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

Toulouse, France, August 21-25, 2023

Source: RAN2 Chairman (MediaTek)

Title: Agenda

# 1 Opening of the meeting

## 1.1 Call for IPR

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| The attention of the delegates of this Working Group is drawn to the fact that **3GPP Individual Members have the obligation** under the IPR Policies of their respective Organizational Partners **to inform their respective Organizational Partners of Essential IPRs** they become aware of.  The delegates were asked to take note that they were hereby invited:   * to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP. * to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Statement and the Licensing declaration forms (https://www.etsi.org/images/files/IPR/etsi-ipr-form.doc) |

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN WG2 Chairman.

## 1.2 Network usage conditions

1/ To avoid email system overload, please don’t attach files and documents to emails e.g. for offline email discussions, but instead use files placed on the meeting server instead. Inbox/Drafts folder is used for meeting offline discussions.

## 1.3 Other

|  |
| --- |
| In accordance with the Working Procedures it is reaffirmed that:  (i) compliance with all applicable antitrust and competition laws is required;  (ii) timely submissions of work items in advance of TSG or WG meetings are important to allow for full and fair consideration of such matters; and  (iii) the chairman will conduct the meeting with strict impartiality and in the interests of 3GPP |

Note on (i): In case of question please contact your legal counsel.

Note on (ii): WIDs don’t need to be submitted to the RAN2 meeting and will typically not be discussed here either.

# 2 General

## 2.1 Approval of the agenda

## 2.2 Approval of the report of the previous meeting

## 2.3 Reporting from other meetings

## 2.4 Instructions

Rel-18 CR Handling

- Current Plan: Rel-18 R2 Functional Freeze is Q4 2023, i.e. Rel-18 TSes need to be created at latest at this point in time.

- CRs for all Rel-18 WIs to be agreed at RAN2#124 (November 2023). Running Draft CRs need to be updated to be real CRs.

- Previously in-principle-agreed Rel-18 CRs (e.g. for TEI18 or WIs ending before November 2023) need to be updated towards the latest TS version and submitted for final CR agreement at RAN2#124 (CR editor / proponent need to do this).

- Such CRs do not need to be resubmitted to intermediate meetings before RAN2#124.

- Such CR may be superseded by revision due to correction, which is in-principle agreed (see bullet below). CR editor / proponent should be ready to handle such revisions.

- For WG meetings until functional freeze (including this) it is possible to maintain and revise Rel-18 CRs, also in-principle-agreed Rel-18 CRs, also for WIs with no TU budget (they are kept in the agenda for this purpose). It is better to fix issues now rather than wait for ASN.1 review.

- For revision proposals for Rel-18 CRs/DraftCRs, use TPs attached to discussion documents or DraftCRs (Includes current running Rel18 CRs or update of in-principle agreed Rel-18 CRs)

- CR editors / Rapporteurs are requested to continue even after close of their respective WIs to support maintenance related to their respective CR / WI.

Rel-18 RRC parameters and MAC CEs

- RRC parameters, including those requested by other groups, e.g. RAN1, are covered by WI-specific RRC CRs.

- MAC CE parameters, including those requested by other groups, e.g. RAN1, are covered by WI-specific MAC CRs

- For information see also R2-2306732, LS on Signalling alternatives, from R2#122.

Rel-18 UE capabilites

- Handling in RAN2 is expected similar to Rel-17.

- For information see also R2-2306810 Further Guidelines on UE capability definitions LS out, from R2#122.

Expected Outcomes

- EUTRA UE capabilities are covered in WI-specific CRs.

- NR UE capabilities are covered in Rel-18 common MegaCRs (38306 and 38331) covering all rel-18 WIs (end outcome).

- UE capabilities in LPP 37355 are covered in CR for the Positioning WI.

During the work on NR UE caps:

- In a Common Rel-18 Agenda Item (AI): RAN1 and RAN4 features are handled jointly under a common AI, with some explicit exceptions. Running UE cap MegaCRs are maintained for the parts handled in the common AI.

- In WI-specific Rel-18 Agenda Items: RAN2 features are handled per WI. Case-by-case, for selected WIs, RAN1 and RAN4 features handled specifically per WI. The outcomes are covered in WI-specific Running CRs (draft CRs). It is expected that WI-specific UE cap running CRs will be merged with the Running Mega CRs only at/after RAN2#124.

Tdoc limitations

Tdoc limitations doesn’t apply to Rapporteur Input, i.e.

- Assigned summary rapporteur input of the summary.

- Email / offline discussions outcomes by discussion rapporteur,

- WI rapporteurs input for WI planning etc,

- TS rapporteur input for TS maintenance.

- Contact Company of a LSin that triggers RAN2 action may submit one tdoc to facilitate the LS reply. This only applies to one of the contact companies in case there are several (default the first).

Tdoc limitations doesn’t apply to Input created at the meeting, revisions, assigned documents etc.

Tdoc limitations doesn’t apply to shadow / mirror CRs (Cat A), or In-Principle Agreed CRs.

Tdoc limitations applies to all other submitted tdocs (e.g. discussion tdoc and CR tdoc are counted as two).

## 2.5 Others

RAN2 election

Chair, 1st Vice Chair, and 2nd Vice Chair to be elected, see 3GPP web page, where information is/will be posted.

# 3 Incoming liaisons

Note: LSs are moved to the respective agenda items if any.

# 4 EUTRA Rel-17 and earlier

Only essential corrections. No documents should be submitted to 4. Please submit to 4.x

## 4.1 EUTRA corrections Rel-17 and earlier

(NB\_IOTenh4\_LTE\_eMTC6-Core; leading WG: RAN1; REL-17; WID: RP-211340)

(UPIP\_EN-DC\_UE; leading WG: RAN3; REL-17; WID: RP‑213669)

(LTE TEI17)

Essential corrections to LTE Rel-17 topics not covered by other agenda items.

(NB\_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: RP-200293); REL-15 and Earlier NB-IoT WIs are in scope but not listed explicitly (long list).

(LTE\_eMTC5-Core; LTE\_eMTC5-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: RP192875;), REL-15 and Earlier eMTC WIs are in scope but not listed explicitly (long list).

(LTE\_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed: June 20; WID: RP-190921);

(LTE\_terr\_bcast-Core, LTE\_DL\_MIMO\_EE-Core, LTE\_high\_speed\_enh2-Core; LTE TEI16 Non-positioning);

REL-15 and Earlier EUTRA WIs are in scope but not listed explicitly (long list), Except V2X and Sidelink WIs and Positioning WIs, which are adressed by AIs below.

NOTE that LTE corrections related to NR WIs or Joint NR LTE WIs should be submitted to NR AIs below.

NOTE that LTE corrections which are the same as an NR correction should be submitted to the respective NR AI (so the NR CR and LTE CR can be treated together).

This Agenda Item is treated in the EUTRA Breakout session

## 4.2 NB-IoT and eMTC support for NTN Rel-17

(LTE\_NBIOT\_eMTC\_NTN; leading WG: RAN1; REL-17; WID: RP-211601)

Tdoc Limitation: 1 tdocs

This Agenda Item is treated in the Breakout session that includes NTN

A single CR per TS with miscelaneous corrections is encouraged. Small editorial corrections should be sent directly to rapporteur. Big open issues can be discussed with contributions with CR in the appendix of the contribution

## 4.3 V2X and Sidelink corrections Rel-15 and earlier

REL-15 and Earlier WIs related to V2x and Sidelink are in scope but not listed explicitly (long list).

This Agenda Item is treated in the V2X and Sidelink Breakout session

## 4.4 Positioning corrections Rel-16 and earlier

(LTE\_NavIC-Core, LTE TEI16 Positioning), REL-15 and Earlier WIs related to positioning are in scope but not listed explicitly (long list).

This Agenda Item will be handled by email.

# 5 NR Rel-15 and Rel-16

Essential corrections only.

Tdoc Limitation: 8 tdocs in total for all sub agenda items.

In case a correction need to be reflected in both NR TS and LTE TS, the corrections should be submitted under one single AI (so the NR and LTE correction can be treatee together), the sub-AIs below this

## 5.1 Common

Includes the following WIs and input that doesn’t fit elsewhere.

(NR\_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 19: WID: RP-191971)

(NR\_IAB-Core; leading WG: RAN2; REL-16; started: Dec 18; target Aug 20; WID: RP-200840)

(NR\_unlic-Core; leading WG: RAN1; REL-16; started: Dec 18; Closed June 20; WID: RP-192926).

(NR\_IIOT-Core; leading WG: RAN2; REL-16; started: Mar 19; Completed: Jun 20; WID: RP-200797)

(NR\_UE\_pow\_sav-Core; leading WG: RAN1; REL-16; started: Mar 19; Completed Jun 20; WID: RP-200494).

(NR\_2step\_RACH-Core; leading WG: RAN1; REL-16; started: Dec 18; Completed: June 20; WID: RP-200085).

(SRVCC\_NR\_to\_UMTS-Core; leading WG: RAN2; REL-16; started: Dec 18; Completed; Mar 20; WID: RP-190713)

(RACS-RAN-Core, leading WG: RAN2; REL-16; started: Mar 19; completed: Jun 20; WID: RP-191088)

(NG\_RAN\_PRN-Core; leading WG: RAN3; REL-16; started: Mar 19; completed: June 20; WID: RP-200122)

(NR\_eMIMO-Core, leading WG: RAN1; REL-16; started: Jun 18; target; Aug 20; WID: RP-200474;)

(NR\_CLI\_RIM; leading WG: RAN1; REL-16; started: Dec 18; Completed: Jun 20; WID: RP-191997;)

(NR\_L1enh\_URLLC-Core, leading WG: RAN1; REL-16; Completed: June 20; WID: RP-191584)

(LTE\_NR\_DC\_CA\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; Target Aug 20; WI RP-200791)

(NR\_Mob\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed June 20; WID: RP-192277).

(NR\_HST, NR\_RRM\_enh-Core, NR\_RF\_FR1, NR\_RF\_FR2\_req\_enh, NR\_n66\_BW, LTE\_NR\_B41\_Bn41\_PC29dBm-Core, NR\_CSIRS\_L3meas,)

(NR TEI16).

LTE mob enh corrections that are common with NR mobility enhancements should be submitted to this AI.

### 5.1.1 Stage 2 and Organisational

Incoming LSs, etc. You should discuss your stage 2 CRs with the specification rapporteurs before submission. Includes impact to 38.300, 36.300, 37.340

#### 5.1.1.1 Other

### 5.1.2 User Plane corrections

User Plane corrections will be handled in the User Plane break out session

#### 5.1.2.1 MAC

#### 5.1.2.2 RLC PDCP SDAP BAP

#### 5.1.2.3 Other

User plane related corrections that should be handled in User plane break out session.

### 5.1.3 Control Plane corrections

#### 5.1.3.1 NR RRC

Corrections to 38331, and related change to other TS if applicable, e.g. 36331, Stage-2 etc.

#### 5.1.3.2 UE capabilities

UE cap corrections 38306, 38331

#### 5.1.3.3 Other

This agenda item addresses the idle and inactive behaviour specified in 38.304 or 36.304, LTE-specific changes for the applicable WIs, Other parts not covered elsewhere.

## 5.2 NR V2X

(5G\_V2X\_NRSL-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Aug 20; WID: RP-200129).

CR rapporteurs will take care of miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company first for small changes (e.g. non-controversial clarification/correction, editorial correction, etc.).

## 5.3 NR Positioning Support

(NR\_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 19: WID: RP-191971)

(NR\_pos-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Jun 20; WID: RP-200218).

(NR TEI16 Positioning)

### 5.3.1 General and Stage 2 corrections

Including incoming LSs if any, Including impact to 36.305 and 38.305. Stage 2 corrections shall be discussed with the specification rapporteur (Sven Fischer sfischer@qti.qualcomm.com) before submission. Stage 2 CRs not discussed with the specification rapporteur will not be treated.

### 5.3.2 RRC corrections

Including impact to 36.331, 38.331, and 38.306.

### 5.3.3 LPP corrections

### 5.3.4 MAC corrections

## 5.4 SON MDT support for NR

(NR\_SON\_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; Completed June 20; WID: RP-191776).

### 5.4.1 General and stage-2 corrections

Including incoming LSs, TS 37.320 corrections

### 5.4.2 TS 38.314 corrections

### 5.4.3 RRC corrections

# 6 NR Rel-17

## 6.1 Common

(NR\_MG\_enh-Core; leading WG: RAN4; REL-17; WID: RP-211591)

(NR\_UDC\_enh-Core; leading WG: RAN2; REL-17; WID: RP-211203)

(NG\_RAN\_PRN\_enh-Core; leading WG: RAN3; REL-17; WID: RP-202363)

(NR\_IAB\_enh-Core; leading WG: RAN2; REL-17; WID: RP-211548)

(NR\_UE\_pow\_sav\_enh-Core; leading WG: RAN2; REL-17; WID: RP-212632)

(LTE\_NR\_DC\_enh2-Core; leading WG: RAN2; REL-17; WID: RP-201040)

(LTE\_NR\_MUSIM-Core; leading WG: RAN2; REL-17; WID: RP-212610)

(NR\_Slice -Core; leading WG: RAN2; REL-17; WID: RP-212534)

(NR\_QoE-Core; leading WG: RAN3; REL-17; WID: RP-211406)

(NR\_ext\_to\_71GHz-Core; leading WG: RAN1; REL-17; WID: RP-212637)

(NR\_cov\_enh-Core; leading WG: RAN1; REL-17; WID: RP-211566): non-RACH-indication parts

(NR\_redcap-Core; leading WG: RAN1; REL-17; WID: RP-211574)

(NR\_feMIMO-Core; leading WG: RAN1; REL-17; WID: RP-212535)

(NR\_SmallData\_INACTIVE-Core, leading WG: RAN2; REL-17; WID: RP-212594)

(NR\_IIOT\_URLLC\_enh-Core; leading WG: RAN2; REL-17; WID: RP-210854)

(NR\_MBS-Core; leading WG: RAN2; REL-17; WID: RP-201038)

PRACH partitioning items

NR TEI17: Corrections are accepted. New TEI17 tech proposal requirements: a) authored by an operator (and preferably co-signed by more), AND: b) resolves a concrete problem in the market for this operator (no new vendor initiated enhancements).

Includes Rel-17 Work Items without specific R2 Agenda Item, e.g. RAN1 and RAN4 led items, SA2 and CT1 led items (was previously “Rel-17 Other”)

Includes aspects that does not fit under the more specific AIs, e.g. multi-WI aspects.

Tdoc Limitation: 10 tdocs

### 6.1.1 Stage 2 and Organisational

Incoming LSs, etc. You should discuss your stage 2 CRs with the specification rapporteurs before submission. Includes impact to 38.300, 37.340, (36.300 if applicable)

### 6.1.2 User Plane corrections

User Plane Related aspects will be handled in the User Plane break out session. (exception: TEI new proposals if any).

### 6.1.3 Control Plane corrections

#### 6.1.3.1 NR RRC

Corrections to 38331, and related change to other TS if applicable, except UE caps.

#### 6.1.3.2 UE capabilities

UE cap corrections 38306, 38331.

#### 6.1.3.3 Other

Including idle and inactive behaviour specified in 38.304 or 36.304.

## 6.2 NR Sidelink relay

(NR\_SL\_Relay-Core; leading WG: RAN2; REL-17; WID: RP-212601)

Tdoc Limitation: 2 tdocs

### 6.2.1 Control plane and Stage-2 corrections

A single CR with miscellaneous corrections is encouraged. Small editorial corrections should be sent directly to the CR rapporteur. Larger open issues can be discussed with contributions (limited time).

### 6.2.2 User plane corrections

A single CR with miscellaneous corrections is encouraged. Small editorial corrections should be sent directly to the CR rapporteur for the corresponding spec. Larger open issues can be discussed with contributions (limited time).

## 6.3 NR Non-Terrestrial Networks (NTN)

(NR\_NTN\_solutions-Core; leading WG: RAN2; REL-17; WID: RP-211557)

Tdoc Limitation: 1 tdocs

A single CR per TS with miscellaneous corrections is encouraged. Small editorial corrections should be sent directly to rapporteur. Big open issues can be discussed with contributions with CR in the appendix of the contribution

## 6.4 NR positioning enhancements

(NR\_pos\_enh-Core; leading WG: RAN1; REL-17; WID: RP-210903)

Tdoc Limitation: 2 tdocs

### 6.4.1 Stage 3 corrections

A single CR per TS (RRC, LPP, MAC, UEcap 306) with miscellaneous corrections is encouraged. Small editorial corrections should be sent directly to the CR rapporteur. Larger open issues can be discussed with contributions (limited time).

### 6.4.2 Stage 2 corrections

A single CR with miscellaneous corrections is encouraged. Small editorial corrections should be sent directly to the CR rapporteur. This agenda item will be handled at lower priority.

## 6.5 SON MDT

(NR\_ENDC\_SON\_MDT\_enh-Core; leading WG: RAN3; REL-17; WID: RP-201281)

Tdoc Limitation: 2 tdocs

### 6.5.1 SON Corrections

### 6.5.2 MDT Corrections

## 6.6 NR Sidelink enhancements

(NR\_SL\_enh-Core; leading WG: RAN1; REL-17; WID: RP-202846)

Tdoc Limitation: 2 tdocs

Note for RRC and MAC CRs, CR rapporteur’s summary and suggestion may be provided. CR rapporteurs will take care of miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company first for small changes (e.g. non-controversial clarification/correction, editorial correction, etc.).

### 6.6.1 Control plane and stage 2 corrections

### 6.6.2 User plane corrections

# 7 Rel-18

## 7.0 Common

Multi-WI Rel-18 items, e.g. cross-WI-issues not handled under another WI. UE capabilities.

### 7.0.1 UE Capabilites

Multi-WI handling of Rel-18 feature lists and UE capability Mega CRs.

### 7.0.2 Other

## 7.2 NR network-controlled repeaters

(NR\_NetConRepeater; leading WG: RAN1; REL-18; WID: RP-230175)

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

Corrections. For smaller corrections please contact CR editor / Rapporteur directly.

## 7.2 Expanded and improved NR positioning

(NR\_pos\_enh2; leading WG: RAN1; REL-18; WID: RP-231460)

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

### 7.2.1 Organizational

Including incoming LSs and rapporteur inputs.

### 7.2.2 Sidelink positioning

Positioning architecture and signalling procedures (e.g. configuration, measurement reporting, etc) to enable sidelink positioning. Including measurements to enable RTT-based positioning, SL-AoA, and SL-TDOA; signalling and associated UE behaviour for support of unicast, groupcast (not including many-to-one) and broadcast of SL-PRS transmissions; reporting signalling and procedures to facilitate support of SL positioning in all coverage scenarios and for PC5-only and joint PC5-Uu scenarios; and signalling to NG-RAN for SL positioning and service authorization as needed.

Including report of [Post122][402][POS] SLPP session handling (Intel)

### 7.2.3 RAT-dependent integrity

Error modelling parameters, signalling, and procedures to support UE-based and LMF-based integrity of RAT-dependent positioning methods.

### 7.2.4 LPHAP

Enhancements for enabling LPHAP use case 6 (TS 22.104), including extending eDRX cycle (coordinated with RedCap WI); SRS configuration enhancements based on validity area for UEs in RRC\_INACTIVE; DL-PRS measurements in RRC\_IDLE and reporting in RRC\_CONNECTED; and alignment between eDRX and PRS configurations.

Including report of [Post122][401][POS] SRS configuration and activation in LPHAP (CATT)

### 7.2.5 RedCap positioning, carrier phase positioning, and bandwidth aggregation for positioning

RAN1 led objectives that may require progress in RAN1 before RAN2 can take decisions.

## 7.3 Network energy savings for NR

(Netw\_Energy\_NR -Core; leading WG: RAN1; REL-18; WID: RP-223540)

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

### 7.3.1 Organizational

LS, workplan, email discussion etc

Expected inputs: running CRs for the following: 38.300 [Ericsson], 38.331 [Huawei], 38.321 [InterDigital]

Expected inputs after more agreements are made: 38.304 [Apple] (if needed), 38.306 [Vivo]

### 7.3.2 DTX/DRX mechanism

### 7.3.3 SSB-less Scell operation

Contributions on inter-band CA for FR1 and co-located cells

### 7.3.4 Cell selection/re-selection

Contributions mechanisms to prevent legacy UEs camping on cells adopting the Rel-18 NES mode

### 7.3.5 Connected mode mobility

Contributions on CHO procedure enhancement(s) in case source/target cell is in NES mode

### 7.3.6 Others

This will be downprioritized

## 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 .

### 7.4.1 Organizational

Including LSs and any rapporteur inputs (e.g. work plan, running CRs update).

Please follow WI Rapporteur plan for providing Running CRs. At current meeting all Running CR will be expected to be started. Running CR rapporteurs are encouraged to actively drive CR progress (can e.g. suggest to chair how to treat).

### 7.4.2 L1L2 Triggered Mobility

For this meeting there will be focus on working with stage-3 Aspects (improving the CRs, making decisions needed to progress the CRs, and there will be focus on inter-WG-issues.

#### 7.4.2.1 General and Stage-2

Including further preformance enhancements, and potential elaboration on the components of the latency time line, if needed. Including impacts to and expectations of other groups. Including security.

RAN2 aspects of RACH-less LTM and early acquisition of TA.

#### 7.4.2.2 RRC

RRC solutions, e.g. candidate configuration / reference configuration, Measurement Configuration (and other configs used before cell switch). RRC configured L2 reset.

WID: Configuration and maintenance for multiple candidate cells to allow fast application of configurations for candidate cells [RAN2, RAN3].

Including [Post122][055][Mob18] 38.331 Running CR and Open issues (Ericsson).

#### 7.4.2.3 L2 centric parts

Including remaning issues and solutions focused on dynamic cell switch not addressed by the RRC subclause above.

WID: Dynamic switch mechanism from serving cell to candidate cell (including SpCell and SCell) for the potential applicable scenarios based on L1/L2 signalling [RAN2, RAN1]

Including [Post122][058][Mob18] Contents of Cell Switch MAC CE (Huawei)

### 7.4.3 NR-DC with selective activation cell of groups

Continue discussion from previous meeting. Security aspects as indicated by SA3 are postponed until SA3 has made further progress.

Including [Post122][056][Mob18] 38.331 Running CR for selective activation of SCGs for NR-DC (OPPO)

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

Including [Post122][057][Mob18] 38.331 Running CR for CHO including target MCG and candidate SCGs (CATT)

## 7.5 XR Enhancements for NR

(NR\_XR\_enh-Core; leading WG: RAN2; REL-18; WID: [RP-230786](https://www.3gpp.org/ftp/TSG_RAN/TSG_RAN/TSGR_99/Docs/RP-230786.zip))

Time budget: 2 TU

Tdoc Limitation: 6 Tdocs

### 7.5.1 Organizational

Including LSs and any rapporteur inputs (e.g. work plan, SA2/SA4 progress reports)

Running CR rapporteurs of MAC (Qualcomm), PDCP (LGE) and RRC (Huawei) specifications are requested to provide first versions running CRs as rapporteur input (which are not counted against the Tdoc limits), with the intent to have first endorsed versions of Stage-3 CRs after the meeting.

### 7.5.2 XR awareness

Including discussion on the contents of UAI for XR traffic assistance information from UE to network (e.g. jitter signalling details, whether periodicity is needed, PSI signalling, etc.)

Including discussion on use of TSCAI for XR (e.g. as per SA2 LS [S2-2308197](https://www.3gpp.org/ftp/tsg_sa/WG2_Arch/TSGS2_157_Berlin_2023-05/Docs/S2-2308197.zip)) and whether there are any RAN2 impacts

Including discussion on how/what network configures for the UE on XR awareness (e.g. PSI/PSIHI, UAI framework, etc.) and how network uses the UE information (e.g. padding BSR to detect EoDB etc.)

### 7.5.3 XR-specific power saving

Including signalling details of using rational number DRX cycles with XR

Including discussion on solutions for SFN wrap-around (e.g. how does the dedicated signalling of the SFN counter work)?

### 7.5.4 XR-specific capacity improvements

No documents should be submitted to 7.5.4. Please submit to 7.5.4.x

#### 7.5.4.1 BSR enhancements for XR

Including discussion on details for the delay status reporting (e.g. BSR format and values to be reported, how does the DSR work with the BSR, is there impact from intra-UE prioritization on the remaining time calculation, etc.)

Including discussion on how to define the static BSR table for XR (e.g. min/max of the table and steps between values etc.)

#### 7.5.4.2 Discard operation for XR

Including discussion the configuration and PDCP specification details of PDU set-based discard operation

Including discussion on how PSI-based discard is used by UE e.g. by RRC configuration, PDCP/RLC/MAC header or control PDU, MAC CE?

Including discussion on how PSI impacts discard operation (e.g. do we have one or two timers, etc.)

#### 7.5.4.3 Configured Grant enhancements for XR

Including RAN2-specific aspects of unused and/or multiple configured grant (CG) PUSCH transmission occasions in a period of a single CG PUSCH configuration (UTO-UCI, HARQ process determination, etc.).

Including discussion on the topics raised in RAN1 LS R1-2306233.

### 7.5.5 UE capabilities for XR

Including UE capability specification rapporteur (Intel) proposal for starting point of UE capability discussions (e.g. as provided in [R2-2305492](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_122/Docs/R2-2305492.zip), does not count against Tdoc limit)

Including discussion on UE capabilities for XR from RAN2 perspective, e.g. what are the baseline capabilities for XR and what are optional additions and are there some dependencies to existing capabilities?

## 7.6 IoT NTN enhancements

(IoT\_NTN\_enh-Core; leading WG: RAN1; REL-18; WID: RP-223519)

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

### 7.6.1 Organizational

LSs, rapporteur inputs and other organizational documents. Rapporteur inputs and other pre-assigned documents in this AI do not count towards the tdoc limitation.

### 7.6.2 Performance Enhancements

#### 7.6.2.1 HARQ enhancements

#### 7.6.2.2 GNSS operation enhancements

### 7.6.3 Mobility Enhancements

#### 7.6.3.1 Enhancements for neighbour cell measurements

Including outcome of [Post122][112][IoT NTN Enh] Mobility enhancements (other contributions on issues handled in [Post122][112][ might not be treated at RAN2#123)

#### 7.6.3.2 Other

### 7.6.4 Enhancements to discontinuous coverage

Including outcome of [Post122][113][IoT NTN Enh] Discontinuous coverage (other contributions on issues handled in [Post122][113][ might not be treated at RAN2#123)

## 7.7 NR NTN enhancements

(NR\_NTN\_enh -Core; leading WG: RAN1; REL-18; WID: RP-223534)

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

### 7.7.1 Organizational

LSs, rapporteur inputs and other organizational documents. Rapporteur inputs and other pre-assigned documents in this AI do not count towards the tdoc limitation.

### 7.7.2 Coverage Enhancements

### 7.7.3 Network verified UE location

### 7.7.4 NTN-TN and NTN-NTN mobility and service continuity enhancements

#### 7.7.4.1 Cell reselection enhancements

##### 7.7.4.1.1 NTN-TN enhancements

##### 7.7.4.1.2 NTN-NTN enhancements

#### 7.7.4.2 Handover enhancements

Including outcome of [Post122][114][NR NTN Enh] Unchanged PCI (other contributions on issues handled in [Post122][114][ might not be treated at RAN2#123)

## 7.8 NR support for UAV

(NR\_UAV -Core; leading WG: RAN2; REL-18; WID: RP-223545)

Time budget: 1 TU

Tdoc Limitation: 3

### 7.8.1 Organizational

Stage 2 running CR expected as input to this meeting

Expected input: Running CRs for 38.331 (Qualcomm), 38.300 (Nokia)

Expected input after capability discussions: 38.306 (Huawei)

### 7.8.2 Measurement reporting for mobility and interference control

Contributions should focus on further details related enhancement to measurement reports taking into account agreements made in RAN2#121bis-e

### 7.8.3 Flight path reporting

*Contributions on enhancements to flight path reporting*

### 7.8.4 Subscription-based aerial-UE identification

Contributions should focus on signaling required to support subscription-based aerial-UE identification

This AI will not be treated and no contributions are expected, as no further NR enhancements will be pursued.

### 7.8.5 UAV identification broadcast

UAV identification broadcast using PC5-U will be treated with higher priority.

## 7.9 Enhanced NR Sidelink Relay

(NR\_SL\_relay\_enh-Core; leading WG: RAN2; REL-18; WID: RP-223501)

Time budget: 1.5 TU

Tdoc Limitation: 4 tdocs

### 7.9.1 Organizational

Including incoming LSs and rapporteur inputs.

### 7.9.2 UE-to-UE relay

Single-hop Layer-2 and Layer-3 UE-to-UE relay for unicast. Including common L2/L3 functionality comprising relay discovery and (re)selection and L2-specific functionality including adaptation layer design, control plane procedures, and QoS handling if needed.

### 7.9.3 Service continuity enhancements for L2 UE-to-network relay

Inter-gNB direct/indirect path switching; intra-gNB indirect/indirect path switching; and inter-gNB indirect/indirect path switching, to be supported by reuse of solutions for the other scenarios.

### 7.9.4 Multi-path relaying

Mechanisms to support multi-path scenarios where a UE is connected to the same gNB using one direct path and one indirect path via 1) Layer-2 UE-to-Network relay, or 2) via another UE (where the UE-UE inter-connection is assumed to be ideal). This agenda item will include a rapporteur contribution summarising open issues from RAN2#121 (invited contribution not counted against the tdoc limit).

Including report of [Post122][403][Relay] Procedures for multi-path relay (LG)

### 7.9.5 DRX

Study the gains and, if needed, specify signalling between gNB and relay UE in sidelink mode 2 to assist the determination of the sidelink DRX configuration used for remote UE. This agenda item will be handled at lower priority.

## 7.10 IDC enhancements for NR and MR-DC

(NR\_IDC\_enh-Core; leading WG: RAN2; REL-18; WID: RP-221281)

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

Corrections. For smaller corrections please contact CR editor / Rapporteur directly.

## 7.11 Enhancements of NR Multicast and Broadcast Services

(NR\_MBS\_enh-Core; leading WG: RAN2; REL-18; WID: RP-221458)

Time budget: 0.75 TU

Tdoc Limitation: 3 tdocs

### 7.11.1 Organizational

LS in, rapporteur input, running CRs etc.

MBS UE capabilities CRs rapporteur is requested to provide an initial analysis of the required UE capabilities and identification of the related discussion points.

### 7.11.2 Multicast reception in RRC\_INACTIVE

Objective: Specify support of multicast reception by UEs in RRC\_INACTIVE state [RAN2, RAN3], PTM configuration for UEs receiving multicast in RRC\_INACTIVE state [RAN2]. Study the impact of mobility and state transition for UEs receiving multicast in RRC\_INACTIVE. (Seamless/lossless mobility is not required) [RAN2, RAN3].

Papers should not be submitted to 7.11.2, please use 7.11.2.1 or 7.11.2.2 instead.

#### 7.11.2.1 Control plane

Including aspects such as:

- PTM configuration structure (exact parameters etc.)

- details of multicast MCCH configuration and MCCH handling by the UE

- service continuity during mobility and state transitions (e.g. access control for connection resume due to MBS, resume due to bad reception quality etc.)

- details of notifications/group paging enhancements due to session activation/deactivation/temporary no data

- details of frequency prioritization and multicast NCL

- UE capabilities

#### 7.11.2.2 User plane

Including aspects such as:

- CFR configuration

- MAC operation (e.g. DRX, scheduling)

- L2 operation during state transitions and mobility (e.g. MRBs establishment/release etc.)

- further discussion on PHY layer impacts (considering the LS in from RAN1 in R1-2306243) etc.

### 7.11.3 Shared processing for MBS broadcast and Unicast reception

Objective: Specify Uu signalling enhancements to allow a UE to use shared processing for MBS broadcast and unicast reception, i.e., ‎including UE capability and related assistance information reporting regarding simultaneous unicast reception in RRC\_CONNECTED and MBS broadcast reception from the same or different operators [RAN2]

Including aspects such as:

- what exact parameters should be reported

- whether/how to address the case where additional information cannot be read by the UE from the non-serving cell

- whether any special handling is needed when the non-serving cell updates the configuration which is relevant for MII

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

( NR\_mobile\_IAB -Core; leading WG: RAN3; REL-18; WID: RP-221815)

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

### 7.12.1 Organizational

Ls in Rapporteur input etc

Current meeting: Should discuss/review Running CRs and the CR impact. CR Rapporteurs are encouraged to drive (for Mob Enh we are still lacking some RAN2 agreements).

### 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

Continue from last meeting. feasibility of RACH-less HO and the related way forward. Other aspects of Connected mode mobility enhancements.

#### 7.12.2.2 Idle/Inactive mode

Misc low-complexity enhancements, if any. Continue the discussion on SIB indication to UEs for enhancements of cell reselection, primarily inter-frequency cell reselection. Still assume to agree on UE behaviour before determining whether to have the SIB indication.

### 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].

## 7.13 Further enhancement of data collection for SON MDT in NR and EN-DC

(NR\_ENDC\_SON\_MDT\_enh2-Core; leading WG: RAN3; REL-18; WID: RP-221825)

Includes LS in’s related to AI/ML for NG-RAN

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

### 7.13.1 Organizational

Ls in Rapporteur input.

### 7.13.2 MRO for inter-system handover for voice fallback

### 7.13.3 MDT override

### 7.13.4 SHR and SPCR

### 7.13.5 SON for NR-U

Focus on UE impacts. RAN2/RAN3 progress should be considered.

### 7.13.6 RACH enhancement

### 7.13.7 SON/MDT enhancements for Non-Public Networks

### 7.13.8 Other

## 7.14 Enhancement on NR QoE management and optimizations for diverse services

(NR\_QoE\_enh-Core; leading WG: RAN3; REL-18; WID: RP-223488)

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

### 7.14.1 Organizational

Including LSs and any rapporteur inputs (e.g. work plan)

Running CR rapporteurs of 37.340 (Nokia), 38.300 (China Unicom) and NR RRC (Ericsson) specifications are requested to provide first/updated versions running CRs as rapporteur input (which are not counted against the Tdoc limits)

Including UE capability rapporteur proposal for starting point of UE capability discussions

### 7.14.2 QoE measurements in RRC\_IDLE INACTIVE

Including any further discussion on area scope handling for MBS QoE

Including discussion on AS layer signalling details and UE indication to network on report availability

### 7.14.3 Rel-17 leftover topics for QoE

Including discussion on Rel-17 leftover topics as agreed in previous meetings.

Including discussion on buffer level threshold based triggering (e.g. how do the RAN3 decisions impact RAN2 specifications)

### 7.14.4 Support of QoE measurements for NR-DC

Including discussion on how the QoE report transmission is handled (e.g. if the QoE report is not configured to use the currently configured SRB, whether this works if SCG is deactivated/released, what do the RAN3 agreements state on this, etc.)

Including discussion on how MN knows to corrrectly forward SN-associated QoE reports received via SRB4

Including discussion on RRC configuration of QoE reporting and measurements for NR-DC

### 7.14.5 UE capabilities and other topics

Including discussion on the continuity of legacy QoE measurement job for streaming and MTSI service during intra-5GC inter-RAT handover process (deprioritized if input from RAN3 is not received during the meeting).

Including any other QoE enhancement discussion (e.g. service type aspects).

Including discussion on UE capability aspects of the QoE WI (e.g. support of MBS QoE and corresponding UE memory size requirements, support of SRB5, support of buffer level threshold based triggering in AS, alignment between AS and AL capabilities, etc.)

## 7.15 NR Sidelink evolution

(NR\_SL\_enh2; leading WG: RAN1; REL-18; WID: RP-230077)

Time budget: 1 TU

Tdoc Limitation: 5 tdocs

### 7.15.1 Organizational

Includes Incoming LS, WI rapporteur inputs, and stage-2 and stage-3 running CRs from the assigned CR rapporteurs.

### 7.15.2 SL-U: SL Consistent LBT failure

Includes further updates/details on SL C-LBT failure handling/recovery

### 7.15.3 SL-U: SL resource (re)selection, SL LCP

Includes further updates/details on SL resource (re)selection and SL LCP restriction

### 7.15.4 SL-U: Others

Includes further updates/details on e.g. leftovers on SL DRX and SL CG, etc.

### 7.15.5 SL-FR2

Includes e.g. identification of RAN2 scopes and proposals, further updates/details from the previous RAN2 discussion, updates/details of related RAN1 discussion, etc.

### 7.15.6 SL-CA

Includes further updates/details on SL CA. Note this work assumes a very high degree of reuse from LTE V2X.

## 7.16 Artificial Intelligence Machine Learning for NR air interface

(FS\_NR\_AIML\_air; leading WG: RAN1; REL-18; WID:RP-221348)

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

Aspects of on-line/real-time training are deprioritized.

NOTE that from Now also R1 parts of the TR can be / should be used as baseline for R2 discussions.

### 7.16.1 Organizational

LS ins. Rapporteur input.

Expect to discuss and clarify the RAN2 input to the TR. Including [Post122][059][AIML] TR text proposal (Ericsson)

### 7.16.2 AIML methods

Explore AIML methods that are expected applicable to this SI and their expected or potential architecture (allocation of functionality to entities), Identification asepcts, other framework aspects, impact on RAN2. Most of LCM is in RAN2 scope.

Both general aspects and use-cases specific aspects are applicable (for use cases in scope). . Please input to 7.16.2.x

#### 7.16.2.1 Architecture and General

Discussion on Model ID is postponed. Based on RAN1 progress, Can discuss the AIML algorithm dependency on locality (e.g. cell specific), UE-side AIML dependency on gNB configuration etc, dependency on other aspects such as UE speed, Network-side AIML dependency to be UE specific etc, and the related procedure impacts. Can discuss the expected impacts for Network Side-algorithms.

UE Cap: On a high level, Identify potential impacts to RRC and LPP UE capabilities or equivalent functionality if any.

Progress the logical arch (if needed).

Mapping of Functionality to entities, general aspects.

Including [Post122][060][AIML] Mapping of functions to physical entities (CMCC)

#### 7.16.2.2 Data Collection

Postpone evaluation discussion unitil RAN1 reply is received. Can continue to discussion Open issues.

Mapping of functionality to entities, for Data collection (i.e. do we use the existing data collection frameworks as is or what modifications do we expect, any aspects that is not covered that may be important?)

#### 7.16.2.3 Model transfer – delivery

Expect to continue evaluation for cases of methods, ambition level, mapping of functionality to entities. Determine tangible open issues if any.

#### 7.16.2.4 Control and LCM other

AIML control beyond / other than Model transfer – delivery, Impact of other LCM procedures.

## 7.17 Dual Transmission/Reception (Tx/Rx) Multi-SIM for NR

(NR\_DualTxRx\_MUSIM-Core; leading WG: RAN2; REL-18; WID: [RP-230751](https://www.3gpp.org/ftp/TSG_RAN/TSG_RAN/TSGR_99/Docs/RP-230751.zip))

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

### 7.17.1 Organizational

Including LSs and any rapporteur inputs (e.g. work plan)

Running CR rapporteurs of 37.340 (ZTE), 38.300 (China Telecom) and 38.331 (vivo) specifications are requested to provide first/latest versions running CRs as rapporteur input (which are not counted against the Tdoc limits)

### 7.17.2 Procedures for MUSIM temporary capability restriction

Including discussion on “proactive” and “reactive” approaches and whether/how it’s possible to use the same procedural framework for both cases

Including discussion on how the early MUSIM indication from UE to NW indication during RRC connection setup/resume works

Including discussion on whether/how UE can request specific serving cells to be released for for the “proactive” approach

Including discussion on how the UE signalling on capability restrictions works (e.g. which RRC message and other signalling details)

### 7.17.3 Allowed MUSIM temporary capability restrictions

Including discussion on which UE capabilities in NW A or NW B can be impacted by temporary UE capability restrictions (e.g. MIMO layers, measurement gaps, SRS tx switching, bandwidth support, etc.) and in which granularity?

Including discussion band combination restrictions due to band conflict and what does UE report to the network for those cases?

### 7.17.4 Other

Including discussion on gap priority: How does the network set the gap priorities for MUSIM gaps?

## 7.18 Mobile Terminated Small Data Transmission

(NR\_NR\_MT\_SDT-Core; leading WG: RAN2; REL-18; WID: RP-222993)

Time budget: 0.5 TU

Tdoc Limitation: 2 tdoc

This WI is planned to be concluded and finalized at current meeting.

### 7.18.1 Organizational

*Running CRs expected as input in this meeting: 38.300 (Nokia), 38.331 (ZTE), 38.321 (Huawei),* 38.306 (Intel).

### 7.18.2 Control plane aspects

### 7.18.3 User plane aspects

## 7.19  Enhanced support of reduced capability NR devices

(NR\_redcap\_enh-Core; leading WG: RAN1; REL-18; WID: RP-223544)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 7.19.1   Organizational

Incoming LSs, running CRs, etc.

### 7.19.2   Enhanced eDRX in RRC\_INACTIVE

PTW details, e.g. restriction that RAN PTW is longer/shorter/same as CN PTW.

Remaining fallback details if any.

### 7.19.3   Further reduced UE complexity in FR1

Early indication.

Access restrictions details for eRedCap.

*Capability related, e.g. how to define an eRedCap UE.*

*Issue of decoding Msg4.*

## 7.20 NR MIMO evolution

(NR\_MIMO\_evo\_DL\_UL-Core; leading WG: RAN1; REL-18; WID: RP-223276)

Time budget: 0.75 TU

Tdoc Limitation: 3 tdoc

### 7.20.1   Organizational

Rapporteur input, incoming LS etc.

### 7.20.2   Two TAs for multi-DCI multi-TRP

RAN2 impacts of two TAs for multi-DCI multi-TRP operation, including output of email discussion [852], and other potential issues if not covered by the email discussion.

### 7.20.3   Unified TCI extension to mTRP operation

RAN2 impacts of unified TCI extension to mTRP operation, including the cases for sDCI and mDCI.

### 7.20.4   Other

Other issues if not covered by 7.20.1, 7.20.2, and 7.20.3.

This agenda item is of lower priority, i.e., it will be treated if time allows. Depending on the number of contributions/proposals, a summary of this agenda item may be used.

## 7.21 Further NR coverage enhancements

(NR\_cov\_enh2-Core; leading WG: RAN1; REL-18; WID: RP-221858)

Time budget: 0.5 TU

Tdoc Limitation: 2 tdoc

### 7.21.1   Organizational

Incoming LSs, Rapporteur input etc, including reports from [Post122][801] and [Post122][802].

### 7.21.2   Control plane issues

Details of RACH configuration and RACH partitioning signalling and any other impacts to CP from RAN1 agreements.

### 7.21.3   User plane issues

Overall RACH procedure and any other MAC impacts

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

(FS\_NR\_LPWUS; leading WG: RAN1; REL-18; WID: RP-222644)

Time budget: 0.5 TU

Tdoc Limitation: 2 tdoc

### 7.22.1   Organizational

Incoming LSs, Rapporteur input etc.

### 7.22.2   Idle Inactive Mode

### 7.22.3   Connected Mode

## 7.23 Timing Resiliency and URLLC Enh

(NR\_TRS\_URLLC; leading WG: RAN3; REL-18; WID: RP-230754)

Time budget: 0.5 TU

Tdoc Limitation: 1 tdoc

### 7.23.1   Organizational

Incoming LSs, Rapporteur input etc.

Expected inputs to next meeting, running CRs for the following: 38.300 [Nokia], 38.331 [Ericsson],

### 7.23.2   General

*No contributions on BAT offset derivation are expected*

## 7.24 NR TEI18

Specific items may be allocated to a breakout session for treatment.

Time budget: 1 TU

### 7.24.1 TEI proposals by Other Groups

Items initiated by other groups that is/has been communicated by LS, where the other group indicate this is TEI18. (Specific other-group-WIs should use the R18 Other Agenda Item below).

### 7.24.2 TEI proposals by RAN2

Items initiated in RAN2.

Tdoc limitation: 1 tdoc, limitation only applicable for non-previously-agreed-to-be-considered TEI proposals.

## 7.25 R18 Other

Specific items may be allocated to a breakout session for treatment.

Impacts from Other RAN WGs and TSGs that has no separate TU budget in RAN2. LS ins for Rel-18 specific WIs/SIs that has no RAN WI.

Time budget: 2 TU

Tdoc Limitation: -

### 7.25.1 RAN4 led items

### 7.25.2 RAN1 led items

E.g. MC enhancements, DSS

### 7.25.3 Other

RAN3, SA2, SA3, CT1 led items and others, e.g. eNPN, Slicing.

#### 7.25.4 Self-Evaluation NTN

(FS\_IMT-2020\_Sat\_eval; leading Group: TSG RAN; REL-18; WID: RP-230754)

This will be treated in NTN breakout session (Sergio).

Study on Self-Evaluation towards the 3GPP submission of a IMT-2020 Satellite Radio Interface Technology, including both NR NTN and IoT-NTN. Note that the time allocated will be very limited, and this is expected to be mostly an offline activity.