3GPP TSG-RAN WG2 Meeting #117 electronic R2-2xxxxxx

Online, February, 2022

Source: RAN2 Chairman (MediaTek)

Title: Proposed Agenda

# 1 Opening of the meeting

**This e-Meeting**

- This e-Meeting follows 3GPP principles for e-Meetings.

- RAN2 117 electronic has full decision power, i.e. full decision power to make agreements and approvals according to RAN WG2 terms of reference, without any need to ratify decisions at a later RAN2 or other meeting. .

## 1.1 Call for IPR

|  |
| --- |
| 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 ftp server instead. Inbox/Drafts folder is used for AT-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 Others

Instructions – UE capabilites

There is no specific coordination for EUTRA UE capabilities. WI specific CRs shall be developed.

For Rel17 NR UE capabilities the following applies:

1: Aim to Work on mega CRs (one mega CR for TS 38.306 and one for TS 38.331). This work is done under Agenda Item AI 8.0.2

2: Coordinate centrally incorporation in CRs of RAN1 / RAN4 features for all Rel17 WIs. This work is done under Agenda Item AI 8.0.2 and changes are done directly to the mega CRs. ​There could be exceptions, case by case, where RAN1 / RAN4 features are treated under a WI-specific Agenda Item instead.

3: RAN2 should only implement in the CRs the features / feature groups from the RAN1 and RAN4 feature list without any FFS (no highlighted yellow, [] and/or marked as FFS/TBD). Also UE Capabilities that are dependent on such FFS features should not be implemented.

4: R2 Features and capabilities developed only in R2, are developed individually per WI, under WI-specific Agenda Items. Draft CRs (running CRs) for 38.331 and 38.306 are produced. The 306 CRs shall include an annex containing the RAN2 determined UE capabilities in the feature list format (similar to annex containing RAN2 agreements) for easy compilation into the TR38.822 in the later stage.

5. At the end of R2 117 (Feb meeting), endorsed WI specific UE capability CRs will be merged into the mega CRs, and the mega CRs will be provided to TSG RAN. Any exception to this need to be decided case by case.

Tdoc Limitations

RAN2#117-e focuses on closing of Rel-17. A common tdoc limitation has been imposed on AI5 + AI6. It is expected that companies will need to prioritize.

Tdoc limitations – instructions (reminder)

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

- Assigned Editor of Running CRs input to update the running CR and input of one tdoc to facilitate addressing of CR open issues.

- 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 applies to all other submitted tdocs.

# 3 Incoming liaisons

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

# 4 EUTRA corrections Rel-15 and earlier

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

## 4.1 NB-IoT corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.2.

## 4.2 eMTC corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.1.

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

Documents in this agenda item will be handled in a break out session.

## 4.4 Positioning corrections Rel-15 and earlier

Documents in this agenda item will be handled by email. No web conference is planned for this agenda item.

## 4.5 Other LTE corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

Purely editorial corrections should be avoided, text enhancements may be deprioritized. Corrections should be taken up with the specification editor before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

# 5 Rel-15 WI: New Radio (NR) Access Technology

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

Only essential corrections. Please submit CRs marked “NR\_newRAT-Core, TEI16” under one of the below clauses.

**Tdoc limitation: AI5 + AI6: 14**

## 5.1 Organisational

Incoming LSs, etc.

## 5.2 Stage 2 corrections

Includes corrections to TS 38.300 and TS 37.340. You should discuss your stage 2 CRs with the specification rapporteurs before submission.

## 5.3 User Plane corrections

### 5.3.1 MAC

### 5.3.2 RLC PDCP SDAP

## 5.4 Control Plane corrections

### 5.4.1 NR RRC

Includes NR RRC and Changes that are applied to both NR RRC and LTE RRC, except UE capabilities.

### 5.4.2 LTE changes

LTE specific changes for this WI, except UE cap and Idle/Inactive. Changes that are applied to both LTE and NR shall be treated together under respective Agenda item other than this one.

### 5.4.3 UE capabilities

Including impacts to 38.306 (and 36.306) and the associated impact to 38.331 (and 36,331).

### 5.4.4 Idle/inactive mode procedures

This agenda item addresses the idle and inactive behaviour specified in 38.304 or 36.304. Other aspects related to inactive (e.g. state transitions, out of coverage, etc) are covered under RRC agenda items (5.4.1)

## 5.5 Positioning corrections

Corrections to both the stage 2 and stage 3 aspects related to positioning. Stage 2 CRs 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.

Documents in this agenda item will be handled by email. No web conference is planned for this agenda item.

# 6 Rel-16 NR Work Items

Essential corrections only.

Tdoc Limitation: **See common tdoc limitation with AI 5**

## 6.1 Common

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

(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 6.1.X. LTE-only corrections, see AI 7.

### 6.1.1 Organisational

Incoming LSs, etc.

### 6.1.2 Stage 2 corrections

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

### 6.1.3 User Plane corrections

#### 6.1.3.1 MAC

#### 6.1.3.2 RLC

#### 6.1.3.3 PDCP

#### 6.1.3.4 SDAP

#### 6.1.3.5 BAP

### 6.1.4 Control Plane corrections

#### 6.1.4.1 NR RRC

In case a correction need to mirrored for both NR RRC and LTE RRC, the corrections should be submitted under the same AI (i.e. the sub-AIs below this).

##### 6.1.4.1.1 Connection control

Including L1 Parameters, L2 Parameters, Connection establishment and release, Connection reconfiguration (also reconfig with sync, Handover), Connection resume and release with RRC\_INACTIVE state, Security procedures, re-establishment, RRC processing delay requirements etc.

##### 6.1.4.1.2 RRM and Measurements

##### 6.1.4.1.3 System Information and Paging

##### 6.1.4.1.4 Inter-Node RRC messages

##### 6.1.4.1.5 Other

#### 6.1.4.2 LTE changes

LTE-specific changes for these WIs. Changes that are applied to both LTE and NR shall be treated together under respective Agenda item other than this one.

#### 6.1.4.3 UE capabilities

#### 6.1.4.4 Idle/inactive mode procedures

This agenda item addresses the idle and inactive behaviour specified in 38.304 or 36.304. Other aspects related to inactive (e.g. state transitions, out of coverage, etc) are covered under RRC agenda items

## 6.2 NR V2X

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

Documents in this agenda item will be handled in a break out session

Tdoc Limitation: See tdoc limitation for Agenda Item 6

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.).

### 6.2.1 General and Stage-2 corrections

Including incoming LSs, rapporteur inputs, etc.

### 6.2.2 Control plane corrections

This agenda item may utilize a summary document on RRC (Huawei).

### 6.2.3 User plane corrections

Including [Post116-e][710][V2X/SL]. This agenda item may utilize a summary document on MAC (LG).

## 6.3 NR Positioning Support

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

(NR TEI16 Positioning)

Documents in this agenda item will be handled by email. No web conference is planned for this agenda item, and non-urgent documents may be postponed to next meeting.

Tdoc Limitation: See tdoc limitation for Agenda Item 6

### 6.3.1 General and Stage 2 corrections

Including incoming LSs, 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.

This agenda item may use a summary document (decision to be made based on submitted tdocs).

### 6.3.2 RRC corrections

Including impact to 36.331, 38.331, and 38.306.

This agenda item may use a summary document (decision to be made based on submitted tdocs).

### 6.3.3 LPP corrections

This agenda item may use a summary document (decision to be made based on submitted tdocs).

### 6.3.4 MAC corrections

## 6.4 SON/MDT support for NR

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

Documents in this agenda item will be handled in a break out session

Tdoc Limitation: See tdoc limitation for Agenda Item 6

### 6.4.1 General and stage-2 corrections

Including incoming LSs, TS 37.320 corrections

### 6.4.2 TS 38.314 corrections

### 6.4.3 RRC corrections

# 7 Rel-16 EUTRA Work Items

Only essential corrections. No documents should be submitted to 7. Please submit to 7.x

## 7.1 EUTRA Rel-16 General

No documents should be submitted to 7.1. Please submit to.7.1.x

Purely editorial corrections should be avoided, text enhancements may be deprioritized. Corrections should be taken up with the specification editor before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

### 7.1.1 Cross WI RRC corrections

Including RRC corrections that impact multiple WIs and require discussion in the common session.

### 7.1.2 Feature Lists and UE capabilities

Corrections to UE capabilities should be taken up with the 36.331 and 36.306 specification editors before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

## 7.2 Additional MTC enhancements for LTE

(LTE\_eMTC5-Core; LTE\_eMTC5-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: RP192875;)

Documents in this agenda item will be handled in a break out session.

Some documents in 7.2 and 7.3 may be treated jointly.

## 7.3 Additional enhancements for NB-IoT

(NB\_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: RP-200293)

Documents in this agenda item will be handled in a break out session

Some documents in 7.2 and 7.3 may be treated jointly.

## 7.4 LTE Other WIs

(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)

(Documents relating to Rel-16 LTE but for which there is no existing RAN WI/SI, e.g. LSs from CT/SA requesting RAN2 action)

Including TEI16 corrections and issues that do not fit under any other topic.

Purely editorial corrections should be avoided, text enhancements may be deprioritized. Corrections should be taken up with the specification editor before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

For LTE mobility enhancements, only corrections that are LTE-specific should be submitted to this AI. Corrections that impact or are common with NR mobility enhancements should be submitted to 6.1.X instead.

## 7.5 LTE Positioning

(NavIC, LTE TEI16 Positioning)

Documents in this agenda item will be handled by email. No web conference is planned for this agenda item.

# 8 Rel-17 NR Work Items

## 8.0 General

Please input to 8.0.x. These AIs includes General Aspects regarding Rel 17, both NR and LTE, organizational and planning, common aspects regarding UE caps, RRC parameters, running CRs, need for organized inter-WI coord etc. A main purpose of this AI is to provide opportunity for rapporteurs and other highly interested to illuminate important aspects for the finalization phases of Rel-17. Input to this AI is optional. Note that the multi-WI topic of RACH indication and partitioning is handled under a separate AI.

### 8.0.1 RRC

Including discussions on plan for ASN.1 review. Note that Rel-17 Cat B RRC CRs (maybe with some exception) are expected to be WI-specific.

### 8.0.2 UE capabilities

Feature lists from other groups and UE cap Mega CRs will be treated under this AI, except for NR\_ext\_to\_71GHz-Core and NR\_pos\_enh-Core for which all UE caps are treated under WI specific AI. Specific issues may be reallocated to WI-specific AIs.

### 8.0.3 Gaps Coordination

Tdoc limitation: 1

This AI is complementary to other AIs.

### 8.0.4 Other

E.g. cross WI coordination on MAC CEs.

## 8.1 NR Multicast

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

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

### 8.1.1 General

#### 8.1.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 8.1.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

#### 8.1.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, Provide resolution proposals to Rapporteur Handled Open Issues, see R2-2202025.

### 8.1.3 Open Issues

#### 8.1.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues.

Please see R2-2202025: 11 RRC related Open issues, 6 MAC related Open issues, 1 38304 Open Issue, 1 PDCP Open Issue, 1 38300 Open Issue, 2 UE caps Open Isseus, 4 Other Open Issues (exact organization into different discussions is TBD)

Companies to provide input into the following discussion:

[Pre117-e][001][MBS] CP open Issues Input (Huawei)

[Pre117-e][002][MBS] UP open Issues Input (Samsung)

#### 8.1.3.2 Invited Input

Invited company input on the following Open Issues Please see R2-2202025

- MAC: FFS to CSI and SRS reporting due to MBS DRX.

- Other: the questions in R3-221469 LS on NR RRC to support split NR-RAN architecture for NR MBS

### 8.1.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 8.0.2.

### 8.1.5 Other

Issues not covered elsewhere.

#### 8.1.5.1 Control Plane

#### 8.1.5.2 User Plane

##  8.2 MR DC/CA further enhancements

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

Time budget: 1 TU

Tdoc Limitation: 5 tdocs

No documents should be submitted to 8.2. Please submit to.8.2.x

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [201])

### 8.2.1 Organizational, Requirements and Scope

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [210]-[215]

Including rapporteur input on remaining open issues needed to close the WI.

### 8.2.2 Efficient activation / deactivation mechanism for one SCG and SCells

No documents should be submitted to 8.2.2. Please submit to.8.2.2.x

#### 8.2.2.1 UE behaviour while SCG is deactivated

This agenda item may use a summary document (decision to be made based on submitted tdocs) focusing on essential open issues in UE behaviour while SCG is deactivated (as per open issue list).

Including discussion on UE behaviour while SCG is deactivated (e.g. TA timer and RLM/BFD, MCG power limitation and PDCCH blind decoding limitations)

[Pre117-e][220][DCCA] Summary of UE behaviour while SCG is deactivated (Huawei)

Scope: Provide summary of UE behaviour while SCG is deactivated according to open issue list.

Intended outcome: Discussion summary in R2-220xxxx.

Deadline: TBD

#### 8.2.2.2 Actions at SCG activation and deactivation

Including discussion on actions that occur at SCG activation or deactivation (e.g. UL split bearer handling, MAC actions, BWP used when SCG (de)activation is triggered)

#### 8.2.2.3 Other aspects of SCG activation/deactivation

Including essential parts of SCG activation/deactivation that do not fit under other AIs. For any proposals provided in this AI, TPs are required to be provided to illustrate the necessity and impacts of the topic. Proposals that do not provide Stage-3 details will not be treated.

This agenda item may be deprioritized in this meeting .

### 8.2.3 Conditional PSCell change / addition

No documents should be submitted to 8.2.3. Please submit to.8.2.3.x

#### 8.2.3.1 CPAC procedures from network perspective

Including discussion on network aspects of CPAC (e.g. inter-node messages, coexistence of Rel-16 and Rel-17 procedures)

#### 8.2.3.2 CPAC procedures from UE perspective

Including discussion on relation with deactivated SCG (e.g. is CPC triggered even if the SCG is deactivated SCG, can the CPC command include deactivated SCG, maximum number of CPC configurations, unsynchronized update of MCG configuration at CPC execution, full configuration changes)

#### 8.2.3.3 Other CPAC aspects

Including essential parts of CPAC that do not fit under other AIs. For any proposals provided in this AI, TPs are required to be provided to illustrate the necessity and impacts of the topic. Proposals that do not provide Stage-3 details will not be treated.

This agenda item may be deprioritized in this meeting .

### 8.2.4 Temporary RS for SCell activation

Including discussion on any essential aspects that were not yet covered by endorsed CRs

This agenda item may be deprioritized in this meeting.

### 8.2.5 UE capabilities

Including finalization of RAN2 feature list input on SCG deactivation, CPAC and efficient SCell activation needed to create UE capability CRs.

If changes are proposed against the baseline endorsed in previous meeting, the proposals should illustrate the differences to the baseline illustrated in [R2-2109676](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_116-e/Docs/R2-2109676.zip).

## 8.3 Multi SIM

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

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [202])

### 8.3.1 Organizational, Requirements and Scope

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [235]-[239]

### 8.3.2 Paging collision avoidance

This agenda item will be deprioritized in this meeting unless additional feedback from SA2/CT1 is received. Proposals that do not provide Stage-3 details will not be treated.

### 8.3.3 UE notification on network switching for multi-SIM

Including discussion on NW switching for multi-SIM with leaving from and staying in RRC\_CONNECTED

This agenda item may use a summary document (decision to be made based on submitted tdocs) considering stage-3 details of MUSIM (including UAI, gap configuration and NW switching with leaving RRC\_CONNECTED)

[Pre117-e][230][MUSIM] Summary Stage-3 details of MUSIM (vivo)

Scope: Provide summary of Stage-3 aspects of MUSIM configuration according to open issue list.

Intended outcome: Summary document in R2-220xxxx.

Deadline: TBD

### 8.3.4 Paging with service indication

This agenda item will be deprioritized in this meeting unless additional feedback from SA2/CT1 is received. Proposals that do not provide Stage-3 details will not be treated.

### 8.3.5 UE capabilities and other aspects

Including finalization of RAN2 feature list input on MUSIM and remaining details needed to create UE capability CRs.

Including discussion on essential aspects of MUSIM that need to be resolved during Rel-17 but are not covered by other agenda items.

If changes are proposed against the baseline endorsed in previous meeting, the proposals should illustrate the differences to the baseline illustrated in [R2-2109625](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_116-e/Docs/R2-2109625.zip).

## 8.4 NR IAB enhancements

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

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

RP 92e: DAPS-like solutions to be deprioritized.

RP 93e: Enhancements to improve topology-wide fairness and multi-hop latency to be deprioritized. RAN2-led efforts on enhancements to LCG-range extension, RLF indications and local rerouting to continue.

### 8.4.1 General

#### 8.4.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 8.4.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

#### 8.4.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, and provide resolution proposals to Rapporteur Handled Open Issues, See also R2-2202050

[Stage-2 OIs: Update with latest agreements, and address of ALL editor’s Notes]

[BAP OIs: Aspects BAP#5, BAP#6, BAP#7, BAP#9].

### 8.4.3 Open Issues

#### 8.4.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues, see R2-2202050:

- MAC CE for beam indication signaling (as proposed by RAN1)

- Remaining Issues on RLF indication not related to BAP#6, BAP#7 BAP#9 (focus Stage 3). Including input on BAP#8

- RAN3’s working assumption on Solution 1 for latency reduction of intra-donor topology adaptation. Identification of potential obstacles and how to overcome them.

- UE capabilities for the IAB-MT’s inter-CU HO and NR DC

- RRC: Remaining aspects of CP-UP separation (focus Stage 3).

Companies to provide input into the following discussion:

[Pre117-e][003][eIAB] eIAB Open Issues Input (Qualcomm)

[Pre117-e][014][eIAB] eIAB MAC Open Issues Input (Samsung)

#### 8.4.3.2 Invited Input

Company input on the following Open Issues, See R2-2202050:

- BAP re-writing mapping configurations for UL inter-donor-DU re-routing, including include option a to d (identified in [Post116bis-e][079]).

- Aspects BAP#1, BAP#4, BAP#2, BAP#3 (identified in [Post116bis-e][078]).

### 8.4.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 8.0.2. Input to this subclause shall not overlap with any input to any of previous subclasues.

### 8.4.5 Other

Issues not covered elsewhere.

## 8.5 NR IIoT URLLC

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

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

### 8.5.1 Organizational

*Including open issues for control plane and user plane [POST116bis-e][512][IIoT] UP open issues (Samsung) and [POST116bis-e][513][IIoT] CP open issues (Ericsson)*

NOTE: NO contributions on these critical open issues are expected

### 8.5.2 Enhancements for support of time synchronization

RAN1 progress if any should be taken into account.

Contributions should only be focused on important issues not included in open issues email discussion.

### 8.5.3 Uplink enhancements for URLLC in unlicensed controlled environments

Contributions should only be focused on important issues not included in open issues email discussion.

### 8.5.4 RAN enhancements based on new QoS

Contributions should only be focused on important issues NOT included in open issues email discussion.

## 8.6 Small Data enhancements

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

Time budget: 1.5 TU

Tdoc Limitation: 2 tdocs

### 8.6.1 Organizational

In coming LSs, rapporteur input for email discussions summaires etc (tdocs in this don’t count towards tdoc limit).

Inputs expected for 38.321 CR (Huawei), 38.331 CR (ZTE), 38.300 CR (Nokia)

Including [Post116-e][506][SDT] RRC running CR update (ZTE), [Post116-e][507][SDT] MAC running CR update (Huawei), and [Post116-e][508][SDT] Stage-2 running CR update (Nokia)

### 8.6.2 User plane common aspects

Including email discussion [POST116bis-e][510][Sdata] UP open issues (Huawei) – NO contributions on these issues.

### Any other contributions should focus on important issues not covered by open issues email discussions. Issues that have been discussed and not agreed in the past should not be brought again, unless there is large support (i.e. large number of companies co-sourced contributions)8.6.3 Control plane common aspects

Including email discussion [POST116bis-e][511][Sdata] CP open issues (ZTE) - NO contributions on these issues

Any other contributions should focus on important issues not covered by open issues email discussions. Issues that have been discussed and not agreed in the past should not be brought again, unless there is large support (i.e. large number of companies co-sourced contributions)

## 8.7 NR Sidelink relay

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

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

### 8.7.1 Organizational

Incoming LSs, TS updates, rapporteur inputs. This AI is reserved for rapporteur and organizational inputs. Documents in this AI do not count towards the tdoc limitation. For LSes that need action or have impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided. Related documents and proposed responses from companies other than the contact company should be submitted to the corresponding technical agenda item (and do count towards the tdoc limitation).

### 8.7.2 Open issues

No documents should be submitted to 8.7.2. Please submit to 8.7.2.x.

#### 8.7.2.1 Control plane procedures

Including connection management, SI delivery, paging, access control for remote UE.

Including report of [Pre117-e][605][Relay] Open issues on relay control plane procedures (Huawei).

#### 8.7.2.2 Service continuity

Service continuity between Uu and relay paths, limited to intra-gNB cases.

Including report of [Pre117-e][603][Relay] Open issues on relay service continuity (CATT)

#### 8.7.2.3 Adaptation layer design

Including bearer mapping, remote UE identification, security aspects if any.

Including report of [Pre117-e][604][Relay] Open issues on relay adaptation layer (OPPO)

#### 8.7.2.4 QoS

Mechanisms for E2E QoS management.

Including report of [Pre117-e][602][Relay] Open issues on relay QoS (Samsung)

#### 8.7.2.5 Discovery and re/selection

Including 5G ProSe Direct Discovery for the non-relaying case. Re-using LTE discovery and re/selection as baseline.

Including report of [Pre117-e][601][Relay] Discovery and relay re/selection (ZTE)

#### 8.7.2.6 UE capabilities

Including report of [Pre117-e][606][Relay] Open issues on relay UE capabilities (Qualcomm)

### 8.7.3 Other

Any other topics on NR sidelink relay.

## 8.8 RAN slicing

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

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [203])

### 8.8.1 Organizational

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [241]-[243]

Including rapporteur input on remaining open issues needed to close the WI.

### 8.8.2 Cell reselection

This agenda item may use a summary document (decision to be made based on submitted tdocs)

Including discussion (with TPs) on how to realize the slice-specific reselection without using specific slice priority value formula when evaluating cell reselection

Including discussion on slice groups and details of how to handle (e.g. slice group mapping to RA, PCI list and/or TAC per slice, UE behaviour if gNB doesn't provide supported slice group info on the best ranked cell, handling of low priority slices, etc.)

[Pre117-e][240][Slicing] Summary of slice-specific cell reselection (CMCC)

Scope: Provide summary of Stage-3 aspects of MUSIM configuration according to open issue list.

Intended outcome: Summary document in R2-220xxxx.

Deadline: TBD

### 8.8.3 RACH

Including discussion based on remaining open issues for RAN slicing-specific RACH prioritization that are not discussed as part of the common RACH prioritization agenda (if any)

NOTE: The common discussion on Rel-17 RACH partitioning will be discussed under AI 8.18. This AI will only consider RACH partitioning from slicing perspective.

### 8.8.4 UE capabilities

Including discussion on UE capabilities related to RAN2-defined features for RAN slicing. If changes are proposed against the baseline endorsed in previous meeting, the proposals should illustrate the differences to the baseline illustrated in [R2-2109627](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_116-e/Docs/R2-2109627.zip).

## 8.9 UE Power Saving

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

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

RP 93e: PEI: Support PDCCH-based PEI as the only option.

### 8.9.1 General

#### 8.9.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 8.9.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided. Open Issues see R2-2201785

**RLM/BFD relaxation (wait for RAN4)**

OI 3.4: Granularity for RLM/BFD relaxation enable/disable (e.g. per-UE/CG/Serving cell)

OI 3.5: How to provide the criteria configuration for RLM relaxation and BFD relaxation for low mobility criterion?

OI 3.6: How to provide the criteria configuration for RLM relaxation and BFD relaxation for serving cell quality criterion?

OI 3.7: How to evaluate the low mobility criterion for RLM/BFD relaxation?

OI 3.8: How to evaluate the serving cell quality criterion for RLM/BFD relaxation?

**PDCCH Skip (Wait for RAN1)**

OI 4.4: In case UE cannot monitor DCP due to PDCCH skipping, whether a) Physical layer of UE reports a value of 1 for Wake-up indication bit to higher layer or b) Physical layer of UE does not report Wake-up indication bit to higher layer.

#### 8.9.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, and Provide resolution proposals to Rapporteur Handled Open Issues. See also R2-2201785:

**PEI and Subgrouping** - OI 1.10: Modifications of the content and location of PEI configurations (based on RAN1 progress),

OI 1.11: It is FFS how to extend for DCI\_format 2\_7. Wait for further RAN1 input.

OI 1.12: Whether to add the note according to RAN1 agreement: PEI-O can be configured by network to be placed close to or overlapped with an earlier SS burst before its associated POs.

OI 1.13: FFS how to number the PDCCH monitoring occasions for PEI.

OI 1.14: FFS whether to have a separate clause for subgrouping or merge it into the previous clause for PEI in 7.x as a subclause (e.g. 7.x.y).

OI 1.15: Whether we need a note in spec on this agreement: “R2 assumes that all the cells within the registration area supports the same number of CN assigned subgroups, i.e. no remapping of CN assigned group ID to RAN subgroup ID”

OI 1.16: Detailed parameter alignment between TS38.304 and TS 38.331.

**TRS / CSI-RS** - OI 2.6: RAN2 to wait for further RAN1 input on whether TRS/CSI-RS configuration can be split as common and TRS specific part

OI 2.7: FFS if scramblingID is per TRS resource set, or per TRS resource

OI 2.8: FFS: the number of configured TRS resource sets is not larger than the number of actual transmitted SSBs determined according to ssb-PositionsInBurst in SIB1.

OI 2.9: Whether/Which part related to TRS/CSI-RS needs to be captured in TS 38.304.

OI 2.10: Detailed parameter alignment between TS38.304 and TS 38.331.

**PDCCH Skip** - OI 4.2: How to capture searchSpaceSwitchTimer-r17 is FFS as the granularity is FFS.

OI 4.3: How to capture PDCCHSkippingDurationList and PDCCHSkippingDuration are FFS as the granularity is FFS.

**UE cap** - OI 5.4: How to capture PDCCH monitoring adaptation capabilities in RAN2 TS?

### 8.9.3 Open Issues

#### 8.9.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues See R2-2201785

**PEI and paging subgrouping**

OI 1.1: How to indicate whether UE monitor PEI in last used cell or any other cells?

OI 1.2: Identify valid cases where UE is unable to monitor subgroup PEI configured by network. Then decide if there can be any rule for subgroup PEI monitoring, or UE simply monitor paging as per legacy.

OI 1.3: RAN2 assumes that PEI can be used “without” subgrouping. FFS whether the bits in the PEI for subgrouping then need to have any particular meaning, or whether this would be done by just having one subgroup.

**TRS / CSI-RS**

OI 2.1 RAN2 to confirm TRS/CSI-RS can be applied to eDRX UEs.

OI 2.2: Whether / how to address the delay required for updating a TRS/CSI-RS configuration due to the eDRX acquisition period (1024 H-SFN)

OI 2.3: A UE which acquired SIB-X with a TRS/CSI-RS configuration but didn’t yet receive an associated L1-based availability indication considers the configured TRS/CSI-RS as [FFS: “unavailable” or “available”]

OI 2.4: Aspects on SIB-X sizing and segmentation: Can segmentation be avoided? If not, how to segment?

OI 2.5: If a UE acquired SIB-X with a TRS/CSI-RS configuration but didn’t yet receive an associated L1-based availability indication, should UE consider the configured TRS/CSI-RS as “unavailable” or “available”?

**BFR-BFD relaxation**

OI 3.1: Can UE start/stop RLM/BFD relaxation by itself if it meets/fails the relaxation criteria?

OI 3.2: Should UE report fulfilment or not (entry/exit) to network for RLM/BFD relaxation?

OI 3.3: Should NW be able to enable/disable RLM/BFD relaxation with explicit indication irrespective if the RLM/BFD relaxation criteria is configured or not?”

**UE caps**

OI 5.1: How to capture UE AS capabilities for PEI/subgrouping in RAN2 TS?

OI 5.2: For TRS/CSI-RS occasion support in Idle and inactive mode, should gNB need to know UE support it?

OI 5.3: UE AS capabilities for RLM/BFD relaxation

Companies to provide input into the following discussion:

[Pre117-e][004][ePowSav] PEI and paging subgrouping Open Issues Input (MediaTek)

[Pre117-e][005][ePowSav] TRS / CSI-RS Open Issues Input (CATT)

[Pre117-e][006][ePowSav] BFR-BFD relaxation Open Issues Input (vivo)

[Pre117-e][007][ePowSav] UE caps Open Issues Input (Intel)

#### 8.9.3.2 Invited Input

Company tdocs invited for input on the following open issues

##### 8.9.3.2.1 PEI and paging subgrouping

OI 1.4: RAN2 has a preference to support PEI with both DRX and eDRX; FFS on potential issues (e.g., PEI and PTW).

OI 1.5: FFS on the detailed NAS signalling between AMF and UE for CN assigned subgrouping.

OI 1.6: When AMF has assigned a UE with a Paging subgroup, some signaling should be supported between AMF and gNB(s) to inform gNB(s) about the related subgroup information for paging a UE in RRC\_IDLE/RRC\_INACTIVE. Exact information is FFS. The message(s) and associated design are up to RAN3.

OI 1.7: It is FFS when a UE in RRC\_INACTIVE has been assigned by CN a Paging subgroup, whether some signaling should be introduced between gNBs to inform each other about the UE’s subgroup for RAN paging.

OI 1.8: Handling in scenarios where certain gNB within a RNA does not support CN controlled subgrouping

OI 1.9: When K=1, the PEI configuration can be either (1) subgroupConfig is absent (i.e., PEI without subgrouping) or (2) subgroupConfig is present and subgroupNumPerPO=1. FFS if UE PHY processing for DCI format 2\_7 is the same.

##### 8.9.3.2.2 PDCCH Skip

OI 4.1: Should UE ignore PDCCH skipping (i.e., PDCCH skipping is cancelled) while UL HARQ reTx timer is running?”

### 8.9.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 8.0.2. Input to this subclasue shall not overlap with any input to previous subclauses.

### 8.9.5 Other

Issues not covered elsewhere.

## 8.10 NR Non-Terrestrial Networks (NTN)

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

Time budget: 1.5 TU

Tdoc Limitation: 4 tdocs

### 8.10.1 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.

#### 8.10.1.1 LS in

For LSes that need action: one tdoc by contact company to address the LS and potential reply is considered.

Rapporteur input may be provided.

#### 8.10.1.2 CRs

CR Rapporteurs to provide running CRs, potentially updated.

### 8.10.2 User Plane

#### 8.10.2.1 MAC aspects

##### 8.10.2.1.1 Open issues

Contributions on open issues listed in R2-2201900. For some aspects the discussion will happen in Pre117 email discussion [103]. For the others, company contributions can be submitted.

Including report of [Pre117-e][103][NTN] MAC open issues (Interdigital)

##### 8.10.2.1.2 Other RACH aspects

Contributions on other RACH issues.

##### 8.10.2.1.3 Other MAC aspects

Contributions on other (non RACH) MAC issues.

#### 8.10.2.2 RLC and PDCP aspects

### 8.10.3 Control Plane

#### 8.10.3.1 Idle/inactive mode aspects

##### 8.10.3.1.1 Open issues

Contributions on open issues listed in R2-2201898. For some aspects the discussion will happen in Pre117 email discussion [102]. For the others, company contributions can be submitted.

Including report of [Pre117-e][102][NTN] Idle mode open issues (ZTE)

##### 8.10.3.1.2 Other

Contributions on any other issues.

#### 8.10.3.2 RRC aspects

##### 8.10.3.2.1 Open issues

Contributions on open issues listed in R2-2201896. For some aspects the discussion will happen in Pre117 email discussion [101]. For the others, company contributions can be submitted.

Including report of [Pre117-e][101][NTN] RRC open issues (Ericsson))

##### 8.10.3.2.2 Other

Contributions on any other issues.

### 8.10.4 UE capabilities

#### 8.10.4.1 Open issues

Contributions on open issues listed in R2-2201962. For some aspects the discussion will happen in Pre117 email discussion [104]. For the others, company contributions can be submitted.

Including report of [Pre117-e][104][NTN] UE caps open issues (Intel)

#### 8.10.4.2 Other

Contributions on any other issues.

## 8.11 NR positioning enhancements

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

Time budget: 2 TU

Tdoc Limitation: 3 tdocs

### 8.11.1 Organizational

Rapporteur input. Incoming LS etc. This AI is reserved for rapporteur and organizational inputs; documents in this AI do not count towards the tdoc limitation. For LSes that need action or have impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided. Related documents and proposed responses from companies other than the contact company should be submitted to the corresponding technical agenda item (and do count towards the tdoc limitation).

Including report of [Pre117-e][613][POS] RAN1 parameter list impact to RRC running CR (Ericsson)

Including report of [Pre117-e][614][POS] Issues requiring RAN1 input (Intel)

### 8.11.2 Open issues

No documents should be submitted to 8.11.2. Please submit to 8.11.2.x.

#### 8.11.2.1 Latency enhancements

Enhancements of signalling, and procedures for improving positioning latency of the Rel-16 NR positioning methods, for DL and DL+UL positioning methods.

Including report of [Pre117-e][607][POS] Open issues on positioning latency enhancements (Huawei)

#### 8.11.2.2 RRC\_INACTIVE

Methods, measurements, signalling and procedures to support positioning for UEs in RRC\_ INACTIVE state, for UE-based and UE-assisted positioning solutions. UL and DL+UL NR positioning methods and gNB positioning measurements for UEs in RRC\_INACTIVE are treated at lower priority.

Including report of [Pre117-e][609][POS] Open issues on positioning in RRC\_INACTIVE (InterDigital)

#### 8.11.2.3 On-demand PRS

Specify UE-initiated and LMF-initiated on-demand transmission and reception of DL PRS for DL and DL+UL positioning for UE-based and UE-assisted positioning solutions.

Including report of [Pre117-e][608][POS] Open issues on on-demand PRS (Lenovo)

#### 8.11.2.4 GNSS positioning integrity

Signalling and procedures to support GNSS positioning integrity determination.

Including report of [Pre117-e][610][POS] Open issues on GNSS positioning integrity (ESA)

#### 8.11.2.5 A-GNSS enhancements

Including support of BDS B2a and B3I signals and support of NavIC.

#### 8.11.2.6 Accuracy enhancements

Input on the accuracy enhancement objectives led by RAN1.

Including report of [Pre117-e][611][POS] Open issues on positioning accuracy enhancements (CATT)

#### 8.11.2.7 UE capabilities

Including report of [Pre117-e][612][POS] Open issues on positioning UE capabilities (Intel)

### 8.11.3 Other

Any other topics on NR positioning enhancements.

## 8.12 Reduced Capability

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

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 8.12.1 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.

#### 8.12.1.1 LS in

For LSes that need action: one tdoc by contact company to address the LS and potential reply is considered.

Rapporteur input may be provided.

#### 8.12.1.2 CRs

CR Rapporteurs to provide running CRs, potentially updated.

### 8.12.2 Control Plane

#### 8.12.2.1 Idle/inactive mode aspects

##### 8.12.2.1.1 Open issues

Contributions on open issues listed in R2-2201889. For some aspects the discussion will happen in Pre117 email discussion [105]. For the others, company contributions can be submitted.

##### 8.12.2.1.2 Other

Contributions on any other issues.

#### 8.12.2.2 RRC aspects

##### 8.12.2.2.1 Open issues

Contributions on open issues listed in R2-2201887. For some aspects the discussion will happen in Pre117 email discussion [105]. For the others, company contributions can be submitted.

Including report of [Pre117-e][105][RedCap] CP open issues (Ericsson)

##### 8.12.2.2.2 Other

Contributions on any other issues.

### 8.12.3 User Plane

#### 8.12.3.1 MAC aspects

##### 8.12.3.1.1 Open issues

Contributions on open issues listed in R2-2201891. For some aspects the discussion will happen in Pre117 email discussion [106]. For the others, company contributions can be submitted.

Including report of [Pre117-e][106][RedCap] MAC open issues (vivo)

##### 8.12.3.1.2 Other

Contributions on any other issues.

### 8.12.4 NCD-SSB aspects

Contributions on NCD-SSB aspects, that might affect multiple specs

### 8.12.5 UE capabilities

#### 8.12.5.1 Open issues

Contributions on open issues listed in R2-2201893. For some aspects the discussion will happen in Pre117 email discussion [107]. For the others, company contributions can be submitted.

Including report of [Pre117-e][107][RedCap] UE caps open issues (Intel)

#### 8.12.5.2 Other

Contributions on any other issues.

## 8.13 SON/MDT

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

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

### 8.13.1 Organizational

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

### 8.13.2 CRs and Rapporteur Resolutions

*Tdoc Limitation: 0.*

*CR Rapporteurs to provide running CRs, potentially updated, and Provide resolution proposals to Rapporteur Handled Open Issues (directly in the running CR). See also R2-2201991, R2-2202015, and R2-2201986.*

### 8.13.3 SON related Open Issues

*Including Pre117-e discussions to gather company input on specific Open Issues*

*Including company input on Open Issues*

*See also R2-2201991, and R2-2202015*

### 8.13.3.1  Pre-discussions

*Tdoc Limitation: 0*

### 8.13.3.2  Invited Input

Company input by tdocs

### 8.13.4 MDT related Open Issues

*Including Pre117-e discussions to gather company input on specific Open Issues*

*Including company input on Open Issues*

*See also R2-2201986*

### 8.13.4.1  Pre-discussions

*Tdoc Limitation: 0*

### 8.13.4.2  Invited Input

Company input by tdocs

### 8.13.5 UE Capabilities

*Initial discussion on Features / UE caps developed in RAN2, if any. Note that this AI is complementary to AI 8.0.2.*

### 8.13.6 Others

## 8.14 NR QoE

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

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

### 8.14.1 General

#### 8.14.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 8.14.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

Open Issues, see also R2-2202043:

wait for RAN3 progresses on management-based mobility.

wait for RAN3 progresses on whether RAN visible QoE should also be paused or if it is only regular QoE reports.

wait for RAN3 and SA4 progresses on how to define the RVQoE metrics reporting in RRC.

wait for SA4 progresses on whether the application can/would take the RRC segmentation capability into account and whether this need explicit indication.

wait for RAN3 progresses on whether to need separate UE capability for slice-based QoE.

#### 8.14.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, provide resolution proposals to Rapporteur Handled Open Issues, see also R2-2202043

38331: a) further details around session start/stop, e.g. implementation in RRC, handling at pause, if it should be configurable etc, b) how to support pause status information in an appropriate inter-node RRC message and reply the LS to RAN3. c) the signalling design for RAN visible specific periodicity. d) the signalling design for PDU session ID.

38.306: a) which of the following options to choose for RRC segmentation capability: Option 1: Conditional mandatory without UE capability parameter (no extra bit), Option 2: Optional without UE capability parameter (no extra bit), Option 3: Optional with UE capability parameter (one extra bit) b) whether the Pause and resume capability is one of basic sub-features. c) which of the following options to choose for RVQoE capability, Option 1: One parameter indicating whether UE supports RAN visible QoE, Option 2: Separate parameters indicating whether UE supports RAN visible QoE for each service type.

### 8.14.3 Open Issues

#### 8.14.3.1 Pre-discussions

Tdoc Limitation: 0.

Including Pre117-e discussions to gather company input on specific Open Issues see also R2-2202043

- Whether and how the data should be retransmitted during HO.

- Which SRB (SRB2 or SRB4) to transmit RAN visible QoE measurements.

Companies to provide input into the following discussion:

[Pre117-e][008][QoE] QoE Open Issues Input (China Unicom)

#### 8.14.3.2 Invited Input

Company input on the following Open Issues see also R2-2202043

- Whether and how the gNB resumes or pauses QoE reporting during HO and RRC resume.

- Whether solutions of legacy QoE mobility could be applied to RAN visible QoE and the specific aspects applied only for RAN visible QoE mobility.

### 8.14.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 8.0.2. Input here should not overlap with input for the previous subclasues.

Includes Company input on the following Open Issues see also R2-2202043: Whether and How AS layer obtains application capability.

### 8.14.5 Other

Issues not covered elsewhere.

## 8.15 NR Sidelink enhancements

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

Time budget: 1.5 TU

Tdoc Limitation: 3 tdocs

### 8.15.1 Organizational

Including incoming LSs, rapporteur inputs (e.g. running CR and/or open issues that were not covered by [POST] email discussion and need to be addressed), etc.

### 8.15.2 SL DRX

Including [POST116bis-e][705].

### 8.15.3 Resource allocation enhancements RAN2 scope

Including [POST116bis-e][706] and [POST116bis-e][707].

## 8.16 NR Non-Public Network enhancements

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

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

### 8.16.1 Organizational

Rapporteur input, incoming LS etc. Running CRs.

### 8.16.2 Issues and Corrections

Address Open Issues: Finalize encoding of GINs in SIB, settle max no of GINs per Cell, finalize UE capabilites.

## 8.17 NR feMIMO

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

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

### 8.17.1 General

#### 8.17.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 8.17.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

#### 8.17.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, provide resolution proposals to Rapporteur Handled Open Issues, See also R2-2202001

RRC:

- whether pathloss reference and power control parameters of PUSCH/PUCCH/SRS should be associated with Joint TCI state

- How to refer to a BWP/CC, where Joint/DL and UL TCI state pool are defined

- On SRS partial sounding, there is a parameter ‘StartRBIndex’ that is missing in ASN1. In 38.211, there is: ”$k\_{F}\in \left\{0,1,…,P\_{F}-1\right\}$ is given by the higher-layer parameter StartRBIndex if configured, otherwise $k\_{F}=0$”.

- Many maxNRof values are not added in the CR(e.g. rows 24,25). Suggestion: rapporteur provides in next version towards 117

- Row 18 “PDSCH configuration for each CC/BWP. The reference CC/BWP includes the Rel-17 TCI state pool (a list of TCI states) for PDSCH” not implemented. Suggestion: rapp provides in next version towards 117

- Rows 16,17 DLorJOint-TCIState-Id-r17 not implemented in CSI-AssociatedReportConfigInfo or NZP-CSI-RS-Resource. Suggestion: rapp provides in next version towards 117

### 8.17.3 Open Issues

#### 8.17.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues See also R2-2202001

RRC:

- pucch-PowerControlSet to be aligned with the corresponding MAC CE design, R2 action: develop common understanding on the operation.

- BFD/BFR RRC configuration is not implemented. Rows 60-62, 67. R2 action: develop common understanding on the operation.

- the detail SSB configuration of aTRP, and including whether such IE is also applicable for mTRP (4.1), why put it under SSB-MTC (4.2), wheher there is a disconnect on the application of PUCCH-SpatialRelationInfo (4.4.),

- How to indicate serving cells, which will share common TCI state i.e. share the MAC CE and DCI from one reference serving cell (this issue is also related to the configuration of beamAppTime-r17).

Companies to provide input into the following discussion:

[Pre117-e][009][feMIMO] feMIMO Open Issues Input (Ericsson)

#### 8.17.3.2 Invited tdocs

-

### 8.17.4 Other

Issues not covered elsewhere.

- OI RRC: FFS for sfnSchemePdsch in PDSCH-Config to be applicable for BWP-DownlinkCommon (RRC Rap: hopefully R1 can give guidence).

#### 8.17.4.1 RRC and General

Please see the RRC CR (in R2-2202000), annotated L1 parameters list (in R2-2202055), and RRC open issues list (in R2-2202001). Please focus company input on Open Issues and unresolved parts.

#### 8.17.4.2 MAC

Please check the MAC CR (in R2-2201994) for Open issues on MAC. Please focus company input on Open Issues.

## 8.18 RACH indication and partitioning

Time budget: Equivalent to 0.5-1 TU

Tdoc Limitation: 2 tdocs

Expected to cover WIs SDT, CovEnh, RedCap, RAN slicing. RA specific aspects from the different WI should be covered in this AI given the RA experts are all there.

### 8.18.1 Common signalling framework

Including output of [POST116bis-e][513][IIoT] CP open issues (Ericsson) – NO contributions on these issues

Any other contributions should focus on important issues not covered by open issues email discussions.

### 8.18.2 Common aspects of RACH procedure

Including output of [POST116bis-e][514][RA Part] UP open issues (ZTE) – NO contributions on these issues

Any other contributions should focus on important issues not covered by open issues email discussions.

## 8.19 Coverage Enhancements

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

Time budget: 0.5

Tdoc Limitation: 1 tdoc

Common aspects related to RACH indication (in MSG1) / RACH partitioning shall be submitted to 8.18

### 8.19.1 Organizational

Rapporteur input, incoming LS etc.

#### 8.19.1.1 LS in

For LSes that need action: one tdoc by contact company to address the LS and potential reply is considered.

Rapporteur input may be provided.

#### 8.19.1.2 CRs

CR Rapporteurs to provide running CRs, potentially updated.

### 8.19.2 General

All aspects, including possible corrections/TPs for the running CRs.

## 8.20 Extending NR operation to 71GHz

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

Time budget: 0.5

Tdoc Limitation: 2 tdocs

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [204])

### 8.20.1 Organizational

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [218] and [219]

Including input running Stage-2 CR from the specification/WI rapporteur (which does not count against the Tdoc limits)

Including result of open issue email discussion [204].

### 8.20.2 General

Including discussion if additional differentiation between licensed operation and "no-LBT mode" is needed for any case

Including discussion on whether RAN2 should introduce new absolute values for CG/SR/DRX parameters

### 8.20.3 UE capabilities

This agenda item may use a summary document.

Including discussion on interaction of FR2-2 UE capabilities with upper layer features introduced by other Rel-17 WIs

Including discussion on UE capabilities for FR2-2 based on decision to go with per-band signalling

[Pre117-e][210][71 GHz] Summary of UE capabilities for 71 GHz (Intel)

Scope: summarize contributions to 71 GHz UE capabilities and provide proposals for discussion.

Intended outcome: Summary document in R2-220xxxx.

Deadline: TBD

## 8.21 TEI17

Time budget: 1.5 TU

Note that TEI17 will have low priority in 2022 Q1. Normal treatment resumed in Q2.

### 8.21.0 In-principle agreed CRs

### 8.21.1 TEI proposals initiated by other groups

Including incoming LSes. This AI may be deprioritized at current meeting.

### 8.21.2 TEI proposals initiated by RAN2

Treatment of new (= not agreed) proposals will have low priority at current meeting.

Tdoc limitation: 2 tdocs, except for Operators.

CRs or detailed modifications to agreed proposals are not counted towards the limit

## 8.22 NR and MR-DC measurement gap enhancements

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

Time budget: 0.5

Tdoc Limitation: 3 tdocs

### 8.22.1 General

#### 8.22.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 8.22.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

#### 8.22.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, Provide resolution proposals to Rapporteur Handled Open Issues. See also R2-2202054

**Concurrent MG:**

- C1-4: Simultaneously support of legacy gap and concurrent gap

- C1-5: Simultaneously support of per-UE gap and per-FR gap

- C1-6: Support of gap sharing for concurrent gap

### 8.22.3 Open Issues

#### 8.22.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues See also R2-2202054

**Concurrent MG**

C1-1: Whether to use ToAddModList and ToReleaseList structure

C1-2: In addition to the per frequency layer association, define ASN.1 for per use case (e.g. PRS, SSB, CSI-RS, EUTRA) association with concurrent gaps.

C1-3: Maximum support of concurrent gaps

C1-7: Potential Configuration restriction for associated gap ID configuration in measObjectNR

**NCSG MG**

N1-1: It is FFS whether to support reporting of NCSG for E-UTRA target bands

N1-4: Whether the NCSG could be configured as per FR gap

N1-5: Whether to add a new IE for NCSG gap configuration or reuse the legacy GapConfig with some extension

Companies to provide input into the following discussion:

[Pre117-e][010][MGE] MGE Open Issues Input (MediaTek)

#### 8.22.3.2 Invited Input

Company input by tdocs. See also R2-2202054

##### 8.22.3.2.1 Pre-configured MG patterns

Company input on the following Open Issues

- P1-1: Discuss support of case 4 where NW signals the pre-configured gap and BWP status via RRC, then UE follows BWP status to activates/deactivates gap upon BWP switching

- P1-2: Support pre-configured MG under CA based on BWP switching on a single CC

##### 8.22.3.2.2 Network Controlled Small Gap

Company input on the following Open Issues

- N1-6: Introduction of signalling for enabling the derivation of SSB indexes of target cell(s) on a frequency different than serving cell frequency from serving cell timing, to increase NCSG efficiency.

- N1-7: Whether the reporting of R17 gap requirement information (e.g. needForNCSG-InfoNR) should be combined with R16 gap requirement information (i.e. NeedForGapsInfoNR) or the R17 NCSG requirement information could be reported independently.

### 8.22.4 UE capabilities

Features / UE caps developed in RAN2. Input should not overlap with input to previous subclauses. Note that this AI is complementary to AI 8.0.2.

### 8.22.5 Other

Issues not covered elsewhere.

## 8.23 Uplink Data Compression (UDC)

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

Time budget: 0

Tdoc Limitation: 1 tdocs

Finalization of CRs, resolution of FFS. Technical discussion will be mainly offline

### 8.23.1 Organizational

Rapporteur input, CRs.

### 8.23.2 General

Open issues, Data rate limit capability, FFS on inter-Node Signalling

## 8.24 NR R17 Other

Time budget: 1.5 TU

Includes items and topics without specific R2 Agenda Item. Includes LS in for R17 items not in a specific R2 Agenda Item. In general incoming LSes are always treated with high priority regardless if specific AI or TU allocation exists.

### 8.24.0 In-principle agreed CRs

### 8.24.1 RAN4 led Items

e.g. TxD, TX switching, BCS4/5

### 8.24.2 RAN1 led Items

e.g. DSS (expect that DSS work is initiated by LS from R1)

### 8.24.3 Other

# 9 Rel-17 EUTRA Work Items

## 9.0 EUTRA Rel-17 General

Tdoc Limitation: 0 tdocs

No documents should be submitted to 9.0. Please submit to 9.0.x

### 9.0.1 L1 parameters and cross-WI RRC aspects

This agenda item may use a summary document (decision made based on submitted contributions).

Including RRC details on L1 parameters for Rel-17 WIs that require discussion in the common session or are related to multiple Rel-17 WIs.

### 9.0.2 Feature Lists and UE capabilities

This agenda item may use a summary document (decision made based on submitted contributions).

Including UE capability details based on RAN1/4 inputs that are not covered by other WIs or require discussion in the common session due to affecting multiple Rel-17 LTE WIs.

## 9.1 NB-IoT and eMTC enhancements

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

Time budget: 1 TU

Tdoc Limitation: 1 tdocs

### 9.1.1 Organizational

LS in

36.300 running CR (Huawei)

36.331 running CR (Qualcomm)

36.304 running CR (Nokia)

36.306 running CR (ZTE)

### 9.1.2 Open Issues

Outcomes of:

[Pre117-e][301][NBIOT/eMTC R17] NB-IoT carrier selection (ZTE)

[Pre117-e][302][NBIOT/eMTC R17] Capabilities open issues (Huawei)

[Pre117-e][303][NBIOT/eMTC R17] Other open issues (Ericsson)

### 9.1.3 Other

## 9.2 NB-IoT and eMTC support for NTN

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

Time budget: 0.5 TU

Tdoc Limitation: 4 tdocs

RP 93e: An LS was sent to SA asking about NAS support for discontinous coverage and WUS. Understanding that RAN work on discontinous coverage shall continue for now (also WUS work if any is needed).

### 9.2.1 General

#### 9.2.1.1 Organizational

Tdoc Limitation: 0

Planning etc

#### 9.2.1.2 LS in

Tdoc Limitation: 0

LS in. For LSes that need action or has impact beyond taking into account by CR rapporteurs: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

#### 9.2.1.3 CRs and Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide running CRs, potentially updated, Provide resolution proposals to Rapporteur Handled Open Issues. See also R2-2202053

**Control Plane**

OI 2.4 [CR rapporteur handled issue] FFS whether t-Service applies to higher priority frequencies

OI 2.5 [CR rapporteur handled issue] Change/amend text on location registration related to TAU in NTN

OI 2.10 [CR rapporteur handled issue] Signalling of Part-of ARFCN indication in MIB for NB-IoT

### 9.2.3 Open Issues

TBD how to handle Open issues that are the same as for NR NTN

#### 9.2.3.1 Pre-discussions

Tdoc Limitation: 0.

Pre117-e discussions to gather company input on specific Open Issues See also R2-2202053

**User Plane**

OI 1.1a [Pre117-e-offline] Decide on a suitable name and contents for the MAC CE corresponding K\_Offset.

OI 1.1b [Pre117-e-offline] Decide on a suitable name and contents for the UE-specific TA Report MAC CE.

OI 1.2 [Pre117-e-offline]: How to extend SR-Prohibit Timer in IoT-NTN?

OI 1.3 [Pre117-e-offline]: How to extend RLC t-Reordering Timer and PDCP Discard Timer in IoT NTN?

OI 1.4 [Pre117-e-offline]: Decide whether to use LCID or eLCID for UE-specific TA Report MAC CE.

O1 1.5 [Pre117-e-offline]: Decide whether to use LCID or eLCID for MAC CE corresponding K\_Offset.

OI 1.6 [Pre117-e-offline]: Decide whether the threshold-based TA-Trigger needs to deviate from NR-NTN agreements

OI 1.7 [Pre117-e-offline]: Decide whether we need different behavior for different re-configurations e.g., Re-establishment, Handover

OI 1.8 [Pre117-e-offline]: Decide if TA reporting in connected mode is not controlled by enabling/disabling indication in SI?

OI 1.9 [Pre117-e-offline]: What's the logical channel priority of the TA report MAC CE, e.g., compared with other MAC CEs?

**Control Plane**

OI 2.1 [Pre117-e-offline]: Define a new barring bit for NTN UEs barring.

OI 2.6 [Pre117-e-offline] If some mechanism is needed to trigger the UE to reacquire the NTN specific SIB in RRC\_IDLE

OI 2.7 [Pre117-e-offline] If anything additional is needed on expiry of the UL synchronisation timer

OI Provision of SIBxx in dedicated signalling at HO

**Discontinuous Coverage**

OI 3.1 [Pre117-e-offline]: Decide on the maximum number of satellites, whose ephemeris (assistance) information will be provided.

OI 3.2 [Pre117-e-offline]: How to signal this information (new SIB for this purpose or dedicated signaling)?

OI 3.3 [Pre117-e-offline]: Decide if average ephemeris and almanac information should be used for estimating discontinuous coverage. Take into account the size and feasibilty of specifying almanac.

OI 3.4 [Pre117-e-offline]: What will be the UE behavior on receiving this ephemeris information?

Companies to provide input into the following discussions:

[Pre117-e][011][IoT-NTN] User plane Open Issues Input (OPPO)

[Pre117-e][012][IoT-NTN] Control plane Open Issues Input (Huawei)

[Pre117-e][013][IoT-NTN] Discontinous Coverage Open Issues Input (MediaTek)

#### 9.2.3.2 Invited tdoc input

Company input on the following Open Issues See also R2-2202053

**User Plane**

OI 1.10 [Company Tdocs Invited]: Whether SR can be triggered if there is no available or sufficient UL-SCH resources for the triggered TA reporting?

**Control Plane**

OI 2.2 [Company Tdocs invited]: Decide on Location Reporting by NAS and Coarse location report.

OI 2.3 [Company Tdocs invited]: Whether existing offset are sufficient to prioritize TN vs NTN frequencies

OI 2.8 [Company Tdocs invited]: Configuration of event-triggered TA report

OI 2.9 [Company Tdocs invited]: Signalling of multiple TACs per PLMN in eMTC and NB-IoT

**Discontinuous Coverage**

O1 3.5 [Company Tdocs Invited]: Decide on whether additional new parameters like satellite footprint reference point on ground, satellite coverage radius can be used?

### 9.2.4 UE capabilities

Includes invited tdocs for identified Open issues

#### 9.2.4.1 R2 Features and General

Open Issues See also R2-2202053

**UE Capabilities**

OI 4.1 [Company Tdocs Invited]: UE capability for supporting soft-switching procedure

OI 4.2 [Company Tdocs Invited]: UE capability for supporting PUR Timer modifications

OI 4.3 [Company Tdocs Invited]: Reuse of the existing CHO capability indication for IoT-NTN CHO

 OI 4.4 [Company Tdocs Invited]: Whether Capability Indication of existing IoT-Features until Rel-16 are reused in NTN, or to what extent they need to be duplicated to allow for different Interoperability Test (IOT) Status

#### 9.2.4.2 R1 and R4 Features

CR Rapporteur to make initial proposals

### 9.2.5 Other

Issues not covered elsewhere. See also R2-2202053

OI 2.11 [Other] Signalling range of positionX, positionY, positionZ

OI 2.12 [Other] Signalling range and step size of velocityVX, velocityVY, velocityVZ

OI 2.13 [Other] UE location reporting in eMTC

OI 2.14 [Other] UE location reporting in NB-IoT

## 9.3 EUTRA R17 Other

Time budget: 0 TU

Tdoc Limitation: No limitation but new topics may be deprioritized depending on available time.

This agenda item may use a summary document (decision made based on submitted contributions).

Including RRC CRs based on L1 parameters received from RAN1 for all Rel-17 LTE WIs not covered by other AIs

Including final CRs for LTE TEI17 proposals that have been agreed in principle earlier.

## 9.4 User Plane Integrity Protection support for EPC connected architectures

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

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

Including discussion on SA3 LS [R2-2200153](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_116bis-e/Docs/R2-2200153.zip)

Including configuration and capability aspects of allowing full rate UPIP for EN-DC UEs connected to EPC

## 9.5 NR and EUTRA Inclusive language

Time budget: N/A

RAN coordinator for inclusive language is Gino Masini (Ericsson).

CRs were endorsed/agreed-in-principle at R2#112-e. Final approval of CRs is expected in RAN#95e, so affected RAN2 specifications rapporteurs are requested to submit the endorsed CRs (updated to latest TS versions) for approval in this meeting.