCI state

[R2-2400275](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400275.zip) Issue on the association between CSI-RS and SSB of the LTM candidate cell CATT discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400356](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400356.zip) RRC signaling related TCI state configurations Panasonic discussion

Measurements

[R2-2400443](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400443.zip) Discussion on the impact of s-Measure on L1 measurement vivo discussion Rel-18 NR\_Mob\_enh2-Core

Miscellanous

[R2-2400812](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400812.zip) RRC Remaining issues on LTM Huawei, HiSillicon discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400468](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400468.zip) Discussion on LTM remaining issues LG Electronics discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401062](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401062.zip) Considerations on LTM related open issues Fujitsu discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401242](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401242.zip) Correction on 38.331 for LTM Langbo CR Rel-18 38.331 18.0.0 4592 - F NR\_Mob\_enh2-Core

[R2-2401468](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401468.zip) Discussion on RRC issues of LTM OPPO discussion Rel-18 NR\_Mob\_enh2-Core Late

n-TimingAdvanceOffset (see also LS in)

[R2-2400814](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400814.zip) Reply LS on n-TimingAdvanceOffset for PDCCH order RACH Huawei, HiSillicon LS out Rel-18 NR\_Mob\_enh2-Core To:RAN1

[R2-2401063](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401063.zip) [F015] Default value of n-TimingAdvanceOffset in IE EarlyUL-SyncConfig Fujitsu discussion Rel-18 NR\_Mob\_enh2-Core

Further enhancements

[R2-2400795](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400795.zip) Views on fast cell recovery during LTM failures Panasonic discussion Rel-18

##### 7.4.1.3.2 Subsequent CPAC

Execution condition

V135

[R2-2400446](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400446.zip) [V135] Subsequent CPAC condition handling after execution vivo discussion Rel-18 NR\_Mob\_enh2-Core

DISCUSSION

- Ericsson think this can be controlled by Meas Config instead.

- OPPO think we can just mandate to provide execution conditions for all cells. Mediatek agrees. Nokia think each neighbour cell shall select his neighbours. NEC agrees with Nokia. Ericsson think UE shall only evaluate relevant cells. ZTE agrees with E/// & Co. CATT agrees with all.

* V135 propAgreed
* UE stops evaluating cand cell for which execution condition is not provided (but configurations are kept)

C123 V136

[R2-2400273](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400273.zip) [C123] Execution Condition of Subsequent CPAC CATT discussion Rel-18 NR\_Mob\_enh2-Core

DISCUSSION

- Ericsson think that just a clarification is needed. Network can provide the correct execution condition.

- OPPO think current text with “replace” is sufficient, as it aligns with earlier rel.

- Nokia think the problem can happen, after a couple of changes, supports this.

- CATT confirms that this is an issue. The UE may end up evaluating initiation conditions for the subsequent case.

- MTK think current text is not clear, need clarification. Prefer solution 1.

- vivo think we need to discuss what the Ue stores.

- OPPO think we can just not do subsequent CPA …

- LGE think both solutions can work, somewhat prefer solution 1.

* Allow subsequent CPA acc to earlier agreements, discuss spec impact/related clarifications (if any)

[R2-2400445](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400445.zip) [V136] Execution condition for subsequent CPA vivo discussion Rel-18 NR\_Mob\_enh2-Core

* Noted

Misc

[R2-2401185](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401185.zip) [C123][V136][V135] Execution condition update for subsequent CPAC MediaTek Inc. discussion NR\_Mob\_enh2-Core

[R2-2401014](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401014.zip) [C123][E072][V136] open issues related to SCPAC LG Electronics discussion Rel-18 NR\_Mob\_enh2-Core

* [AT125][502][feMob] SCPAC execution conditions (CATT)

Scope: progress to arrive at Agreeable TP. Can include clarifications etc also from the non-treated proposals.

Deadline: CB acc to Meeting schedule

[R2-2401930](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401930.zip) Report of [AT125][502][feMob] SCPAC execution conditions (CATT) CATT

* TP is endorsed

L2 Reset

[R2-2401472](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401472.zip) Discussion on the open issues for subsequent CPAC OPPO discussion Rel-18 NR\_Mob\_enh2-Core Late

DISCUSSION

P1-P4

- MTK think the principle of P1 is similar to LTM and should work.

P6 P7

- Proposals involves no TS impact

* P1 For DRB, security cell set ID (mapping to SN) is used to determine how the L2 reset is performed for SCPAC execution:

- For inter-SN SCPAC: MAC reset, refresh of security and re-establishment of RLC and PDCP should be performed.

- For intra-SN SCPAC: MAC reset and RLC re-establishment and PDCP data recovery should be performed.

* P2 For DRB, UE performs L2 reset according to the change of termination point for SCPAC execution.

- UE performs PDCP re-establishment, RLC re-establishment and MAC reset if there is change of termination point for the bearer;

- UE performs PDCP data recovery, RLC re-establishment and MAC reset if there is no change of termination point for the bearer.

* P3 For SRB3, cell set ID (mapping to SN) is used to determine whether PDCP re-establishment or PDCP SDU discard is performed for SCPAC execution.
* P4 For SRB1/SRB2, UE relies on NW indication to perform L2 reset.
* P6 If at least the subsequent CPAC was configured, UE removes CHO, CHO with SCG and CHO with candidate SCG configurations when PSCell changes, same as the legacy in the current spec.
* P7 If the subsequent CPAC (or CPC or CPA as previous rel) was not configured, UE does not have to remove the configuration for CHO, CHO with SCG or CHO with candidate SCG(s) autonomously when PSCell changes.
* [AT125][503][feMob] TP L2 reset etc (OPPO)

Deadline: CB acc to Meeting schedule

[R2-2401953](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401953.zip) TP of L2 reset OPPO

* TP is endorsed

[R2-2400313](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400313.zip) Consideration on remaining issues for subsequent CPAC ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400274](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400274.zip) Open Issue on L2 Reset for Subsequent CPAC CATT discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400185](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400185.zip) Open issues of L2 reset for subsequent CPAC Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401055](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401055.zip) L2 reset in case of subsequent CPAC Sharp discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400836](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400836.zip) Subsequent CPAC L2 reset Interdigital, Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400604](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400604.zip) Remaining issue of subsequent CPAC including [E072] NEC discussion Rel-18 NR\_Mob\_enh2-Core

**Subsequent CPAC execution**

[R2-2400272](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400272.zip) [C109] MCG configuration handling upon Subsequent CPAC CATT discussion Rel-18 NR\_Mob\_enh2-Core

DISCUSSION

- QC think traffic may be moved between CGs as a result of these procedures so it is not true that lower layers are not impacted.

- Ericsson think the UE will need to release anyway as the UE will build the configuration from scratch e.g. with ref config.

- Nokia think this is beneficial and should be done.

- OPPO think that if we keep partial config UE may not be able to apply complete configuration.

* Some support but also concerns on potential additional work, not agreed

[R2-2400788](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400788.zip) Open issues for subsequent CPAC Ericsson discussion Rel-18 NR\_Mob\_enh2-Cor

- QC support this

- MTK think this is an optimization and brings some more work.

- Nokia think that if this makes it easier to support previous proposal then ok.

- ZTE think current TS is clear. Not needed. HW agrees and think there are more impacts.

* P1 not agreed, no support

General

[R2-2400789](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400789.zip) Further issues for subsequent CPAC Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

DISCUSSION

P1 P2

- Nokia wonder if the intention is to send LS to R3. Ericsson clarifies that the intention is to have this in RRC inter-node message. Should send an LS

- HW think this should be already in the UE config.

- QC think all the proposals should be considered together. Tend to think P1 P2 P3 are fine

* [AT125][504][feMob] SCPAC inter-node issues (Ericsson)

Scope: Progress and check offline

Deadline: CB acc to Meeting schedule

[R2-2401880](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401880.zip) Report of [AT125][504][feMob] SCPAC inter-node issues (Ericsson) Ericsson

* The MN includes information to the target SN about subsequent CPAC configurations in MN format, in the CG-ConfigInfo that is included in SN Addition Request or SN Modification Request at normal PSCell addition/change.
* The target SN provides to the MN information about modified S-CPAC configurations in CG-Config in the response message SN Addition/Modification Request Acknowledge.
* The conditionalReconfiguration is included in the sourceConfigSCG (in CG-ConfigInfo) from the MN to the target SN.
* Can include the TP in the RRC CR and review in the RRC CR discussion
* Send LS to inform R3 about these agreements (post email discussion)
* [Post125][519][feMob] LS to RAN3 on SCPAC inter node agreements (Ericsson)

Scope: LS to inform R3 about agreements on SCPAC inter node agreements

Intended outcome: Approved LS out

Deadline: Short (not for RP)

[R2-2400494](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400494.zip) Considerations on CHO with SCG(s) and Subsequent CPAC Samsung R&D Institute UK discussion

Moved here

[R2-2400395](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400395.zip) Remaining issues in Subsequent CPAC Qualcomm Incorporated discussion Rel-18

[R2-2401037](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401037.zip) On remaining issues for SCPAC Nokia, Nokia Shanghai Bell discussion

SRB3

[R2-2400491](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400491.zip) [S792] SRB3 release during SCPAC and LTM Samsung discussion

Other

[R2-2400210](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400210.zip) Discussion on remaining issues in Subsequent CPAC Transsion Holdings discussion Rel-18

##### 7.4.1.3.3 CHO including target MCG and candidate SCGs for CPC CPA in NR-DC

[R2-2400669](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400669.zip) On the Remaining Issues for CHO with CPC in Rel-18 Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

#### 7.4.1.4 MAC Corrections

MAC corrections and User Plane Centric Issues (including tdocs on user plane centric issue that also impact other TS)

CR

[R2-2400139](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400139.zip) Miscellaneous CR for further mobility enhancements in MAC Huawei, HiSilicon CR Rel-18 38.321 18.0.0 1733 - F NR\_Mob\_enh2-Core

- Offline check

* [Post125][515][feMob] 38321 (Huawei)

Scope: Review R2-2400139. Include progress of current meeting, treat remaining points needing further discussion (if any), Include agreeable parts.

Intended outcome: Agreed 38321 CR

Deadline: Short

Miscellaneous

[R2-2400141](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400141.zip) MAC remaining issues on LTM Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Cor

MAC CE for activating/deactivating semi-persistent report

DISCUSSION

P1

- MTK support. CATT support wonder if we need to reply, as R1 asks for a solution.

- Samsung think new MAC CE is more clean, as they are related to different features. New MAC CE would have same fields but be identified by a new LCID.

- ZTE think there are several examples where we have used a legacy MAC CE for a new feature.

- Samsung think that as these are different features there would be strange/complext cases e.g. that both legacy and LTM activation and deactivation is done at the same time. CATT think there is no issue, the network will know. Ericsson think both can work.

- Majority want the R-bit solution and both can work

* Use one R bit of the SP CSI reporting on PUCCH Activation/Deactivation MAC CE to indicate whether the MAC CE applies to *CSI-ReportConfigId* or *ltm-CSI-ReportConfigId*.

RSRP checking for CFRA indicated by LTM MAC CE

DISCUSSION

- MTK wonder of we need fallback if we don’t have the check

- vivo think there is no fallback in such case, and think RSRP check should be done

- OPPO think this is ok, wonder if we would fallback to RRC configured CFRA.

- Apple think this may cause delays, as the UE need to actually measure again acc to R4 requirements.

- LGE think this will cause delay, this will not enhance the performance. Low delay is important for LTM. Network can ensure this is ok, to sufficient extent.

- Nokia think there is no additional delay, think recovery causes more delay.

- ZTE point out that for PDCCH order with CFRA the network is responsible and UE don’t need to re-check.

- vivo think we should assume that the UE just uses the latest available measurement for this comparison, so no additional delay.

- VDF think this may be up to impl.

* R2 understands that for most LTM cases, the UE will have recent L1 measurement results. For the LTM cell switch with CFRA, if the UE checks RSRP for the CFRA resource, this check can in most cases be based on this latest available measurement with no additional latency introduced by RSRP check for CFRA resource.
* Apply the RSRP checking to the case of CFRA resource indicated by LTM cell switch MAC CE (as in the legacy RRC configured CFRA resource case).

Co-existence between LTM and other Rel-18 features P3 P4 P5

DISCUSSION

P3

- MTK think it is not possible to have multi-TA operation after cell switch, wonder what is proposed.

- ZTE think this doesn’t work, think the UE cannot know. Already denied in R1. Think RACH-less LTM and two TA can work ok.

- LGE think that during the LTM cell switch, two TA is not needed. One TA is sufficient.

- CATT think anyway we don’t need to support co-existence with mTRP, think it can be configured after LTM execution.

- HW think for RACH based it works, without any change. Think for RACH-less it can be made to work with a bit in the MAC CE. Think we need to avoid RRC reconfigurations.

- Samsung support this. Think we can use also implicit indication by TCI state. Xiaomi agrees.

- FW supports this .. and think with UE based TA there may be some ambiguity.

- Ericsson think we should limit the impact..

P4 P5

- Samsung think it is easy to support this, we have all other parameters in the MAC CE, so adding a parameter is not a complexity, should add two bits. HW think there are concerns for R1 impact, R2 impact is ok.

- LG think we need to check the behaviour. CBRA fallback has certain restriction.

- Nokia think we have this in RRC, not sure we need this parameter in MAC CE.

For these items we need final confirmation when impact is better determined

* Aim to Support the co-existence between RACH-less LTM with network provided TA and R18 MIMO two TA. Determine the impact offline.
* Aim to support also MSG1 repetition for CFRA. Determine the impact offline.
* [AT125][509][feMob] MAC offline (Huawei)

Scope: Address two offline points above. Address remaining MAC corrections. Identify agreements and discussion points. Can pre-exclude some items better treated on-line. (and can choose to treat simple corrections in CR post meeting disc instead).

Intended outcome: Report, TP or Draft TP, partial or full, when applicable.

Deadline: CB acc to Meeting schedule

[R2-2401924](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401924.zip) Summary of [AT125][509][feMob] MAC offline Huawei, HiSilicon

LTM with MIMO two TA

* For LTM with MIMO two TA,

- Use post-email discussion to discuss the TP with outcome of endurable TP for next meeting, aiming to reuse the MIMO design as much as possible;

- To use option 2, not signal additional info but use the mapping from TCI state to TAG ID to understand the applicable TAG, in the TP.

Candidate TCI state

* Currently, RAN2 assume when network intends to (de)activate multiple candidate cells, the network can just send multiple MAC CEs in the one MAC PDU.
* RAN2 assumption: When the network wants to deactivate all candidate TCI state for candidate cell, the network can just not include any TCI state ID field in the MAC CE.

Legacy type 1 CG

* When UE performs LTM RACH-less cell switch configured with specific CG resource, the legacy type1 CG is not used until LTM completion.

DISCUSSION P1234

P2

- CATT think we need to send LS to R1 first. MTK think R1 stopped the discussion with the understanding that R2 resolve this

- OPPO wonder if P2 is needed. Ericsson and CATT think indeed R1 has made agreement on deactivation at LTM cell switch but for different case.

DRX and measurement gaps during rach-less LTM switch

* Confirm the intention that DRX should neither delay the completion of the LTM reconfiguration nor incur addition explicit RRC reconfigurations.
* Postpone the discussion on the application of measurement gap and DRX configuration may be applied, during RACH-less LTM cell switch.

DRX monitoring after early RACH

* No need of spec impact on Proposal 4 in [R2-2400447](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400447.zip) (can be addressed by NW implementation).

cg-LTM-RetransmissionTimer

* Proposal 7: Agree on the intention from P1/2 in [R2-2400880](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400880.zip)/[R2-2401085](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401085.zip) (details to be reviewed via post email).

[R2-2400276](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400276.zip) Issues on deactivation of TCI states of LTM candidate cell CATT discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400196](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400196.zip) MAC corrections for LTM Samsung Electronics Co., Ltd discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400807](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400807.zip) On the cell switch aspects in LTM Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

Moved here from 7.4.1.3.1

[R2-2400957](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400957.zip) LTM MAC Open Issues MediaTek Inc. discussion Rel-18 NR\_Mob\_enh2

[R2-2401044](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401044.zip) Considerations On Remaining MAC Issues For LTM ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400447](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400447.zip) Discussion on MAC open issues for LTM vivo discussion Rel-18 NR\_Mob\_enh2-Core

RACH-less

[R2-2400880](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400880.zip) Discussion on remaining issues of RACH-less LTM cell switch NEC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401085](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401085.zip) Correction on PUSCH transmission during RACH-less LTM cell switch LG Electronics Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400886](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400886.zip) Discussion on fallback RACH for LTM ASUSTeK discussion Rel-18 38.321 NR\_Mob\_enh2-Core

Multi TA Multi TCI state

[R2-2400888](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400888.zip) Discussion on support for multi-TA candidate Cell in LTM ASUSTeK discussion Rel-18 38.321 NR\_Mob\_enh2-Core

[R2-2400879](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400879.zip) Discussion MAC CE for LTM FGI, NTPU discussion

RSRP check CFRA

[R2-2400164](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400164.zip) Remaining MAC issues for LTM Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400319](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400319.zip) Need of RSRP checking for CFRA NEC discussion NR\_Mob\_enh2-Core

MAC CE to activate-deactivate semi-persistent PUCCH

[R2-2400271](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400271.zip) Discussion on RAN1 LS on Activation/Deactivation of SP PUCCH for LTM CATT, Fujitsu discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401204](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401204.zip) Support of L1/L2 controlled LTM CSI reporting Samsung discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400320](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400320.zip) MAC CE to activate-deactivate semi-persistent PUCCH report for LTM NEC discussion NR\_Mob\_enh2-Core

[R2-2400837](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400837.zip) MAC CE to activate/deactivate semi-persistent PUCCH Interdigital, Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400575](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400575.zip) Discussion on MAC CE to activate/deactivate semi-persistent PUCCH report for LTM China Telecom discussion Rel-18 NR\_Mob\_enh2-Core

UE based TA

[R2-2400482](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400482.zip) On serving cell TA issues with UE TA measurement Futurewei discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400483](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400483.zip) TS38.321 TP on source cell TA update for UE based TA measurement Futurewei discussion Rel-18 NR\_Mob\_enh2-Core

Indication of Cand Config

[R2-2400887](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400887.zip) Discussion on LTM candidate configuration for different CGs ASUSTeK discussion Rel-18 38.321 NR\_Mob\_enh2-Core

Smaller TS Modifications

[R2-2400889](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400889.zip) Discussion on early UL synchronization in LTM ASUSTeK discussion Rel-18 38.321 NR\_Mob\_enh2-Core

[R2-2401045](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401045.zip) Miscellneous On MAC Spec for LTM ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401064](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401064.zip) Corrections to TS 38.321 on LTM Fujitsu discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401380](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401380.zip) MAC remaining issues for LTM Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401469](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401469.zip) Discussion on MAC issues for LTM OPPO discussion Rel-18 NR\_Mob\_enh2-Core Late

[R2-2401477](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401477.zip) Discussion on MAC Issues for LTM CATT discussion Rel-18 NR\_Mob\_enh2-Core Late

Other

[R2-2401086](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401086.zip) Consideration on MAC open issues for LTM LG Electronics Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401191](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401191.zip) Ongoing Random Access procedure handling for LTM Langbo discussion Rel-18 38.321 NR\_Mob\_enh2-Core

[R2-2401194](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401194.zip) PREAMBLE\_POWER\_RAMPING\_COUNTER increment condition for LTM Langbo discussion Rel-18 38.321 NR\_Mob\_enh2-Core

[R2-2401195](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401195.zip) PREAMBLE\_POWER\_RAMPING\_COUNTER reset condition for LTM Langbo discussion Rel-18 38.321 NR\_Mob\_enh2-Core

#### 7.4.1.5 UE capabilities

Including outcome of [Post124][561][feMob] UE capability (Intel). Please input to the email discussion rather than inputing bu tdocs.

[R2-2400385](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400385.zip) Report of [Post124][561][feMob] UE capability (Intel) Intel Corporation report Rel-18 NR\_Mob\_enh2-Core

* Q1-2-a: Separate IOT bit for RACH based LTM is not introduced
* Q1-2-c: MAC CE based CFRA is mandatory for LTM. No separate capability bit is needed
* Q1-2-e: One of 45-3/3a and 4/4a shall be supported for UE supporting LTM: wait for RAN1 update of the feature list table
* Q5-2-a: SCPAC-1 (MN initiated SCPAC) and SCPAC-2 (SN initiated MN format SCPAC) are not merged
* Q5-2-b: SCPAC-4 (reference configuration for MN) and SCPAC-5 (reference configuration for SN) are not merged
* Q1-2-d: inter-frequency LTM measurements (45-1a) is not mandatory for LTM, but is mandatory for inter-frequency LTM.
* Q5-1/5-2-c discussed in post email disc
* Have separate capability for SCPAC after SCG release

[R2-2400386](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400386.zip) Draft 331 CR for UE capability for feMob Intel Corporation draftCR Rel-18 38.331 18.0.0 NR\_Mob\_enh2-Core

[R2-2400387](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400387.zip) Draft 306 CR for UE capability for feMob Intel Corporation draftCR Rel-18 38.306 18.0.0 NR\_Mob\_enh2-Core

LTM caps

- Apple think we should have TDD FDD differentiation.

- QC would like FR diff

- Intel clarify that LTM is also dependent on R1 capabilties for LTM which are per band

- Apple think the ltm cap is about LTM cell switch, which could have different applicability than measurements..

SCPAC

mn-ConfiguredMN -Trigger-SCPAC-r18

- Huawei think that some of the linked r-16 caps are inconsistent with S-CPAC wrt MN-invovlement, Discussion that there may be more inconsistencies, and if so it need to be discussed how to resolve this

* Intention to support LTM for band combinations for which L1 measurements (45-1) is supported. Discuss Draft CR in a short post email discussion.
* LTM Caps agreeable
* SCPAC caps discussed in the short email discussion, if not resolved by then, then postponed to next meeting

[R2-2400392](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400392.zip) Discussion on remaining open issues on UE capability for feMob Intel Corporation discussion Rel-18 NR\_Mob\_enh2-Core

* P1 P2: Instead go with the outlined separation.
* [Post125][516][feMob] UE capabilities (Intel)

Scope: Include progress of current meeting. Treat remaining points needing further discussion. Include agreeable parts. Review resulting TPs.

Intended outcome: Endorsed 38306 and 38331 CR

Deadline: Short (for Merge)

### 7.4.2 WI Open Parts

Tdoc Limitation: 1 tdoc (can have TPs with discussion document), Nokia to provide CRs.

Approved Exception Sheet in RP-233969:

Address WI objective#7, focus on solution based on existing measurement, as below:

- RAN2 to define time-based measurement result validation configuration based on RAN4 agreements.

- RAN2 signaling to enable reporting of cell reselection measurement or EMR for fast CA/DC setup.

- NOTE 1: RAN4 shall not work on any new requirements for this functionality in Rel-18. Only essential corrections are allowed.

- NOTE 2: If RAN2 is not able to complete the work, the functionality will be removed from Rel-18.

- NOTE 3: Existing measurement means that no additional measurement is performed during RRC Setup/Resume procedure.

Including outcome of [Post124][560][feMob] eEMR (Nokia).

ON-LINE Tuesday Disc based on session chair summary

EMR

1. Rel-18 eEMR = Rel-16 EMR + Validation using time X

Rel-16 EMR Configuration of Idle Mode measurements is reused (assumption: no additional UE measurement behaviour needed for Rel-18 eEMR).

Rel-16 EMR Reporting is reused.

Rel-18 New things:

- X, which limits what the UE reports. Behaviour agreed already in R4.

- Configuration of X

Understanding: Rel-16 EMR is configured + X is configured = Rel-18 eEMR is configured, for UEs capable of Rel-18 eEMR.

Q1: In SIB1, SIB11, RRCRelease ?

(former Q2) For UE capable of Rel-18 eEMR, with X configuration provided, No reason for / need to report non-valid measurements (rel-16 EMR measurements) to the network

- UE indication that reported measurements has been subject to X-validation.

Q3: In measurement available indication? With reported measurement result? Compatible with Rel-16 EMR?

- i.e. are Rel-16 EMR and Rel-18 eEMR really independent?

Tentative way forward:

- ALT1: No indication in signalling wheter X filtering is applied, but there will be a signalled Rel-18 eEMR capability.

Then if the UE is configured by the cell where the UE reports, the network can know that X has been applied.

X configuration in SIB1?

- ALT2: We have indication in signalling wheter X filtering is applied. X configuration is added to rel-16 eEMR configuration (in SIB11 and RRC release)

DISCUSSION eEMR

Q2

- QC think non-valid measurements shall not be reported, agreed in R4.

- Ericsson think netw can know that the UE is configured and UE doesn’t need to report. R16 measurement.

- ZTE think configuration is in SIB, and think in the report it should be indicated whether filtering is applied. Think there is no need to report R16 non-valid measurements in this case

General

- Q3: LG think the UE doesn’t need to indicate. The network should know what the UE has reported based in UE capability. HW think we can indicate, and we don’t need a capability. OPPO agrees with LG. Lenovo agrees, Nokia confirms that R4 think there is no need to indicate in singalling. CATT think whether we have capability dep on whether we want to configure by dedicated sign. QC think it is good to have a capability, then we can send configuration in SIB.

- NEC wonder what is the intention with the Cap if we only use the SIB configuration?

- VDF think we should avoid SIB1, think it would be better to send in RRC release.

- CATT think UEs can go to Idle without release message and SIB config is useful.

- ZTE and Apple think SIB1 is the best, as the UE shouldnt need to read SIB11 before access.

- vivo think ALT1 is simple.

- QC think ALT2 is the best.

- VDF wonder what is the assumption for the setting of the X.

- CMCC support ALT2.

IMR

1. Rel-18 IMR? Reporting of Available Idle/Inactive cell reselection measurements + Validation using time X (TBD if X is optional)

Existing Configurations for cell reselection specifies what the UE measures (from R2 point of view no additional assumptions for UE measurement behaviour for Rel-18 IMR).

- Configuration of X

Understanding: Cell reselection is configured + X is configured = Rel-18 IMR is configured, for UEs capable of Rel-18 IMR (see also Q on separate X below)

Q: In SIB1, SIB11, Other SIB, RRCRelease?

- UE measument reporting procedure, similar to Rel-16 EMR

DL Indication SIB1

UL measurement results availability indication is setupComplete and resumeComplete.

DL/UL UE information request / response, for the actual reporting.

Q: Shall the UE report all available and valid measurements, or shall it be possible for the network to filter, e.g. only ask for a subset of potential carriers etc (in SIB?).

- Q: From TS point of view Assume that IMR is independent of EMR and eEMR??

- Q: IMR X vs eEMR X, separately configured?

Assume that IMR is independent of EMR and eEMR

DISCUSSION IMR

- LGE think that for IMR case we only need to consider reporting, thus RRC release configuration is not applicable.

**Agreements ON-LINE Tuesday (text format)**

* Two Enhancements are on the table: eEMR and IMR (temporary naming for this disc).

**eEMR:**

* Rel-18 eEMR = Rel-16 EMR + Validation using time X

- Rel-16 EMR Configuration of Idle Mode measurements is reused (assumption: no additional UE measurement behaviour needed for Rel-18 eEMR).

- Rel-16 EMR Reporting is reused.

Understanding: Rel-16 EMR is configured + X is configured = Rel-18 eEMR is configured, (for UEs capable of Rel-18 eEMR).

* For UE capable of Rel-18 eEMR, with X configuration provided, There is no reason for / no need to report non-valid measurements (rel-16 EMR measurements) to the network.
* ALT2: to have indication in signalling whether X filtering is applied. X configuration is added to rel-16 eEMR configuration (in SIB11 and RRC release)

**IMR:**

* Rel-18 IMR is Reporting of Available Idle/Inactive cell reselection measurements + Validation using time X (TBD if X is optional)
* Existing Configurations for cell reselection specifies what the UE measures (from R2 point of view no additional assumptions for UE measurement behaviour for Rel-18 IMR).
* Assume that IMR is independent of EMR and eEMR
* [AT125][501][feMob] Offline on Obj7 (Nokia)

Scope: Progress further necessary points, identify agreements, and CB discussion points. Draft CR.

Deadline: CB acc to Meeting schedule

[R2-2401933](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401933.zip) eEMR and IMR CR Nokia, Nokia Shanghai Bell

- MTK wonder if we should have the X config for R18 eEMR in RRC release/SIB11?

- Nokia think this could be ok

- Apple think now Rel16 and Rel18 are not independent.

- Nokia think UE capabilities can be sorted out in UE cap post email discussion.

- Session chair: if mega CRs are Cat F or C we need separate CR for UE cap for this feature.

* Update the CR to reflect the agreement marked ALT2 above (and make X separate for eEMR and IMR)
* if mega CRs are Cat F or C we need separate CR for UE cap for this feature

*Continue in Post email discussion.*

[R2-2401172](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401172.zip) [Post123bis][551][feMob] eEMR SCell setup delay (Nokia) Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

* Noted, No LS needed.

[R2-2400166](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400166.zip) Discussion on eEMR SCell setup delay vivo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400186](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400186.zip) Discussion on improvement to SCell/SCG setup delay Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400277](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400277.zip) Discussion on Improvement to SCell SCG Setup Delay CATT discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400314](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400314.zip) Discussion on SCell/SCG setup delay improvement ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400321](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400321.zip) Improvement to SCell-SCG setup delay NEC discussion NR\_Mob\_enh2-Core

[R2-2400790](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400790.zip) Discussion on early measurements enhancements Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400813](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400813.zip) Remaining issues on EMR Huawei, HiSillicon discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2400838](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400838.zip) Improvement on Scell/SCG setup/resume delay Interdigital, Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401149](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401149.zip) Discussion on fast SCell/SCG setup delay improvement CMCC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2401162](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401162.zip) Discussion on WI objective #7 extension MediaTek Inc. discussion NR\_Mob\_enh2-Core

[R2-2401231](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401231.zip) Enhancements of early measurement report for fast CA/DC setup LG Electronics Inc. discussion NR\_Mob\_enh2-Core

[R2-2401473](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401473.zip) Discussion on improvement to SCell/SCG setup delay OPPO discussion Rel-18 NR\_Mob\_enh2-Core Late

* 12 tdocs are Noted
* [Post125][517][feMob] CRs for Obj7 (Nokia)

Scope: Include progress of current meeting. Treat remaining points needing further discussion. Include agreeable parts. Review resulting CRs.

Intended outcome: Agreed RRC Cat-B CR. Agreed or Endorsed-for-merge UE caps 38306 and 38331 Cat-B CRs

Deadline: Short

## 7.12 Mobile IAB (Integrated Access and Backhaul) for NR

(NR\_mobile\_IAB -Core; leading WG: RAN3; REL-18; WID: [RP-232669](http://ftp.3gpp.org/tsg_ran/TSG_RAN/TSGR_101/Docs/RP-232669.zip))

Time budget: N/A

Tdoc Limitation: 3 tdocs

Post email disc

* [Post125][518][mIAB] 38331 (Ericsson)

Scope: Review R2-2401371, Include progress of current meeting.

Intended outcome: Agreed 38331 CR

Deadline: Short

### 7.12.1 Organizational Stage-2 and high-level open issues

Ls in Rapporteur input, CRs etc. Includes TS impacts 38300 and Stage-2 Centric Open issues (can also cover secondary impacts to other TSes)

LS in

[R2-2400035](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400035.zip) Reply LS on UE RACH-less handover for mobile IAB (R3-238048; contact: Qualcomm) RAN1 LS in Rel-18 NR\_mobile\_IAB-Core To:RAN2

- QC think we need to reply only if we find issues.

* Noted

Proposed replies

[R2-2400136](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400136.zip) Reply LS on UE RACH-less handover for mobile IAB Huawei, HiSilicon discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2400422](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400422.zip) Discussion on CHO and the reply LS on RACH-less HO in mIAB ZTE, Sanechips other Rel-18 NR\_mobile\_IAB

* Both Noted

- ZTE think PCI confusion may be an issue, and if MCGI is included this is resolved. HW think we don’t need to analyze too much, just send information.

* [AT125][506][mIAB] Reply LS to R3 (ZTE)

Scope: determine if reply LS is needed, and if so converge on an LS

Deadline: CB acc to Meeting schedule

[R2-2401937](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401937.zip) Reply LS on UE RACH-less handover for mobile IAB RAN2 LS out

* LS is approved

### 7.12.2 Stage-3

Note that reuse of NR NTN RACH-less handover is assumed. Modifications of or difference in procedure specifically for mIAB to be determined/elaborated, with mIAB-specifics only when/if there is a need.

For multi-TS input, it is allowed to input also here.

38.305

[R2-2401372](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401372.zip) Introduction of Mobile TRP location info Ericsson draftCR Rel-18 38.305 18.0.0 F NR\_mobile\_IAB-Core

- HW think this should be first agreed in R3. Session Chair think this might be a good idea, anyway review offline.

* [AT125][507][mIAB] Introduction of Mobile TRP location info (Ericsson)

Scope: Introduction of Mobile TRP location info, review offline, determine way forward.

Deadline: CB acc to Meeting schedule

[R2-2401938](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401938.zip) Introduction of Mobile TRP location info Ericsson CR Rel-18 38.305 18.0.0 F NR\_mobile\_IAB-Core

* CR is agreed

Further Enhancement

[R2-2400865](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400865.zip) Mobile IAB-MT gNB-ID acquisition and measurement configuration Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_mobile\_IAB-Core

#### 7.12.2.1 BAP

TS impacts 38340 and BAP Centric Open issues (can also cover secondary impacts to other TSes if applicable)

#### 7.12.2.2 Control plane corrections

TS impacts 38331, ASN.1 RIL, UE capabilities and 38.304

RRC

[R2-2401373](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401373.zip) RILs conclusions for MobileIAB Ericsson discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2401374](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401374.zip) Discussion on RILs conclusion MobileIAB Ericsson discussion Rel-18 NR\_mobile\_IAB-Core

* Both Noted

[R2-2401371](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401371.zip) Miscellaneous corrections on Mobile IAB Ericsson CR Rel-18 38.331 18.0.0 4604 - F NR\_mobile\_IAB-Core

- Expect update

* Post email discussion

E073 E070 A100/101 H753 Z601

[R2-2400434](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400434.zip) Discussion on RILs for mobile IAB Qualcomm Inc. discussion Rel-18 NR\_mobile\_IAB

- H753 and Z601 are already impl..

* Noted

H750 H751 E073

[R2-2400137](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400137.zip) The inheritance of IAB operations to mobile IAB in 38.300 with [H750] [H751] as exclusion Huawei, HiSilicon discussion Rel-18 NR\_mobile\_IAB-Core

* OK but Not needed, already covered

E070

[R2-2401237](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401237.zip) [E070] Barring of mobile IAB-MT LG Electronics Inc. discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2400717](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400717.zip) Mobile IAB-MT barring Samsung discussion

[R2-2400866](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400866.zip) Cell barring for mobile IAB-MT Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_mobile\_IAB-Core

* 3 papers noted

DISCUSSION

- QC think the UE takes on the role of IAB-MT when indicator is sent to the network, before this point in time it is a UE and if it is not allowed to send the indicators it is still just considered to be a UE.

- Nokia think there is additionally the case that the device is not authorised and thus not allowed to function as IAB node / IAB MT

- Samsung think that the barring need to be clarified. Ericsson think this is already clear enough.

* Observation: If MT capable of mobile IAB-MT wants to access a cell not broadcasting *mobileIAB-Support* in SIB1 just to get minimal services such as OAM access without providing a backhauling services via this cell, the MT can access the cell by identifying (or declaring) itself as normal UE.

E070 A101

[R2-2400921](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400921.zip) RRC open issues on mobile IAB Apple discussion Rel-18 NR\_mobile\_IAB-Core

P2

- Ericsson think this should be revisited based on the related offline. Think also that mandatory is not a good way.

- LG think need N is ok.

- Xiaomi agrees with Apple proposal.

- Apple clarifies that the main point is to specify the UE behaviour in case the network doesn’t provide the beam info.

DISCUSSION2

P2

- Ericsson indicate that the condition is not applicable any more as the RRC structure is changed. This is now a choice, and in the FD for the choice.

* Noted

UE caps

RACH-less will first be discussed in the Common Agenda Item 7.0.4, and will be further discussed here only if needed.

[R2-2400864](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400864.zip) UE capabilities for mobile IAB Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_mobile\_IAB-Core

* No *mobileIAB-r18* capability is introduced to inform the network that an IAB-MT is capable of operating as a mobile IAB.

[R2-2400435](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400435.zip) Remaining issues for UE capabilities for mobile IAB Qualcomm Inc. discussion Rel-18 NR\_mobile\_IAB

DISCUSSION

- Nokia think the UE role is related to the MSG5 indication, and not really the capability. Samsung agrees.

- Ericsson think it would be good to not send irrelevant UE caps, and this is sent in connected after a UE has taken a role.

- LGE think we can have comments in 306, similar to Redcap.

- Ericsson support to capture something.

- Session Chair: maybe good to capture something, somewhere.

* [AT125][508][mIAB] 306 clarification (QC)

See if anything is agreeable

Deadline: CB acc to Meeting schedule

[R2-2401951](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401951.zip) Summary [AT125][508][mIAB] 306 clarification (QC) Qualcomm Incorporated

[R2-2401952](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401952.zip) UE capabilities for mobile IAB-MT CR 38.306 Qualcomm Incorporated

- Ericsson think the other TS NO need to be crossed.

- HW think we should modify the wording

* Use “not used” instead of “not supported”.
* Revised in [R2-2401811](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401811.zip), revision endorsed unseen (for merge)

[R2-2401012](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2401012.zip) Open issue list for mobile IAB UE capabilities Nokia, Nokia Shanghai Bell discussion

[R2-2400424](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400424.zip) Discussion on UE capabilities for mobile IAB-MT ZTE, Sanechips other Rel-18 NR\_mobile\_IAB

[R2-2400684](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400684.zip) On mIAB capabilities Samsung discussion

[R2-2400922](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400922.zip) UE capability open issues on mobile IAB Apple discussion Rel-18 NR\_mobile\_IAB-Core

38304

Session Chair: previously discussed

[R2-2400138](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400138.zip) Remove best cell for mobile IAB cell in TS 38.304 Huawei, HiSilicon discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2400423](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400423.zip) On frequency prioritization for UEs in mobile IAB ZTE, Sanechips other Rel-18 NR\_mobile\_IAB

#### 7.12.2.3 User plane corrections

TS impacts 38321

[R2-2400621](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2400621.zip) Handling of DRX and measurement gaps during RACH-less handover Samsung discussion

* Postponed