3GPP TSG-RAN WG2 Meeting #122 R2-2xxxxxx

Incheon, Korea, May 22-26, 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

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

# 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

### 4.2.0 In-Principle-Agreed CRs

### 4.2.1 Corrections

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

### 4.3.0 In-Principle-Agreed CRs

### 4.3.1 Corrections

## 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.

### 4.4.0 In-Principle-Agreed CRs

### 4.4.1 Corrections

# 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

#### 5.1.1.0 In-Principle-Agreed CRs

#### 5.1.1.1 Other

### 5.1.2 User Plane corrections

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

#### 5.1.2.0 In-Principle-Agreed CRs

#### 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

#### 5.1.3.0 In-Principle-Agreed CRs

#### 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.).

### 5.2.0 In-principle agreed CRs

### 5.2.1 Corrections

## 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)

This agenda item will be handled by email.

### 5.3.0 In-Principle-Agreed CRs

### 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).

### 5.4.0 In-Principle-Agreed CRs

### 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)

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)

#### 6.1.1.0 In-Principle-Agreed CRs

#### 6.1.1.1 Other

### 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).

#### 6.1.2.0 In-Principle-Agreed CRs

#### 6.1.2.1 Other

### 6.1.3 Control Plane corrections

#### 6.1.3.0 In-Principle-Agreed CRs

#### 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 Multicast

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

Tdoc Limitation: 2 tdocs

### 6.2.0 In principle agreed CRs

### 6.2.1 CP and Stage-2 corrections

Including corrections to TS 38.300, TS 38.331, TS 38.304, TS 38.306.

### 6.2.2 UP corrections

Including corrections to MAC, PDCP, RLC and SDAP.

## 6.3 NR Sidelink relay

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

Tdoc Limitation: 2 tdocs

### 6.3.0 In principle agreed CRs

### 6.3.1 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).

### 6.3.2 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).

## 6.4 NR Non-Terrestrial Networks (NTN)

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

Tdoc Limitation: 1 tdocs

### 6.4.0 In principle agreed CRs

### 6.4.1 Corrections

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

## 6.5 NR positioning enhancements

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

Tdoc Limitation: 2 tdocs

### 6.5.0 In principle agreed CRs

### 6.5.1 Corrections

A single CR per TS (Stage-2, 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).

## 6.6 SON MDT

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

Tdoc Limitation: 2 tdocs

### 6.6.0 In principle agreed CRs

### 6.6.1 SON Corrections

### 6.6.2 MDT Corrections

## 6.7 NR Sidelink enhancements

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

Tdoc Limitation: 3 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.).

### 6.7.0 In-principle agreed CRs

### 6.7.1 General and Stage 2 corrections

### 6.7.2 Control plane corrections

### 6.7.3 User plane corrections

# 7 Rel-18

## 7.1 NR network-controlled repeaters

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

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

### 7.1.1 Organizational

Including LSs and any rapporteur inputs.

### 7.1.2 Signalling for side control information

Signalling and procedures for for side control information, based on RAN1 agreements.

### 7.1.3 Other RAN2 aspects

Other RAN2 aspects, including: SI impacts, RRC states, RRM, capabilities and others not covered by 8.1.2.

### 7.1.4 Repeater management

RAN2 aspects of repeater management (if any).

Note: this AI is assumed to be handled in RAN3, no contributions are expected in RAN2.

## 7.2 Expanded and improved NR positioning

(NR\_pos\_enh2; leading WG: RAN1; REL-18; WID: RP-223549)

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.

### 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.

### 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. This agenda item will be treated at lower priority.

## 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

### 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.

### 7.4.2 L1L2 Triggered Mobility

#### 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. Consolidation of the procedure(s), failure handling. Differences of expectations/procedure/performance for intra/inter-DU, intra/inter-freq.

#### 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].

#### 7.4.2.3 Cell Switch

Including remaning issues and solutions focused on dynamic cell switch not addressed by the RRC subclause above. Contents of the cell switch command (this will be a focus for current meeting). Discussion can inculde actions and procedure that may be triggered simultaneously, e.g. by other MAC CEs. L2 behaviour details of the cell switch without L2 reset, partial MAC Reset. Other L2 behaviours.

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]

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

Continue discussion from previous meeting. Security aspects as indicated by SA3 are postponed, as it is likely that SA3 will have further progress in May.

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

Include Stage-3 RRC proposals (in order to have better discussion). Continue discussion from previous meeting.

## 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: 5 Tdocs

### 7.5.1 Organizational

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

### 7.5.2 XR awareness

Including discussion on XR traffic assistance information from UE to networkIncluding discussion on how UL jitter information is reported from UE to network: what exactly is reported and via which signalling, what are the value ranges, how does network detect UL EoDB (e.g. can padding BSR be used for that?), etc.

### 7.5.3 XR-specific power saving

Including discussion and details of solutions for DRX cycles with XR: do we use rational numbers for DRX cycle or do integer adjustments? How does each solution work in details?

Including discussion on solutions for SFN wrap-around, e.g. what is the reference SFN: H-SFN, E-SFN or some generic counter?

### 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 delay status reporting: What does UE report for the remaining time and how is the reporting triggered? How does UE calculate the remaining time and what is the granularity of the reporting?

Including discussion on how to decide whether to use static or configured BSR tables for XR, explaining the details of the solutions, e.g. selection of BSR table, amount of needed new tables and how they are created (e.g. based on which distributions/parameters), analysis of quantization errors with the proposed solution, BSR MAC CE structure (e.g. extend/reuse current MAC CE format), etc.

#### 7.5.4.2 Discard operation for XR

Including discussion how the achieve PDU-set based discard in PDCP layer works for UL and DL and how is that specified (e.g. is there need for any PDCP CEs).

Including discussion on whether PDU set discard at PDCP impacts RLC layer (e.g. does discarding at PDCP also trigger discarding at buffered RLC PDUs).

#### 7.5.4.3 Configured Grant enhancements for XR

Including RAN2-specific aspects of Multiple Configured Grant (CG) PUSCH transmission occasions in a period of a single CG PUSCH configuration.

Including RAN2-specific aspects of dynamic indication of unused CG PUSCH occasion(s) based on Uplink Control Information (UCI) by the UE.

Including discussion on retransmission-less CG, e.g. how does the solution discussed in RAN2#121bis-e ensure consistent HARQ operation?

## 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

#### 7.6.3.2 Other

### 7.6.4 Enhancements to discontinuous coverage

## 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

This AI will be treated only after corresponding progress in RAN1

### 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

## 7.8 NR support for UAV

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

Time budget: 1 TU

Tdoc Limitation: 4

### 7.8.1 Organizational

*Stage 2 running CR expected as input to this meeting*

### 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

Note: Work done in LTE is a starting point for this objective. NR-specific enhancements can be considered, if needed, while overall the LTE and NR solutions should be harmonized as much as possible.

### 7.8.5 UAV identification broadcast

UAV identification broadcast using PC5-U will be treated with higher priority. Contributions analysing the gap for supporting DAA using the same framework as BRID can be submitted.

## 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).

### 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: 1 TU

Tdoc Limitation: 3 tdocs

### 7.10.1 Organizational

LS in. Rapporteur Input, e.g. running CRs;

Including the outcome of email discussion [Post121][655][IDC] Discussion on Leftover issues for IDC (xiaomi).

### 7.10.2 FDM solution enhancements

Leftover issues and issues identified for running CRs on FDM solutions.

### 7.10.3 TDM solution

Leftover issues and issues identified for running CRs on TDM solutions.

Note, common issues for FDM and TDM (e.g. inter-node coordination, independent configuration of FDM and TDM, etc) should be submitted under agenda item 7.10.2.

### 7.10.4 UE capabilities

Including impact to TS 38.306 and TS 38.331.

## 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: 2 tdocs

### 7.11.1 Organizational

LS in, rapporteur input, running CRs etc.

### 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

Further details of PTM configuration, service continuity, notifications and RRC state transitions handling including:

- FFS whether the network can provide PTM configuration for intra-gNB cells

- PTM configuration structure (message, parameters etc.)

- service continuity during mobility and state transitions

- notifications/group paging enhancements due to session activation/deactivation or due to Inactive mutlicast reception on/off

- MCCH change notification vs. (group) Paging for different cases

- details of frequency prioritization and multicast NCL

#### 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, identification of PHY layer impacts etc.

**This agenda item will not be treated in this meeting**

### 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:

- Granularity of capability signalling for MBS broadcast reception from non-serving cell

- What additional information and exact parameters should be reported

- Scenarios for UE to report additional info in MII and whether/how network can control when UE should report it

## 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

### 7.12.2 Mobility Enhancements

Enhancements for mobility of an IAB-node together with its served UEs, including aspects related to group mobility. No optimizations for the targeting of surrounding UEs. [RAN3, RAN2]

#### 7.12.2.1 Connected mode

Continue from last meeting: Identify impacts of Conditional HO if any. Determine 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. Need to agree on UE behaviour before determining whether to have the SIB indication (potentially lower priority for current meeting).

### 7.12.3 Other

Define Procedures for migration/topology adaptation to enable IAB-node mobility, including inter-donor migration of the entire mobile IAB-node (full migration) [RAN3, RAN2]. Mitigation of interference due to IAB-node mobility, including the avoidance of potential reference and control signal collisions (e.g. PCI, RACH). [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: 0.5 TU

Tdoc Limitation: 3 tdocs

Prioritization of topics TBD based on input tdocs.

### 7.14.1 Organizational

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

### 7.14.2 QoE measurements in RRC\_IDLE INACTIVE

Including discussion on handling area scope for MBS QoE (i.e. is it done by AS or AL, whether the same mechanism applies for all RRC states, etc.)

Including discussion on AS layer buffer size (e.g. how many values, what is the minimum value).

Including discussion on what AS layer stores in IDLE/INACTIVE and what exactly is sent to AL.

### 7.14.3 Rel-17 leftover topics for QoE

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

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

Including discussion on granularity of QoE reporting (e.g. per QoE config or something else)

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

Including discussion on how to achieve splitting of QoE configuration identities between MN and SN.

Including discussion on different m-based QoE configurations for MN/SN (pending RAN3 decisions).

### 7.14.5 Other topics

Including discussion on the continuity of legacy QoE measurement job for streaming and MTSI service during intra-5GC inter-RAT handover process.

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

This agenda item is not treated in this meeting (except for LSs received from other WGs).

## 7.15 NR Sidelink evolution

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

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

### 7.15.1 Organizational

Includes Incoming LS, rapporteur inputs, and stage-2 running CR.

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

Continue the discussion from RAN2#121bis-e, e.g. including further updates/details on SL C-LBT failure handling/recovery, details of SL LCP restriction, etc.

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

Includes further updates/details on e.g. SL resource (re)selection with SL LBT impact, etc.

### 7.15.4 SL-U: Others

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

### 7.15.5 SL-FR2

Includes e.g. identification of RAN2 scopes and proposals, further updates/details from RAN2#121bis-e 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.

### 7.15.7 SL-Co-Ex

Any required RAN2 discussion or spec impact to complete SL Co-Ex.

## 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

Technical input will be prioritized, Organizational aspects may not be treated.

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

### 7.16.1 Organizational

LS ins. Rapporteur input.

### 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

Model ID: 1a. Applicability/Usefulness 1b. Can discuss also model meta-data that can be useful for LCM and the detailed cases/contexts of such usefulness. Should take into account R1 progress if any. At current meeting: No need to discuss whether metadata is a sub-part of a structured model ID or whether we have other IDs, algorithm ID, function ID etc.

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

Mapping of Functionality to entities, general aspects. 3:

#### 7.16.2.2 Data Collection

Expect to execute evaluation with structure and contents as decided previous meeting. Determine Open issues. Can consider to send an LS to RAN1 to ask specific questions.

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 (e.g. performance aspects)..

#### 7.16.2.4 Model Control other

Model control beyond / other than Model transfer – delivery

## 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: 0 TU

Tdoc Limitation: 0 tdocs

This topic is not planned to be treated in this meeting (except for urgent LSs received from other WGs).

## 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

### 7.18.1 Organizational

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

*UE capabilities and running CR to 38.306 (Intel) will not be expected or discussed in this meeting*

### 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

Pre-requisites for UE supporting/NW allowing INACTIVE eDRX > 10.24 s, e.g. requires R17 INACTIVE eDRX?

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

Fallback details.

### 7.19.3   Further reduced UE complexity in FR1

Early indication.

Access restrictions for eRedCap. Which granularity is required for access restriction, e.g. need for R18 versions of 1Rx/2Rx-barring indications and HD-FDD allowed? Can a NW allow R18 eRedCap without allowing R17 RedCap?

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

## 7.20 NR MIMO evolution

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

Time budget: 0.5 TU

Tdoc Limitation: 2 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, aiming at progressing Stage-2 aspects as much as possible from RAN2 perspective.

### 7.20.3   Other

Other RAN2 impacts than those discussed in 7.20.1 and 7.20.2, including:

unified TCI extension to mTRP operation, including the cases for sDCI and mDCT, and other topics if identified

## 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.

### 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: 2 tdoc

### 7.23.1   Organizational

Incoming LSs, Rapporteur input etc.

### 7.23.2   General

## 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

#### 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.