3GPP TSG-RAN WG2 Meeting #123bis R2-2xxxxxx

Xiamen, China, October 9th – 13th, 2023

Source: Session Chair Johan (MediaTek)

Title: Report from session on Mobility Enh, Mobile IAB and LP-WUS

Schedule: See main Schedule on the server  
New tdocs Range R2-2311330 - R2-2311369

Offline Disc Range [500]-[599]

# Offline Discussions

# Reference documents

Session Chair: These reference docs are duplicate-listed here as they need to be taken into account, but they are treated under AI 7.0.1 and 7.0.3.

[R2-2309417](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309417.zip) LS on Rel-18 RAN1 UE features list for NR after RAN1#114 (R1-2308523; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-18 NR\_MIMO\_evo\_DL\_UL, NR\_pos\_enh2, Netw\_Energy\_NR, NR\_netcon\_repeater, NR\_NTN\_enh, NR\_Mob\_enh2, NR\_SL\_enh2, NR\_redcap\_enh, NR\_MC\_enh, NR\_XR\_enh, NR\_FR1\_lessthan\_5MHz\_BW, NR\_DSS\_enh, NR\_BWP\_wor, NR\_cov\_enh2, TEI18 To:RAN2 Cc:RAN4

[R2-2310023](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310023.zip) Running UE capability CR on 38.306 for Rel-18 R1 R4 feature lists Intel Corporation draftCR Rel-18 38.306 17.6.0 NR\_MIMO\_evo\_DL\_UL, NR\_netcon\_repeater, NR\_DSS\_enh, NR\_MC\_enh, NR\_FR1\_lessthan\_5MHz\_BW, NR\_BWP\_wor, NR\_redcap\_enh, TEI18

[R2-2310024](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310024.zip) Running UE capability CR on 38.331 for Rel-18 R1 R4 feature lists Intel Corporation draftCR Rel-18 38.331 17.6.0 NR\_MIMO\_evo\_DL\_UL, NR\_netcon\_repeater, NR\_DSS\_enh, NR\_MC\_enh, NR\_FR1\_lessthan\_5MHz\_BW, NR\_BWP\_wor, NR\_redcap\_enh, TEI18

[R2-2309434](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309434.zip) LS on Rel-18 higher-layers parameter list (R1-2308674; contact: Ericsson) RAN1 LS in Rel-18 NR\_MC\_enh-Core, NR\_MIMO\_evo\_DL\_UL-Core, NR\_pos\_enh2-Core, Netw\_Energy\_NR, NR\_cov\_enh2, NR\_XR\_enh-Core, NR\_Mob\_enh2, NR\_BWP\_wor-Core, NR\_NTN\_enh, IoT\_NTN\_enh-Core, TEI18 To:RAN2, RAN3 Cc:RAN4

## 7.4 Further NR mobility enhancements

(NR\_Mob\_enh2-Core; leading WG: RAN2; REL-18; WID: RP-223520)

Time budget: 2 TU

Tdoc Limitation: 6 tdocs .

Running CR rapporteurs are encouraged to actively drive CR progress (can e.g. suggest to chair how to treat).

### 7.4.1 Organizational Stage-2 and UE caps

Including LSs and any rapporteur inputs (e.g. work plan, running CRs update for common Running CRs). Including performance impacts, e.g. for LTM and potential elaboration on the components of the LTM latency time line, if needed. Including impacts to and expectations of other groups.

Including outcome of [Post123][054][feMob] Stage-2 Signalling Open Issues and Running CR 37340 (ZTE)

Including RAN2 features and related UE caps. Plese take into account RAN1 and RAN4 features which are handled in Rel-18 common AI 7.0.   
Including other issues, if any

LS in

LTM

[R2-2309414](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309414.zip) Reply LS on L1 measurements for LTM (R1-2308465; contact: Ericsson) RAN1 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2

* Noted

[R2-2309426](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309426.zip) LS on L1 measurement and TA management for LTM (R1-2308625; contact: CATT, Fujitsu, MediaTek) RAN1 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2, RAN3, RAN4

* Noted

[R2-2309457](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309457.zip) Reply LS on PDCCH order RACH on neighbour cell (R4-2314454; contact: CATT) RAN4 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN1 Cc:RAN2

* Noted

[R2-2309458](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309458.zip) Reply LS on beam application time and UE based TA measurement for LTM (R4-2314455; contact: Ericsson RAN4 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN1 Cc:RAN2, RAN3

* Noted

Stage-2

37340

[R2-2309830](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309830.zip) 37.340 running CR for introduction of NR further mobility enhancements ZTE Corporation, Sanechips draftCR Rel-18 37.340 17.6.0 B NR\_Mob\_enh2-Core

- ZTE explains this is the version based on agreements at meeting.

* endorsed

[R2-2309832](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309832.zip) Open issue list on 37.340 running CR ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

* noted

38300

[R2-2310360](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310360.zip) 38.300 running CR for introduction of NR further mobility enhancements MediaTek Inc., vivo draftCR Rel-18 38.300 17.6.0 B NR\_Mob\_enh2-Core

- MTK explains that FFS issues resolved in stage-3 were removed. More need to be captured for DL and UL synch.

* Noted

[R2-2310361](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310361.zip) Stage-2 TP for Early Synchronization MediaTek Inc. discussion

* [AT123bis][511][feMob] Stage-2 TP for Early Synchronization (MTK)

Scope:

Intended outcome:

Deadline: CB acc to Meeting schedule

UE capabilites

[R2-2310028](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310028.zip) 38.306 running draftCR for introduction of NR further mobility enhancements Intel Corporation draftCR Rel-18 38.306 17.6.0 NR\_Mob\_enh2-Core

[R2-2310029](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310029.zip) 38.331 running draftCR for UE capability of NR further mobility enhancements Intel Corporation draftCR Rel-18 38.331 17.6.0 NR\_Mob\_enh2-Core

[R2-2310033](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310033.zip) Discussion on L2/3 UE capabilities for NR further mobility enhancements Intel Corporation discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311000](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311000.zip) UE capability for LTM and leftover stage 2 issues Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

### 7.4.2 L1L2 Triggered Mobility

#### 7.4.2.1 Control Plane and RRC

(WID: Configuration and maintenance for multiple candidate cells to allow fast application of configurations for candidate cells [RAN2, RAN3]).   
General LTM discussions (incl all aspects), if needed. RRC impact and solutions, stage-3 oriented: companies are encouraged to illustrate proposals by Text Proposals. Including the RRC LTM running CR. Including the outcome of [Post123][056][feMob] LTM Running CR RRC (Ericsson).

Including   
1) R2 centric issues : LTM config and execution (candidate + ref, applying complete config) etc  
2) R1-centric issues: e.g. reflecting RRC parameters (CSI, TCI, TA) from RAN1, and decision on the two options on CSI report provided by RAN1.

LTM RRC CR

[R2-2310885](C:\\Users\\mtk65284\\Documents\\3GPP\\tsg_ran\\WG2_RL2\\RAN2\\Docs\\R2-2310885.zip" \o "C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310885.zip) RRC running CR for LTM Ericsson draftCR Rel-18 38.331 17.6.0 B NR\_Mob\_enh2-Core

- Ericsson think some things should be addressed, this version not to be endorsed.

- Ericsson think we should merge the RRC CRs.

- MTK think we should merge as we have reference configs that can be a common thing. Vivo agrees.

- HW think we should first separate endorse. Merge at next meeting.

* We attempt merge at next meeting, endorse first.
* Expect to endorse RRC CR in a post email disc.

[R2-2310886](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310886.zip) RRC open issues list for LTM Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

* noted

Procedure Coexistence etc

E.g. coexistence with other mobiltiy procedures. Offline long email to next meeting.

[R2-2310887](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310887.zip) Discussion of remaining RRC open issues for LTM Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310399](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310399.zip) L3 handover with LTM configuration Fujitsu discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310802](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310802.zip) Coexistence of LTM and L3M/CHO Interdigital, Inc. discussion Rel-18 NR\_Mob\_enh2-Core

L1 related RRC handling and configuration

CSI Meas Report config, measurment RS/resource config, TCI, (inside outside containers?), SMTC?, Early RACH resource (Freq SSB BWP RO?) TCI early activation, TCI indication, CFRA resource indication, etc. Follow RAN1-suggested modelling or not?

Treat offline first, review current CR, consider comments in meeting inputs.

- Ericsson think that we can treat also L2L3 config and Bearer mapping but with lower priority

* [AT123bis][505][feMob] LTM RRC (Ericsson)

Scope: Discuss and converge on L1 related RRC handling and configuration, can also pre-discuss with lower prio L2L3 related RRC handling and configuration, and bearer remapping/handling for DC.

Intended outcome:

Deadline: CB acc to Meeting schedule (for L2L3 RRC handling and config and DC CB wed morning).

[R2-2311283](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311283.zip)

- MTK point out that R1 majority view was O1, but after checking O2 seems ok with R1.

* For the model of CSI report configuration, RAN2 to implement Option 2 (as in current RRC running CR).
* For the model of RS configuration, RAN2 to follow what indicated by RAN1 in the parameter list.
* The LTM CSI resource configuration is generated by the CU. Send an LS to RAN3 (include in LS below)
* The list of LTM CSI resource configuration is common for all the LTM candidate cells (as in current RRC running CR).
* RAN2 assumes that network can include the field spCellInclusion only if the SpCell is an LTM candidate cell.
* We send an LS to RAN1 (post meeting email disc).
* [AT123bis][513][feMob] R1 LS (Ericsson)

Scope:

Intended outcome:

Deadline: CB acc to Meeting schedule

[R2-2310888](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310888.zip) Early sync and L1 measurements Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

P3

- MTK think this should be left to impl. ZTE and CATT agrees

* No particular solution needed for TA timer handling, this is expected to be handled by the network.

[R2-2309916](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309916.zip) Discussion on L1 related issues for LTM CATT discussion Rel-18 NR\_Mob\_enh2-Core

- CATT indicates that RAN1 are discussing the issues on early Rach and TCI state this meeting, and suggest to wait for more R1 progress. Ericsson agrees

* For RRC aspects of early RACH and TCI state handling wait for R1

[R2-2310371](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310371.zip) Discussion on RRC open issues for LTM OPPO discussion Rel-18 NR\_Mob\_enh2-Core

- Ericsson think this is not in the current CR, this is in the MO

- CATT think this is left for RAN4, and this is discussed in RAN4, dep on whether inter-freq is supported.

- Xiaomi think it is reasonable, and we should probably ask R1 or R4.

- Apple think this was in R1 discussions and we can ask.

* Ask about SMTC (include in R1 LS)

[R2-2309710](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309710.zip) Discussion on RRC centric open issues LG Electronics discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310999](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310999.zip) RRC aspects for LTM Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

DISCUSSIONs

2abc

- No LS is expected from R3.

- Ericsson think it is ok to agree, think we should ask R3 how the src is identified.

* Proposal 2a: For each candidate target cell towards which early RACH is supported, the UE is provided with a RACH configuration (per source per cand), which can be the same for multiple source cells.
* Proposal 2b: RAN2 understands that the source DU needs to know the early RACH configuration for each candidate cell, so that source cell can know how to set the PDCCH order information for early RACH.
* Proposal 2c: The candidate DU provides the TA value and its associated information to the source DU via the CU, e.g. preamble index, RO information (i.e. RA-RNTI) and candidate cell identity, so that the source DU can identify the UE. RAN3 can design the necessary network signalling.
* Send LS to R3
* [AT123bis][512][feMob] LS to R3 (Huawei)

Scope:

Intended outcome:

Deadline: CB acc to Meeting schedule

[R2-2309719](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309719.zip) Discussion on LTM procedures vivo discussion Rel-18 NR\_Mob\_enh2-Core

L2L3 related RRC handling and configuration

RRC Configurations in general: ref config, cand config, complete config, procedure, use of existing delta configuration. Need Codes N, R, S, Configurations to determine L2 reset.

Treat Online

[R2-2309720](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309720.zip) RRC configuration for LTM vivo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310200](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310200.zip) LTM Configuration and Execution MediaTek Inc. discussion Rel-18 NR\_Mob\_enh2

[R2-2309834](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309834.zip) Remaining issues on LTM RRC ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310579](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310579.zip) Remaining issues of RRC configured Layer-2 reset Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core R2-2307669

[R2-2310624](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310624.zip) Discussion on RRC aspects of LTM Samsung discussion

[R2-2310619](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310619.zip) Discussion on RRC aspects for L1/L2-Triggered Mobility Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311124](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311124.zip) Remaining issues for RRC Aspects of LTM SHARP Corporation discussion Rel-18 NR\_Mob\_enh2-Core

Failure Handling

[R2-2310633](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310633.zip) On Failure Handling for Rel-18 LTM Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311210](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311210.zip) LTM Cell Switch Aspects Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310803](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310803.zip) Fast RLF for LTM execution Interdigital, Inc. discussion Rel-18 NR\_Mob\_enh2-Core

DC CA and Bearer Remapping  
MCG LTM, SCG LTM, CA scenarios

Treat Online

[R2-2309915](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309915.zip) Discussion on RAN2 centric issues for LTM CATT discussion Rel-18 NR\_Mob\_enh2-Core

P4

- HW think there is no problem. SCG is deactivated so there would be not much or no L1 measurements anyway, Lenovo agrees this will not happen.

P5

- Apple think we can support LTM recovery for SCG LTM. Ericsson think there will be some work for this.

- Nokia think we normally don’t allow UE to recover by itself.

* R2 assumes that SCG LTM with deactivated src SCG will not happen (no TS impact)
* For SCG configured LTM in NR-DC scenario, LTM recovery for SCG is not supported.
* Proposal 6: For SCG configured LTM in NR-DC scenario, in the case of RLF on PSCell/SCG LTM execution failure/PSCell change failure, UE shall

If the MCG transmission is not suspend, SCG failure information procedure will be triggered;

Otherwise, RRC re-establishment will be executed.

[R2-2309833](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309833.zip) Consideration on LTM in NR-DC ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311095](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311095.zip) RRC aspects of LTM Qualcomm Incorporated discussion

DISCUSSION

- Ericsson think we can keep the release at execution, but can allow also the network to release beforehand. Think we need restriction on which bearers can be allowed.

- NEC think everyone agrees on the need to release, but think there is interruption if there is reelase beforehand. Think we need to look into RB config think MN terminated RB no issue, think SN RN need to be remapped.

- vivo think it is up to network impl when to reelase, think SN terminated RBs can be handled by the network.

- MTK think that the issue by ZTE is valid: i.e. that PDCP reest or recovery is needed atbearer remapping.

- Apple think we should just rely on the network to provide the configuration for what the UE should do.

Complete in SCG if SRB3 is not available

- 2 alts in papers

- CATT prefers to MAC CE

- Lenovo hink CRNTI MAC CE can be used.

* UE only releases SCG configuration at MCG LTM execution if configured by the network (revert prior agreement). No intention to optimize further bearer handling for this case.
* UE need to send an UL transmission for procedure competion also for SCG case. If SRB3 is not configured, FFS exactly if / what modification to TS is needed.

[R2-2310634](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310634.zip) On SCG Release in Rel-18 LTM Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309581](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309581.zip) RB Reconfig for MCG LTM and Clarification on SCG LTM NEC discussion NR\_Mob\_enh2-Core

[R2-2310372](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310372.zip) Discussion on SCG LTM OPPO discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309931](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309931.zip) Analysis on SCG LTM Lenovo discussion Rel-18

[R2-2311211](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311211.zip) On bearer handling in LTM Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

Security – Avoiding Key Stream Reuse

[R2-2310398](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310398.zip) Remaining issue on LTM cell switch procedure Fujitsu discussion Rel-18 NR\_Mob\_enh2-Core

Further elaborations

Measurements

[R2-2310278](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310278.zip) Discussions on LTM related measurements CMCC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309580](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309580.zip) L1 measurement report to support LTM NEC discussion NR\_Mob\_enh2-Core

Misc

[R2-2310339](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310339.zip) CFRA and CG configuration aspects in LTM Apple discussion Rel-18 NR\_Mob\_enh2-Core

Enhancements

[R2-2310400](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310400.zip) Failure detection and fast recovery Fujitsu discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310440](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310440.zip) Prioritizing of LTM candidate cells Rakuten Symphony discussion Rel-18

[R2-2310473](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310473.zip) Security impacts of intra gNB, inter gNB-CU-UP relocation Rakuten Symphony discussion Rel-18

[R2-2310538](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310538.zip) Miscellaneous issues of L1/L2 Triggered Mobility Rakuten Symphony discussion Rel-18

[R2-2310983](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310983.zip) Fast cell recovery aspects for LTM failures Panasonic discussion Rel-18

[R2-2311091](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311091.zip) Conflict between LTM triggering and legacy RRC messaging Qualcomm Incorporated discussion

#### 7.4.2.2 L2 centric parts

General LTM discussions (incl all aspects) where the main issue/discussion point is L2 centric, if needed. Including L2 and MAC impacts (Stage-3 oriented) and remaning issues for dynamic cell switch not addressed by subclause above. Including the MAC Running CR.

MAC

Treat online

[R2-2309869](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309869.zip) 38.321 running CR for introduction of NR further mobility enhancements Huawei, HiSilicon draftCR Rel-18 38.321 17.6.0 NR\_Mob\_enh2-Core

- HW indicate that there are updates to address editors notes

* Updates reviewed together with capture of meeting agreements in post email disc

[R2-2309870](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309870.zip) Rapporteur proposals to address open issues in MAC running CRs (open issue list) Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

=> Revised in [R2-2311250](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311250.zip)

[R2-2311250](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311250.zip) Rapporteur proposals to address open issues in MAC running CRs (open issue list) Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

P2

- Ericsson think we need a configuration similar to for L2 reset as it depnds on bilateral inter-cell synch

- Xiaomi think we also need to consider TA timer handling.

P4

- LG think option 2 is simple. KDDI agrees. Lenovo think we can go this way.

- ZTE think we should have a separate configuration for this CG and then only used for LTM anot nothing more.

- vivo think this is just for first UL tx

- CATT think O1 is more reasonable.

- Chair suggest to just clarify the previous agreement (Option 2): For CG-based UL transmission for confirmation in the target cell, it is assumed this is CG configuration in the cond config and the UE can continue to use those CG (following current behaviour)

- Nokia think that for network, the CG handling is problematic, e.g. to support CG for many beams. Samsung also think O2 is problematic and think CG is needed for NTN.

P6

- Lenovo think it need to be addressed to same HARQ process ID. Xiaomi ZTEagree

* If UE is configured by RRC to perform UE based TA measurement, UE applies the measured TA value and performs RACH-less LTM, upon LTM cell switch. (assume similar config as for L2 reset)
* Observation: No or small specification impact/restriction is expected on the UE to use both DG and CG for RACH-less LTM.
* For RACH-less LTM, the UE determines successful reception of its first UL data based on receiving a PDCCH addressing the UE’s C-RNTI in the target cell scheduling a new transmission as first UL transmission. Can be either DL assignment or UL grant addressed to same HARQ process for the “new transmission”
* [AT123bis][514][feMob] LTM MAC Related Open Issues (Huawei)

Scope: Based on progress so far, continue discussions on R2-2311250, converge on remaining parts, prioritize parts with cross-TS dependency. Can also include other relevant potentially high-priority issues.

Intended outcome:

Deadline: CB acc to Meeting schedule

[R2-2309546](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309546.zip) Discussion on L2 Centric Parts CATT discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309711](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309711.zip) Discussion on CFRA based LTM LG Electronics discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309721](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309721.zip) Contents of LTM MAC CE and other MAC related issue for LTM vivo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309769](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309769.zip) Cell Switching – Open Issues Samsung Electronics Co., Ltd discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309770](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309770.zip) Early Timing Advance Management for LTM - Open Issues Samsung Electronics Co., Ltd discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309871](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309871.zip) Early TA acquisition and LTM MAC CE format Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309894](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309894.zip) RAN2 aspects of RACH-based early TA acquisition Fujitsu discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309895](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309895.zip) The completion of RACH-less LTM Cell switch Fujitsu discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309996](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309996.zip) Remaining issues to support PDCCH-ordered RACH for early TA acquisition LG Electronics Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310018](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310018.zip) Discussion on remaining issues for LTM cell switch command Transsion Holdings discussion Rel-18

[R2-2310099](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310099.zip) Some views On Remaining L2 centric issues for LTM ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310338](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310338.zip) On closing L2 centric open issues in LTM Apple discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310373](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310373.zip) Discussion on L2-centric issues for LTM OPPO discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310392](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310392.zip) RACH-Less LTM MediaTek Inc. discussion

[R2-2310580](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310580.zip) RACH-less LTM and early TA Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310581](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310581.zip) Remaining issues for RACH-based LTM Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core R2-2307671

[R2-2310646](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310646.zip) Discussion on L2 centric part of LTM NEC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310739](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310739.zip) Discussions on TA acquisition and indication for Rach-less LTM KDDI Corporation discussion Rel-18

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[R2-2310763](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310763.zip) RACH-less solution and TA indication for LTM Sony discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310804](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310804.zip) TA indication Interdigital, Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310889](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310889.zip) Remaining MAC issues Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311001](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311001.zip) RACH-less LTM Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311093](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311093.zip) Discussion on early TA acquisition and RACH-less LTM Qualcomm Incorporated discussion

[R2-2311094](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311094.zip) L2 aspects of LTM Qualcomm Incorporated discussion

[R2-2311105](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311105.zip) Discussion on LTM related MAC CE NTT DOCOMO, INC. discussion Rel-18

[R2-2311145](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311145.zip) Remaining issues for Early TA acquisition of RACH-less LTM Sharp discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311146](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311146.zip) Remaining issues for L2 centric parts of LTM Sharp discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309582](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309582.zip) Remaining issues for RACH less LTM cell switch NEC discussion NR\_Mob\_enh2-Core

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[R2-2310017](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310017.zip) Discussion on remaining issues of LTM cell switch procedure Transsion Holdings discussion Rel-18

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TCI state activation / beam indication

[R2-2310279](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310279.zip) Considerations on L2 centric parts CMCC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310104](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310104.zip) Remaining issues on candidate cell TCI state activation Panasonic discussion

[R2-2310374](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310374.zip) Discussion on TCI state related issues for LTM OPPO discussion Rel-18 NR\_Mob\_enh2-Core

UE based TA

[R2-2310277](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310277.zip) Discussions on LTM open issues CMCC discussion Rel-18 NR\_Mob\_enh2-Core

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[R2-2309851](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309851.zip) Support of UE-based TA acquisition for LTM Samsung discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310327](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310327.zip) RSTD based early TA acquisition Apple discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309787](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309787.zip) Configuration for UE based RACH-less LTM and sequential measurement Futurewei discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309930](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309930.zip) Discussion on UE based TA measurement Lenovo discussion Rel-18

[R2-2309786](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309786.zip) Support UE based TA determination and RACH-less LTM Futurewei discussion Rel-18 NR\_Mob\_enh2-Core

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Recovery cases

[R2-2309881](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309881.zip) Discussion on fallback RACH for L1L2-triggered mobility ASUSTeK discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310100](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310100.zip) Further Discussion on RACH-less LTM ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309713](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309713.zip) Views on RACH-less fast recovery KDDI Corporation discussion NR\_Mob\_enh2-Core

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Further Enhancements

[R2-2309788](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309788.zip) Lower layer operation for UE based RACH-less LTM Futurewei discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309712](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309712.zip) Discussion on L2 centric open issues LG Electronics discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309575](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309575.zip) Remaining aspects of Cell Switch Lenovo discussion NR\_Mob\_enh2-Core

[R2-2310530](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310530.zip) Delayed Resource Reservation for inter gNB-DU LTM Rakuten Symphony discussion Rel-18

[R2-2310537](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310537.zip) TA acquisition related open issues Rakuten Symphony discussion Rel-18

### 7.4.3 Subsequent CPAC

Formerly called “NR-DC with selective activation cell of groups”.

RRC CR

[R2-2310375](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310375.zip) RRC running CR for subsequent CPAC in NR-DC OPPO draftCR Rel-18 38.331 17.6.0 B NR\_Mob\_enh2-Core

[R2-2310376](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310376.zip) RRC open issues list for subsequent CPAC in NR-DC OPPO discussion Rel-18 NR\_Mob\_enh2-Core

- Oppo report that this is resubmission of endorsed CR version, and hasn’t recevied any further comments

* Both noted

Open Issues

[R2-2309831](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309831.zip) Summary of [Post123][054][feMob] Discussion on stage-2 signalling open issues ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

Moved from 7.4.1

P7

- MTK think this is related to P9, would like to discussion P9 first.

- OPPO think it relates to handling of the Ref config.

P12:

- Ericsson wonder if there are cond in the src SN whether they can be included.

- HW wonder if there is something else. HW think this can include PScells of other cand SN as well

Check with R3

- ZTE explains that the intention is just to send an LS to R3 with the agreements. MTK agrees that RAN2 can make assumptions and send LS.

P14

- Apple understands that the Cand SN only provides info about proposed cells. HW think we only support 8 so this restriction seems practical. OPPO agrees this is the restriction.

P16b

- ZTE explains that New should be removed.

P6

- Nok wonder if the MN initiated can contain only the SN part or always MN and SN. ZTE think this is flexible acc to P5. Ericsson agrees this can be flexible.

* Proposals marked easy agreement are agreed, except P7

P9

- Chair wonder what the signalling would be like for U1. ZTE think it involves some more signalling for coord.

- MTK think U2 may bring limitations to co-existence, but U1 brings some more signalling.

- HW fthink that we can have coexistence. IN R17 we have both MN configured and SN configured at the same time.

- Nokia wonder if the reference contains both MCG and SCG or just SCG in some case.

- Ericsson think we are discussing rhe maximum no of ref config and agrees we can go with 2.

- Apple think this dep on the format, if we have the same format, we can also use one ref config for both. Vivo think we go with U2 and then after more details disc we can determine if U1 works

- CMCC think U2 is ok

P7

- MTK think that then intra SN and inter SN would have different formats and suggest not to agree P7.

- OPPO think this could work as legacy. LGE agres.

Format:

- vivo wonder if we will continue discussion on the format.

- ZTE think many companies want to allow intra-SN in MN format.

- Apple would prefer to have also intra-SN in MN format. Think this would be simpler. Vivo agrees.

- CATT think that the format question is related to 9a.

- Ericsson think that it would be more complex for the UE to support mixed format cases. MTK agrees, would not like to have both formats used for a UE. QC clarifies that R17 support the mixed format case. MTK think this is different as we now support subsequent CPC. Ericsson agrees and think intra-SN case can become an inter-SN case. OPPO wonder if we then would not support non-MN-involved.

- Session Chair: instead of agreeing P7 P9 etc lets agree instead the UE part and look for consequences if any.

* For one UE, for CPC only either MN format or SN format (only intra-SN case is possible) is used
* MN format is supported for intra-SN (in addition to SN format)

*Session Chair: Can discuss if this bring additional consequences, e.g. can discuss for the LS, whether additional things should be clarified to R3.*

13a, 13b agreed as starting point. Can discuss further in the CR work

* P13a: For MN initiated inter-SN subsequent CPAC, in SN Addition Request message, the MN includes the following information to each candidate SN:

- A list of candidate SNs, and for each candidate SN in the list, a list of cells recommended by MN (assume format as legacy)

* P13b: For SN initiated inter-SN subsequent CPAC, in SN Addition Request message, the MN includes the following information to each candidate SN:

A list of candidate SNs, and for each candidate SN in the list, a list of PSCells suggested to be prepared by the candidate SN.

* Postpone 13c

*Session Chair: If further issues are found during the CR work, we can come back.*

* [AT123bis][502][feMob] LS out to R3 on S-CPAC (ZTE)

Scope:

Intended outcome:

Deadline: CB acc to Meeting schedule

Security

[R2-2311010](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311010.zip) Rapporteur summary Post[123][046][feMob] subsequent CPAC security issues Nokia, Nokia Shanghai Bell discussion

P4

- ZTE wonder if we can remove that the UE maintains. Nokia think the UE need to maintain. Chair: think we can further clarify.

P5

- Lenovo think this is should be captured somewhere, e.g. a FD as it is useful fo the UE. NEC agrees.

- Ericsson wonder if the existing value can be used in some case. Apple agrees.

- Nokia agrees that a single sk-counter list is used.

- Chair: can attempt a different wording for P5 offline, and can maybe attempt to progress some more.

* Rel-18 Conditional-Reconfiguration Information element may include

- List of Group-ID (mapping to SN) and associated SK-counter values outside the candidate conditional configurations.

- The Group-ID parameter is included within each candidate conditional configuration(CondConfigAddMod) marked for subsequent CPAC.

* R2 assumes that the UE need not include the selected SK-counter value in the RRC Reconfiguration Complete message as the selection of SK-counter for Inter-SN cell change follows the defined pattern according to SA3 solution. FFS if useful to still include this, to support some error/failure cases.
* For Pcell-change /PSCell-change /SCG Release scenarios, if the SCPAC configuration is maintained, UE also maintains the current status of the SK-counter list.
* [AT123bis][503][feMob] subsequent CPAC security issues (NOkia)

Scope: f2f offline, attempt further progress.

Intended outcome:

Deadline: CB acc to Meeting schedule

[R2-2311163](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311163.zip) Discussion on security issue for subsequent CPAC NTT DOCOMO, INC. discussion

[R2-2311147](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311147.zip) Remaining issues for security aspects of Subsequent CPAC Sharp discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310337](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310337.zip) UE reporting of sk-counter for S-CPAC Apple discussion Rel-18 NR\_Mob\_enh2-Core

General

[R2-2309547](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309547.zip) Discussion on subsequent CPAC CATT discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309722](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309722.zip) Remaining issues for subsequent CPAC vivo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309835](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309835.zip) Remaining issues on subsequent CPAC ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309852](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309852.zip) Considerations on Subsequent CPAC after SCG Change Samsung discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309908](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309908.zip) Discussion on Subsequent CPAC FGI discussion

[R2-2309948](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309948.zip) Left issues on subsequent CPAC Lenovo discussion Rel-18

[R2-2310006](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310006.zip) Discussion on issues of subsequent CPAC Spreadtrum Communications discussion Rel-18

[R2-2310019](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310019.zip) Discussion on Selective Activation of Cell Groups in NR-DC Transsion Holdings discussion Rel-18

[R2-2310268](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310268.zip) Discussion on remaining open issues for subsequent CPAC CMCC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310326](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310326.zip) Discussion on Subsequent CPAC Apple discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310377](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310377.zip) Discussion on open issues for subsequent CPAC in NR-DC OPPO discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310529](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310529.zip) Subsequent CPAC in NR-DC Qualcomm Incorporated discussion Rel-18

[R2-2310573](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310573.zip) Discussion on the evaluation adjustment for SCPAC ITRI discussion NR\_Mob\_enh2-Core R2-2307889

[R2-2310620](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310620.zip) Discussion on subsequent CPAC Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310647](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310647.zip) Discussion on subsequent CPAC NEC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310873](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310873.zip) Discussion on subsequent CPAC MediaTek Inc. discussion NR\_Mob\_enh2-Core R2-2308756

[R2-2310890](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310890.zip) Discussion on subsequent CPAC Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310987](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310987.zip) Open issues regarding subsequent CPAC Interdigital Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311002](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311002.zip) Subsequent CPAC Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311011](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311011.zip) Discussion on Measurements, Reference Configuration, Security Issues, and Failure Handling for SCPAC Nokia, Nokia Shanghai Bell discussion

[R2-2311096](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311096.zip) Stage 2 and 3 issues for Subsequent CPC LG Electronics Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311148](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311148.zip) Discussion on subsequent CPAC Sharp discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311195](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311195.zip) Discussion on NR-DC with subsequent CPAC. DENSO CORPORATION discussion Rel-18 NR\_Mob\_enh2-Core

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

RRC CR

[R2-2309543](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309543.zip) RRC Running CR for CHO with candidate SCGs CATT draftCR Rel-18 38.331 17.6.0 NR\_Mob\_enh2-Core

[R2-2309544](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309544.zip) RRC Open issue list for CHO with candidate SCGs CATT discussion Rel-18 NR\_Mob\_enh2-Core

General

[R2-2309548](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309548.zip) Rapporteur proposals to open issues on CHO with candidate SCGs CATT, Huawei, HiSilicon, MediaTek, vivo, Lenovo, OPPO, ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

=> Revised in [R2-2311249](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311249.zip)

[R2-2311249](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311249.zip) Rapporteur proposals to open issues on CHO with candidate SCGs CATT, Huawei, HiSilicon, MediaTek, vivo, Lenovo, OPPO, ZTE Corporation, Sanechips, Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

P1P2

- Ericsson think we can agree to the latter part. CATT think the first part refers to R17 configuration. Ericsson wonder why this is important. QC agrees.

- QC wonder if this is a case of CPA/CPC and CHO with cand SCG coexist. CATT confirms that this is for a co-existence scenario.

- vivo wonder if we need to have the same behaviour as R17.

chair: some confusion – P1 offline

P4

- Ericsson think there could be a UE capability to support > 8. QC think the max should be 8

* P2: The execution of CHO with candidate SCG is prioritized, if both PCell for CHO only or CHO including target MCG and target SCG, and the PCell and the associated PSCell for CHO with candidate SCG(s) is triggered
* P4: R2 assumes that the maximum number of conditional reconfigurations maxNrofCondCells (i.e., including the coexistence CHO with candidate SCGs, CHO only, CHO with target SCG, CPA/CPC if present) is 8 in Rel-18. FFS whether any optional additional UE cap is needed.
* [AT123bis][504][feMob] open issues on CHO with candidate SCGs (CATT)

Scope: Offline further progress based on R2-2311249 (and related other contributions). Identify “easy agreements” and FFS points for further disc next meeting.

Intended outcome:

Deadline: CB acc to Meeting schedule

[R2-2309723](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309723.zip) Discussion on CHO with Candidate SCGs vivo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309836](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309836.zip) Remaining issues on CHO with candidate SCG(s) ZTE Corporation, Sanechips discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309872](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309872.zip) Discussion on CHO with candidate SCG(s) Huawei, HiSilicon discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309907](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309907.zip) Discussion on CHO including target MCG and candidate SCGs FGI discussion

[R2-2309932](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309932.zip) CHO with candidate SCG for CPAC Lenovo discussion Rel-18

[R2-2309981](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309981.zip) Considerations on CHO with CPA/CPC Samsung discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310020](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310020.zip) Discussion on CHO with candidate SCGs Transsion Holdings discussion Rel-18

[R2-2310224](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310224.zip) Discussion on open issues of CHO with candidate SCGs China Telecom discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310264](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310264.zip) Discussion on CHO with candidate SCGs CMCC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310378](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310378.zip) Discussion on open issues for CHO with candidate SCGs OPPO discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310437](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310437.zip) Discussions on CHO with candidate SCGs KDDI Corporation discussion

[R2-2310528](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310528.zip) CHO with multiple candidate SCGs Qualcomm Incorporated discussion Rel-18

[R2-2310621](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310621.zip) Discussion on CHO with candidate SCG(s) Xiaomi discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310635](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310635.zip) Final details on CHO with CPAC in Rel-18 Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310891](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310891.zip) CHO with associated CPC or CPA Ericsson discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310988](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310988.zip) Open issues regarding CHO with associated SCG Interdigital Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311082](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311082.zip) On CHO recovery for CHO with candidate SCG MediaTek Inc. discussion NR\_Mob\_enh2-Core R2-2308750

[R2-2311097](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311097.zip) Simultaneous Execution of CHO and CPAC LG Electronics Inc. discussion Rel-18 NR\_Mob\_enh2-Core

### 7.4.5 Others

Including contributions on improvement to SCell/SCG setup delay

LS in

[R2-2309462](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309462.zip) LS on improvement on FR2 SCell/SCG setup delay (R4-2314466; contact: Nokia) RAN4 LS in Rel-18 NR\_Mob\_enh2-Core To:RAN2

Moved from 7.4.1

* Noted

General

[R2-2310796](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310796.zip) eEMR SCell setup delay Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_Mob\_enh2-Core

- Nokia think most from existing EMR can be reused, but not the timer, as the measurements are expected to be started at connection setup.

- Nokia think we can start to work on the RRC CR.

- Ericsson think we can start on the CR and can reuse.

- MTK think this contains a lot of FFS, not sure it is useful to start CR discussion. Can identify R2 impact.

- QC think we cannot really capture anything, based on R4 progress. If R4 progress, we can do something.

- LGE think we can start some work .. but not CR. LGE think measurement configuration is different to EMR.

- Chair think R2 impact is limited, if R4 can conclude it should be possible to have CRs in R2.

* R2 expect to reuse legacy EMR to great extent
* Long email disc to next meeting, identifying R2 impact and attempting RRC Draft CR (Nokia)

[R2-2310481](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310481.zip) Discussion on fast SCell/SCG setup CMCC, Ericsson, ZTE, Huawei, vivo discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2309545](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309545.zip) Discussion on improvement of FR2 SCell/SCG setup delay CATT discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310535](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310535.zip) Discussion on fast Scell setup vivo discussion Rel-18 NR\_Mob\_enh2-Core Late

[R2-2310801](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310801.zip) Improvement on Scell/SCG setup/resume delay Interdigital, Inc. discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2310892](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310892.zip) Discussion on early measurements enhancements Ericsson, CMCC discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311078](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311078.zip) RAN2 signaling for improvement to SCellSCG setup delay LG Electronics discussion Rel-18 NR\_Mob\_enh2-Core

[R2-2311113](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311113.zip) Discussion on FR2 SCell/SCG setup delay MediaTek Inc. discussion NR\_Mob\_enh2-Core

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

( NR\_mobile\_IAB -Core; leading WG: RAN3; REL-18; WID: [RP-232669](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\TSG_RAN\RAN\Docs\RP-232669.zip))

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

### 7.12.1 Organizational

Ls in Rapporteur input, running CRs etc

Workplan

[R2-2310188](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310188.zip) Updated workplan for Rel-18 mobile IAB Qualcomm Inc. (Rapporteur) Work Plan Rel-18 NR\_mobile\_IAB

- QC think an important issue is the connection to R17 cell etc.

* noted

LS in

[R2-2309475](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309475.zip) Reply LS CAG solution for mobile IAB (S2-2309998; contact: Ericsson) SA2 LS in Rel-18 NR\_mobile\_IAB-Core, VMR To:RAN2 Cc:RAN3

* noted, no AS impact is assumed

[R2-2310897](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310897.zip) Conclusions of CAG feature for mobile IAB Ericsson discussion Rel-18 NR\_mobile\_IAB-Core

CRs

BAP

[R2-2309826](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309826.zip) Running CR for introduction of mobile IAB in TS 38.340 (including open issue list) Huawei, HiSilicon discussion Rel-18 NR\_mobile\_IAB-Core

- HW indicates that this version contains Rap updates and open issues, in addition to latest endorsed version.

[R2-2310082](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310082.zip) On impacts to BAP spec CATT, Apple discussion Rel-18 NR\_mobile\_IAB

- HW think this can be taken into account offline.

- Samsung think we should also then include the issue of modelling of multiple DUs R2-2311181.

[R2-2311181](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311181.zip) Mobile IAB node vs IAB node: how to capture the distinction in specifications Samsung R&D Institute UK discussion

* [AT123bis][506][mIAB] BAP (HW)

Scope: progress based on proposals to this meeting and comments

Intended outcome: Endorsable running CR

Deadline: CB acc to Meeting schedule

RRC

[R2-2310893](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310893.zip) RRC running CR for mobile IAB Ericsson draftCR Rel-18 38.331 17.6.0 B NR\_mobile\_IAB-Core

- Ericsson indicate that RACH-less is now covered, it is consistent with overlapping NTN parts.

[R2-2310894](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310894.zip) RRC open issues list for mobile IAB Ericsson discussion Rel-18 NR\_mobile\_IAB-Core

UE Caps

[R2-2310120](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310120.zip) 38.306 running CR for mobile IAB capabilities Nokia, Nokia Shanghai Bell draftCR Rel-18 38.306 17.6.0 NR\_mobile\_IAB-Core

[R2-2310121](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310121.zip) 38.331 running CR for mobile IAB capabilities Nokia, Nokia Shanghai Bell draftCR Rel-18 38.331 17.6.0 NR\_mobile\_IAB-Core

### 7.12.2 Mobility Enhancements

Enhancements for mobility of an IAB-node together with its served UEs.. [RAN3, RAN2]

#### 7.12.2.1 Connected mode

##### 7.12.2.1.1 Reuse of NR NTN RACH-less Handover

Tdoc Limitation: 0

Reuse of NR NTN RACH-less handover is assumed. Modifications of or difference in procedure specifically for mIAB need to be determined (mIAB-specifics only when/if there is a need). There will be offline reivews to assess potential impacts etc. CR rapporteurs (MAC: Samsung, RRC: Ericsson, UE capabilities: Nokia, Stage-2: QC) are encouraged to work with their NR NTN coutnerparts and are invited to input on the potenital TS impacts, and CR strategies (e.g. CR common mIAB/NR NTN, or mIAB CR copy-paste from NR NTN CR etc), and otther aspects as needed. Others are expected to input at the meeting.

Treat online (Third)

General

[R2-2310302](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310302.zip) Remaining issues on CONNECTED mobility in mobile IAB Apple discussion Rel-18 NR\_mobile\_IAB-Core

MAC

[R2-2311179](C:\\Users\\mtk65284\\Documents\\3GPP\\tsg_ran\\WG2_RL2\\RAN2\\Docs\\R2-2311179.zip" \o "C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311179.zip) IAB MAC rapporteur views on MAC impact of RACH-less HO for mIAB and alignment with NTN Samsung R&D Institute UK discussion

Moved from 7.12.1

DISCUSSION

- QC think we need to focus on the delta to NTN. We don’t need to confirm every NTN agreement.

- Ericsson would prefer to have a separate MAC CR as for mIAB it is only RACH-less.

* R2 assumes that for MAC we will work on a joint NTN mIAB CR, FFS if we split into two in the end.
* R2 assumes that for RRC there will be separate NTN and mIAB CRs that need to be consistent.
* UE caps FFS (can discuss next meeting)
* [AT123bis][507][mIAB] Support of RACH-less HO (Samsung)

Scope: Focus on the necessary delta to NTN (e.g. no need to confirm every NTN agreement for mIAB). Review proposals in RRC CR, in R2-2311179 (and other relevant docs if needed).

Intended outcome:

Deadline: CB acc to Meeting schedule

RRC

[R2-2310895](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310895.zip) Rapporteur resolution proposals for mIAB RRC open issues Ericsson discussion Rel-18 NR\_mobile\_IAB-Core

##### 7.12.2.1.2 Other

Including Open Issues (identification of, resolution to), if any. Stage-3 progress (pl illustrate with TPs. Please see Running CRs.

Chair: On new (not-yet-agreed) proposals, there has previously been some interest for time-based CHO (which can be discussed one more round). Other new (not-yet-agreed) proposals, are not expected to be treated.

[R2-2311132](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311132.zip) Time-based CHO enhancement for Mobile IAB AT&T discussion

[R2-2309798](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309798.zip) Remaining issues of mobility enhancements for mobile IAB NEC Corporation discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2310122](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310122.zip) Connected mode issues for mobile IAB Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2310190](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310190.zip) Enhancements for mobile IAB connected mode mobility Qualcomm Inc. discussion Rel-18 NR\_mobile\_IAB

[R2-2310630](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310630.zip) Discussion on mIAB connected mode aspects Samsung Electronics Polska discussion Rel-18 NR\_mobile\_IAB

[R2-2311077](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311077.zip) Resolving open issues - CondEventT1 and mIAB indication during connection setup LG Electronics discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2309827](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309827.zip) Connected mode enhancement for mobile IAB Huawei, HiSilicon discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2309939](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309939.zip) Mobility enhancements for mobile IAB-node and its connected UE Lenovo discussion Rel-18

[R2-2309972](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309972.zip) Discussion on mobility enhancement for UE in connected mode ZTE, Sanechips discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2310025](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310025.zip) Mobile IAB general aspects and mobility enhancement for connected UEs Intel Corporation discussion Rel-18 NR\_mobile\_IAB

[R2-2310303](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310303.zip) UE on-board status identification and reporting Apple, Huawei, HiSilicon, Lenovo, CATT, InterDigital Inc. discussion Rel-18 NR\_mobile\_IAB-Core R2-2307822

#### 7.12.2.2 Idle/Inactive mode

Including Open Issues (identification of, resolution to), if any. Stage-3 progress (pl illustrate with TPs). Please See Running CRs.

[R2-2311076](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311076.zip) Cell reselection and PCI list of IAB cells LG Electronics discussion Rel-18 NR\_mobile\_IAB-Core

* [AT123bis][508][feMob] Cell reselection and PCI list of IAB cells (LGE)

Scope:

Intended outcome: Agreeable points

Deadline: CB acc to Meeting schedule

[R2-2309828](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309828.zip) Idle/Inactive mode mobility enhancement for mobile IAB Huawei, HiSilicon discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2309940](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309940.zip) Mobility enhancement for UE in idle or inactive mode Lenovo discussion Rel-18

[R2-2309973](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309973.zip) Discussion on mobility enhancement for UE in idle or inactive mode ZTE, Sanechips discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2310026](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310026.zip) UE cell (re)selection and mIAB CAG Intel Corporation discussion Rel-18 NR\_mobile\_IAB

[R2-2310075](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310075.zip) Cell reselection prioritization for mobile IAB cells Samsung Guangzhou Mobile R&D discussion

[R2-2310081](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310081.zip) Idle mode mobility for mobile IAB CATT discussion Rel-18 NR\_mobile\_IAB

[R2-2310123](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310123.zip) Cell reselection issues for UEs in mobile IAB scenarios Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2310191](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310191.zip) Enhancements for mobile IAB idle and inactive mode mobility Qualcomm Inc. discussion Rel-18 NR\_mobile\_IAB

[R2-2310304](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310304.zip) Remaining issues on IDLE INACTIVE mobility in mobile IAB Apple discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2310589](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310589.zip) Discussion on the mIAB access to the network Xiaomi discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2310590](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310590.zip) Assistance information for prioritizing mobile IAB cell Xiaomi discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2310773](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310773.zip) Mobile IAB cell indication to UE behaviour Sony discussion Rel-18 NR\_mobile\_IAB

[R2-2310896](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310896.zip) Indication of DU-migration to UEs in IDLE and INACTIVE Ericsson discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2311018](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311018.zip) UE cell reselection prioritization for mobile IAB SHARP Corporation discussion Rel-18 R2-2308581

[R2-2311067](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311067.zip) IDLE/INACTIVE mode mobility enhancements for mobile IAB Kyocera discussion Rel-18 R2-2308110

[R2-2311075](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311075.zip) Access restriction for mIAB cell LG Electronics discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2311133](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311133.zip) Inter-frequency cell reselection enhancements for Mobile IAB AT&T discussion

PCI list

### 7.12.3 Other

Procedures for migration/topology adaptation to enable IAB-node mobility [RAN3, RAN2].

Mitigation of interference due to IAB-node mobility. [RAN3, RAN2]. Note that on PCI collision, RAN2 agreed that further work on this matter would be based on LS by RAN3. Note that on RACH interference and collisions RAN2 agreed that this better be handled between RAN3 and RAN1. Chair: THUS it is not clear whether any interference-mitigation paper would be treated without LS.  
Including UE capabilites. Including outcome of [Post123][051][mIAB] Running CRs UE caps (Nokia).

General

Treat online (first)

[R2-2310189](C:\\Users\\mtk65284\\Documents\\3GPP\\tsg_ran\\WG2_RL2\\RAN2\\Docs\\R2-2310189.zip" \o "C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310189.zip) Mobile IAB-node connecting to Rel-16/17 IAB cell Qualcomm Inc. discussion Rel-18 NR\_mobile\_IAB

DISCUSSION

- HW think this is up to the network.

- ZTE think that in any case a iab node can have both capabilities.

* From R2 perspective It is not supported that Rel-18 mobile IAB-node concurrently operate as a Rel-16/17 IAB-node, as e.g. mobile-IAB doesn’t support child IAB nodes.
* This means that there are restrictions for the network in configuring concurrent use of R-18 mIAB feature(s) and rel-16/17 IAB features (details FFS).
* FFS if an IAB-node may send both MSG5 indications to the network, and the network decides (or if the IAB-node should decide).

[R2-2310591](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310591.zip) Clarification on the mIAB connection to the legacy IAB-donor Xiaomi discussion Rel-18 NR\_mobile\_IAB-Core

* Noted

UE capabilites

Treat online (second)

[R2-2310124](C:\\Users\\mtk65284\\Documents\\3GPP\\tsg_ran\\WG2_RL2\\RAN2\\Docs\\R2-2310124.zip" \o "C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310124.zip) Summary of [Post123][051][mIAB] Running CRs UE caps (Nokia) Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_mobile\_IAB-Core

DISCUSSION P1

- QC think Msg5 indication is a preference indication for AMF selection. Capability is different to this.

- CATT think that MSG5 indicates UE capability and this is thus not needed in UE capabilities. Ericsson think the purpose is different, and think we need such capability for Xn handover (for which the UE cap container is used).

- ZTE think a mIAB node shall check the IAB bcast indication and adjust cell reselection behaviour accordingly. Samsung agrees. HW think this is idle mode and we don’t need signalling.

- Intel think the new cap is used at handover, and think that it may imply restrictions in configuring DC etc.

- Ericsson think that for handover it is needed to know whether the mIAB MT support mIAB or not, so this capability is needed. HW think this can all be resolved by RAN3 signalling.

* RAN2 assumes that the mobileIAB-NodeIndication-r18 in Msg5 implies a preference/intention, with the purpose to help gNB select core network node at initial registration.
* RAN2 assumes that the MT Idle mode behaviours is reflected by a Cap wo signalling in 38306.
* FFS if a separate mobile-IAB capability (signalled) is introduced in Rel-18.

[R2-2309829](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309829.zip) Open issues on UE capability and RANU for mobile IAB Huawei, HiSilicon discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2309974](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309974.zip) Discussion on remaining issues for mobile IAB ZTE, Sanechips discussion Rel-18 NR\_mobile\_IAB-Core

[R2-2310027](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310027.zip) Discussion on mIAB-MT UE capability Intel Corporation discussion Rel-18 NR\_mobile\_IAB

[R2-2310083](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310083.zip) On UE capabilities for mIAB CATT discussion Rel-18 NR\_mobile\_IAB

Lower priority

[R2-2310774](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310774.zip) PCI collision in mobile IAB Sony discussion Rel-18 NR\_mobile\_IAB

## 7.22 Study on low-power wake-up signal and receiver for NR

(FS\_NR\_LPWUS; leading WG: RAN1; REL-18; WID: [RP-232672](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\TSG_RAN\RAN\Docs\RP-232672.zip))

Time budget: 0.5 TU

Tdoc Limitation: 2 tdoc

### 7.22.1   Organizational

Incoming LSs, Rapporteur input etc.

[R2-2309737](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309737.zip) Update of TR 38.869 for LP-WUS WUR vivo (Rapporteur) discussion Rel-18 FS\_NR\_LPWUS

- vivo explains this is the same version as last meeting, encourage to comment directly to rapporteur.

- Nokia wonder if R2 would make a recommendation?

- vivo think for next meeting we may need to complement the recommendation from R1.

* Noted for now

### 7.22.2   Idle Inactive Mode

[R2-2309735](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309735.zip) Discussion on LP-WUS WUR in RRC\_IDLE INACTIVE vivo discussion Rel-18 FS\_NR\_LPWUS

[R2-2310313](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310313.zip) RAN2 impact of LP-WUS in RRC\_IDLE/INACTIVE state Apple discussion Rel-18 FS\_NR\_LPWUS

[R2-2309493](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309493.zip) Use of low-power receiver in RRC Idle/Inactive Qualcomm Incorporated discussion Rel-18 FS\_NR\_LPWUS

[R2-2309536](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309536.zip) Discussion on LP-WUS in RRC\_IDLE/INACTIVE OPPO discussion Rel-18 FS\_NR\_LPWUS

[R2-2309818](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309818.zip) Further considerations on LP-WUS in RRC\_IDLE&INACTIVE states CATT discussion Rel-18 FS\_NR\_LPWUS

[R2-2309858](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309858.zip) LP-WUS in RRC\_IDLE/INACATIVE LG Electronics Inc. discussion Rel-18 FS\_NR\_LPWUS

[R2-2310039](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310039.zip) General considerations on the procedure for RRC\_IDLE\_INACTIVE Xiaomi Communications discussion

[R2-2310062](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310062.zip) Discussion on LPWUS in RRC\_IDLE INACTIVE NEC Corporation. discussion Rel-18 FS\_NR\_LPWUS

[R2-2310483](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310483.zip) Remaining issues on LP-WUS in RRC\_IDLE/INACTIVE state Huawei, HiSilicon discussion Rel-18 FS\_NR\_LPWUS

[R2-2310722](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310722.zip) LP-WUS in RRC IDLE and INACTIVE Nokia, Nokia Shanghai Bell discussion Rel-18 FS\_NR\_LPWUS

[R2-2310778](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310778.zip) Considerations on LP-WUR in RRC Idle/Inactive mode Sony discussion Rel-18 FS\_NR\_LPWUS

[R2-2310827](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310827.zip) Remaining issues of LP-WUS in idle or inactive mode ZTE Corporation, Sanechips discussion Rel-18 FS\_NR\_LPWUS

[R2-2311064](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311064.zip) LP-WUS/WUR for RRC Idle and Inactive Ericsson discussion Rel-18 FS\_NR\_LPWUS

[R2-2311171](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311171.zip) On impact to IDLE/INACTIVE procedures to support LP-WUR Samsung R&D Institute India discussion Rel-18

[R2-2311216](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311216.zip) LP-WUS in RRC Idle/ Inactive Mode Lenovo discussion FS\_NR\_LPWUS

### 7.22.3   Connected Mode

[R2-2309492](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309492.zip) Summary of [Post123][060][LPWUS] Low-power receiver in RRC Connected (Qualcomm) Qualcomm Incorporated discussion Rel-18 FS\_NR\_LPWUS

DISCUSSION P1 P2

- P1: VDF think this is MR active time

- LG are not sure we need to relate LP-WUS to DRX. Think the most basic operation is to just turn on the MR.

- CATT think these are good baseline.

- Ericsson think we cannot discuss everything but also think we will not be able to converge on detailed solution.

- Chair asks if R1 has assumed whether any PDCCH monitoring is done in MR “sleep” state. Vivo think MR will not monitor PDCCH at all unless triggered by LP-WUS.

Chair asks if something like the following can be agreed: R2 further assumes that such LP-WUS indication may be necessary to trigger any MR PDCCH monitoring, i.e. UE not reachable by MR PDCCH without the LP-WUS trigger (FFS detailed conditions).

- Apple think that LP-WUS is also for latency, and think that LP-WUS could be use to wake up the UE when the UE is in PDCCH skip state.

- Nokia think also UL transmission may trigger PDCCH monitoring.

P1

- Lenovo wonder if one intention is to replace DCP. QC confirms that this was proposed.

P2

- OPPO think that LP-WUS can be used to make the UE minor PDCCH in a PDCCH skipping duration.

* RAN2 assumes that the Intention with LP-WUS indication in connected is to trigger MR PDCCH monitoring.
* Option 1 to relate LP-WUS with DRX: Network can configure LP-WUS outside MR DRX active time. In that case, LP-WUS can trigger MR PDCCH monitoring to start procedures related to DRX timer(s). FFS which timer and whether/how it may co-exist with R16 DCP.
* Can CB online to P4 if time

[R2-2309842](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309842.zip) Further considerations on LP-WUS in RRC\_CONNECTED Huawei, HiSilicon discussion Rel-18 FS\_NR\_LPWUS

DISCUSSION

*Proposal 1: It should be known by the gNB whether the UE currently is monitoring LP-WUS by LR or monitoring PDCCH by MR.*

- P1: CATT think it is too early to decide. Think the network can send both. Reluctant to agree now. Ericsson agrees. QC as well. QC think the main knowledge the network needs is if the UE is in coverage of the LP-WUS.

- ZTE think connected and Idle may be different. ZTE think that the network activates explicitly LP-WUS monitoring.

- *Chair: seems P1 is not agreeable as is, there seems to be some consensus that there is some network control and some UE actions (e.g. taken when UE goes out of LP-WUS coverage) FFS details.*

P2.2

- LG is ok

- Apple think there is no R2 impact.

- *Chair: Also for this case there may be a new timer for LP-WUS, and we may choose to put this in MAC, so use the word “current” for now, it seems the main differentiator is to not use DRX.*

* Option 2 to have LP-WUS transparent to current MAC operation (might not have impact to MAC)

*Chair: No intention to downselect these options in the SI.*

[R2-2311068](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311068.zip) LP-WUS/WUR for RRC Connected Ericsson discussion Rel-18 FS\_NR\_LPWUS

* noted

RRM

- Session Chair think that all R2 mobility procedures (incl Handover, Cell reselection etc) requires MR. Question if this need to be studied in R2. Ericsson think not. Vivo think that R4 only discuss RRM serving cell meas for Idle so far.

- Lenovo think RRM is more than measurements and we should be careful.

*Chair: Suggests we assume no substantial impact in SI and no need to discuss RRM in R2 in SI phase (for connected mode at least).*

* [AT123bis][510][LP-WUS] connected mode (vivo)

Scope: Can consider additional option (if support is significant), Can consider to describe the options a little but better, identify open points that should be addressed/clarified in the SI. Can consider to capture pros/cons for each option. Can consider capture something related to duty-cycled, continuous modes.

Intended outcome:

Deadline: CB acc to Meeting schedule

[R2-2309530](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309530.zip) Discussion on LP-WUS in RRC Connected OPPO discussion Rel-18 FS\_NR\_LPWUS

[R2-2309736](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309736.zip) Discussion on LP-WUS WUR in RRC\_Connected vivo discussion Rel-18 FS\_NR\_LPWUS

[R2-2309819](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2309819.zip) LP-WUS co-existence with DCP in RRC\_CONNECTED state CATT discussion Rel-18 FS\_NR\_LPWUS

[R2-2310040](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310040.zip) Discussing on LP-WUS monitoring for RRC\_Connected Xiaomi Communications discussion

[R2-2310061](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310061.zip) Discussion on LPWUS in RRC\_CONNECTED NEC Corporation. discussion Rel-18 FS\_NR\_LPWUS

[R2-2310314](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310314.zip) RAN2 impact of LP-WUS in RRC\_CONNECTED state Apple discussion Rel-18 FS\_NR\_LPWUS

[R2-2310442](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310442.zip) Discussion on LP-WUS for Connected LG Electronics Inc. discussion FS\_NR\_LPWUS

[R2-2310828](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310828.zip) Remaining issues of LP-WUS in connected mode ZTE Corporation, Sanechips discussion Rel-18 FS\_NR\_LPWUS

[R2-2310877](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2310877.zip) On Low-power WUS in RRC\_CONNECTED Nokia, Nokia Shanghai Bell discussion FS\_NR\_LPWUS

[R2-2311172](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311172.zip) On impact to Connected mode procedures to support LP-WUR Samsung R&D Institute India discussion Rel-18

[R2-2311217](file:///C:\Users\mtk65284\Documents\3GPP\tsg_ran\WG2_RL2\RAN2\Docs\R2-2311217.zip) LP-WUS in RRC Connected Mode Lenovo discussion FS\_NR\_LPWUS