3GPP TSG-RAN WG2 Meeting #118 electronic R2-2xxxxxx

Online, May, 2022

Source: RAN2 Chairman (MediaTek)

Title: Skeleton Notes

# Opening of the meeting

**This e-Meeting**

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

- RAN2 118 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

Rel-17 CR Instructions (pl read)

General, all correction CRs / draft CRs:

1. Rapporteurs of Rel-17 WI CRs are asked to continue their volunteer responsibility, even if the WI is closed, at least for the durations of R2 118-e, and R2 119 (later meetings TBD).
2. Unless otherwise explicitly agreed/indicated, max one Cat F CR per TS per WI shall be produced as outcome of the meeting.
3. For smaller / editorial corrections, Companies are asked to coordinate directly with Rapporteurs of Rel-17 WI CRs, rather than submitting separate correction tdocs.
4. Big open issues can be discussed with contributions with CR/TP in the appendix of the contribution, or draft CR.
5. For WI that has been declared 100% complete only essential corrections should be submitted. Other corrections may be deprioritized.

ASN.1 review CRs / draft CRs etc:

1. Documents that relate to ASN.1 review should indicate the RIL number in the document title. Companies shall coordinate to avoid multiple tdocs for an issue. All NR RRC corrections shall be registered with the ASN.1 review file (RIL status to be consistent with CRs etc, to avoid double work or non-addressed issues)
2. CRs and tdocs related to RRC ASN.1 review may use the late submission deadline.
3. Rapporteurs of Rel-17 WI RRC CRs are asked to address Class 1 and Class 2 issues for their WI, at least for those RIL issues with favourable decision at ASN.1 ad-hoc meeting, and at least for RIL issues for which it is not indicated that the RIL company will provide a tdoc. RRC CR Rapporteur resolutions has priority to be treated over other tdocs if any. If RILs need discussion, an accompanying discussion document can be provided.
4. Rapporteurs of Rel-17 WI RRC CRs are further asked to address Class 0 issues for their WI to the extent reasonable (Rapporteur need to assess which issues to include). Class 0 issues are assumed to not impact protocol operation and can in principle also be fixed at a later time.
5. Rapporteurs of Rel-17 WI RRC CRs are asked to indicate which Class 1 2 RILs are intended to be addressed ASAP, and use a [Pre118-e]-discussion for this communication and for the initial informal check of the Issue resolutions etc in the CR (or in the discussion doc if applicable).

Tdoc limitations (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).

- ASN.1 review: Max 1 tdoc per RIL issue (class 1,2) for RIL company (if there is RIL overlap or closely related RILs, companies shall coordinate to avoid multiple tdocs for one topic, including coordination with WI CR Rapporteur, who has priority for treatment). Tdoc for a RIL issue is expected if it is indicated in the RIL that a tdoc will be provided.

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).

Tdoc limitations applies to all other submitted tdocs.

Rel-17 UE capabilities

For R2 118-e, the intention is to finalize UE capabilities for Rel-17

There is no specific coordination for EUTRA UE capabilities.

For 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 6.0.2

2: Coordinate centrally incorporation in CRs of RAN1 / RAN4 features for all Rel17 WIs. This work is done under Agenda Item AI 6.0.2 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 and corrected 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 118, 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.

# 3 Incoming liaisons

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

Rel-18 LSin’s will not be treated at current meeting. Rel-18 LSin’s will be treated in Q3. In case some LS is particularly urgent and treatment is not complex, it could be considered for Q2.

# 4 EUTRA Rel-16 and earlier

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

## 4.1 NB-IoT corrections Rel-16 and earlier

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

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

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 Side-link corrections Rel-15 and earlier

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

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

## 4.4 Positioning corrections Rel-16 and earlier

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

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-16 and earlier

(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.

Including outcome of [Post117-e][209][QoE] Correction to application layer measurement and reporting for LTE (Google)

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 5.1.X instead.

# 5 NR Rel-15 and Rel-16

Essential corrections only.

Tdoc Limitation: 18 tdocs in total for all sub agenda items.

## 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 Organisational

Incoming LSs, etc.

### 5.1.2 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

### 5.1.3 User Plane corrections

#### 5.1.3.1 MAC

#### 5.1.3.2 RLC PDCP SDAP BAP

### 5.1.4 Control Plane corrections

#### 5.1.4.1 NR RRC

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

##### 5.1.4.1.1 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.

##### 5.1.4.1.2 RRM and Measurements

##### 5.1.4.1.3 System Information and Paging

##### 5.1.4.1.4 Inter-Node RRC messages

##### 5.1.4.1.5 Other

#### 5.1.4.2 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.

#### 5.1.4.3 UE capabilities

#### 5.1.4.4 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

## 5.2 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 5

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.).

### 5.2.1 General and Stage-2 corrections

Including incoming LSs, rapporteur inputs, etc.

### 5.2.2 Control plane corrections

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

### 5.2.3 User plane corrections

This agenda item may utilize a summary document on MAC (LG).

## 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)

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 5

### 5.3.1 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).

### 5.3.2 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).

### 5.3.3 LPP corrections

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

### 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).

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

Tdoc Limitation: See tdoc limitation for Agenda Item 5

### 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

## 6.0 General

Please input to 6.0.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.

### 6.0.1 RRC

Including general or multi-WI aspects of ASN.1 review

### 6.0.2 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.

### 6.0.3 Gaps Coordination

Tdoc limitation: 1

This AI is complementary to other AIs.

### 6.0.4 Other

E.g. cross WI coordination on MAC CEs.

## 6.1 NR Multicast

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

Tdoc Limitation: 8 tdocs

WI has been declared 100% complete

### 6.1.1 General

#### 6.1.1.1 Organizational

Tdoc Limitation: 0

LS in, WI rapporteur guidance etc. For LSes that need action: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

#### 6.1.1.3 CR Rapporteur Resolutions

Tdoc Limitation: 0

CR Rapporteurs to provide baseline correction CRs. For smaller corrections, text clarifications etc please contact CR editor.

### 6.1.3 Corrections

Information: Known correction that may be needed: FFS whether CSI-mask for multicast OnDuration is needed; For Unicast DCP monitoring/WUS configured when Multicast DRX is configured, CSI reporting, SRS impact, and whether some restriction need to be captured is FFS; On HFN < 0, R2 assumes it is up to network implementation to ensure that HFN part of RX\_DELIV should be a positive value (TS impact if any is FFS, e.g. a NOTE in RRC or PDCP)

#### 6.1.3.1 Control Plane

#### 6.1.3.2 User Plane

### 6.1.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 6.0.2.

### 6.1.5 Other

## 6.2 MR DC/CA further enhancements

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

Tdoc Limitation: 8 tdocs

No documents should be submitted to 6.2. Please submit to.6.2.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.

WI has been declared 100% complete

### 6.2.1 Organizational

Including LSs and any rapporteur inputs (e.g. from ASN.1 ad-hoc meeting).

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

Including essential corrections to of SCG activation/deactivation. Proposals that do not provide Stage-3 details will not be treated.

### 6.2.3 Conditional PSCell change / addition

Including essential corrections to of CPAC. Proposals that do not provide Stage-3 details will not be treated.

### 6.2.4 Temporary RS for SCell activation

Including essential corrections to of temporary RS for SCell activation. Proposals that do not provide Stage-3 details will not be treated.

### 6.2.5 UE capabilities

Please follow the general guidance on UE capabilities under 2.4 - only corrections related to RAN2 parts are discussed in WI-specific agenda. Work for capabilities from RAN1/4 is done under AI 6.0.2

Including essential corrections to RAN2-specific UE capabilities for SCG activation/deactvation, CPAC and temporary RS for SCell activation. Proposals that do not provide Stage-3 details will not be treated. Please use draft CRs for 38.331 and 38.306 to help with CR merging.

## 6.3 Multi SIM

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

Tdoc Limitation: 5 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.

WI has been declared 100% complete

### 6.3.1 Organizational

Including LSs and any rapporteur inputs (e.g. from ASN.1 ad-hoc meeting).

### 6.3.2 Paging collision avoidance and paging with service indication

Including essential corrections to paging collision avoidance and paging with service indication. Proposals that do not provide Stage-3 details will not be treated.

Including discussion on whether something needs to be captured in RAN2 specifications on UE behavior for NAS-based busy indication in RRC\_INACTIVE (which was postponed in RAN2#117e)

### 6.3.3 NW switching for multi-SIM without leaving RRC\_CONNECTED

Including essential corrections to procedures for NW switching for multi-SIM without leaving RRC\_CONNECTED. Proposals that do not provide Stage-3 details will not be treated.

### 6.3.4 NW switching for multi-SIM with leaving RRC\_CONNECTED

Including essential corrections to procedures for NW switching for multi-SIM with leaving RRC\_CONNECTED. Proposals that do not provide Stage-3 details will not be treated.

### 6.3.5 UE capabilities

Please follow the general guidance on UE capabilities under 2.4 - only corrections related to RAN2 parts are discussed in WI-specific agenda. Work for capabilities from RAN1/4 is done under AI 6.0.2

Including essential corrections to RAN2-specific UE capabilities for MUSIM. Proposals that do not provide Stage-3 details will not be treated. Please use draft CRs for 38.331 and 38.306 to help with CR merging.

## 6.4 NR IAB enhancements

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

Time budget: 0.25 TU (for exception sheet)

Tdoc Limitation: 5 tdocs

### 6.4.1 General

#### 6.4.1.1 Organizational

Tdoc Limitation: 0

LS in, WI rapporteur guidance etc. For LSes that need action: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

#### 6.4.1.3 CR Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide baseline correction CRs. For smaller corrections, text clarifications etc please contact CR editor.

### 6.4.3 Open Issues

Issues listed in exception sheet, see RP-220519

### 6.4.4 Corrections

#### 6.4.4.1 Control Plane

#### 6.4.4.2 User Plane

### 6.4.5 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 6.0.2.

### 6.4.6 Other

## 6.5 NR IIoT URLLC

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

Tdoc Limitation: 3 tdocs

WI has been declared 100% complete

### 6.5.1 Organizational

Including LSs, rapporteur correction CR, and any rapporteur inputs (e.g. from ASN.1 ad-hoc meeting).

### 6.5.2 Control Plane

A single CR 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

### 6.5.3 User Plane

A single CR 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

## 6.6 Small Data enhancements

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

Tdoc Limitation: 3 tdocs

WI has been declared 100% complete

### 6.6.1 Organizational

Including LSs, rapporteur correction CR and any rapporteur inputs (e.g. from ASN.1 ad-hoc meeting).

### 6.6.2 User plane common aspects

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

### 6.6.3 Control plane common aspects

A single CR with miscelaneous corrections is encouraged. Small editorial corrections should be sent directly to rapporteur.

Big critical issues can be discussed in a contribution with CR in the appendix of the contribution

## 6.7 NR Sidelink relay

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

WI has been declared 100% complete

Tdoc Limitation: 8 tdocs

### 6.7.1 Organizational

Incoming LSs, TS updates, rapporteur inputs. This AI is reserved for rapporteur and organizational inputs. 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.

### 6.7.2 Essential corrections

No documents should be submitted to 6.7.2. Please submit to 6.7.2.x.

#### 6.7.2.1 Control plane procedures

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

#### 6.7.2.2 Service continuity

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

#### 6.7.2.3 Adaptation layer design

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

#### 6.7.2.4 QoS

Mechanisms for E2E QoS management.

#### 6.7.2.5 Discovery and re/selection

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

#### 6.7.2.6 UE capabilities

#### 6.7.2.7 ASN.1 issues

Any contributions related only to the details of relay-specific ASN.1 in 38.331.

### 6.7.3 Other

Any other topics on NR sidelink relay.

## 6.8 RAN slicing

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

Tdoc Limitation: 5 tdocs

This WI has approved exception sheet in [RP-220940](https://www.3gpp.org/ftp/tsg_ran/TSG_RAN/TSGR_95e/Docs/RP-220940.zip) and contributions should prioritize solving the issues listed in the exception sheet. Contributions that are not essential corrections may be deprioritized.

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.

### 6.8.1 Organizational

Including LSs and any rapporteur inputs (e.g. from ASN.1 ad-hoc meeting).

Including rapporteur input on WI finalization based on SA2 progress on slice group definition and slice group prioritization.

### 6.8.2 Cell reselection

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

Including discussion on how the network control works for slice-specific cell reselection and any corrections to the principles of slice-specific cell reselection.

Including discussion slice group handling and slice group prioritization based on SA2 progress.

### 6.8.3 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 6.18. This AI will only consider RACH partitioning from slicing perspective.

### 6.8.4 UE capabilities

Please follow the general guidance on UE capabilities under 2.4 - only corrections related to RAN2 parts are discussed in WI-specific agenda. Work for capabilities from RAN1/4 is done under AI 6.0.2

Including essential corrections to UE capabilities related to RAN2-defined features for RAN slicing. Proposals that do not provide Stage-3 details will not be treated. Please use draft CRs for 38.331 and 38.306 to help with CR merging.

## 6.9 UE Power Saving

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

Tdoc Limitation: 5 tdocs

WI has been declared 100% complete

### 6.9.1 General

#### 6.9.1.1 Organizational

Tdoc Limitation: 0

LS in, WI rapporteur guidance etc. For LSes that need action: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

#### 6.9.1.3 CR Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide baseline correction CRs. For smaller corrections, text clarifications etc please contact CR editor.

### 6.9.3 Corrections

Known issues that may need resolution or correction: <List>

#### 6.9.3.1 PEI and Subgrouping

#### 6.9.3.2 RLM and BFD relaxation

Including continuation of TSG RAN discussion whether (and how) impact of signalling restriction (prohibit timer) to consistency of the state understanding between UE and gNB.

#### 6.9.3.3 Other

FFS points: For the case when the UE ignores PDCCH skipping on all serving cells of the corresponding CG while SR is pending, FFS if “all” can be further restricted.

### 6.9.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 6.0.2.

## 6.10 NR Non-Terrestrial Networks (NTN)

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

RAN2 parts of the WI has been declared 100% complete. The exception sheet in RP-220209 contains RAN4 impacts.

Tdoc Limitation: 8 tdocs

### 6.10.1 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.

#### 6.10.1.1 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.

#### 6.10.1.2 Rapporteur CRs

CR Rapporteurs to provide input CRs, if needed.

### 6.10.2 User Plane

#### 6.10.2.1 Known Corrections

Corrections/clarifications for already known issues, e.g. details of support for blind Msg3 retransmission, details of TA reporting during RA (e.g. on when to send TA report if RA triggered by upper layers),  implementation of HARQ RTT Timer extension (coordination with RRC spec),  UE behaviour upon validity timer expiry (confirmation of WA)

#### 6.10.2.2 Other

Contributions on any other UP issues.

### 6.10.3 Control Plane

#### 6.10.3.1 Idle/inactive mode aspects

##### 6.10.3.1.1 Known Corrections

Corrections/clarifications for already known issues, e.g. location based cell reselection, access barring (UE behavior), SIBxx processing (details on UE operation)

##### 6.10.3.1.2 Other

Contributions on any other idle/inactive mode issues.

#### 6.10.3.2 RRC aspects

##### 6.10.3.2.1 Known Corrections

Corrections/clarifications for already known issues, e.g. RRC signaling for: HARQ RTT timer extension, assistance information (e.g., differential propagation delay) for SMTC configuration and neighbor cell satellite information; further details for measurement/location reports; CHO configuration after T2 expiry

##### 6.10.3.2.2 Other

Contributions on any other RRC issues.

### 6.10.4 UE capabilities

#### 6.10.4.1 Known remaining issues

Corrections/clarifications for already known issues, e.g. structure, IoT bits, Fixed Dish type UE without GNSS module but with GNSS coordinates

#### 6.10.4.2 Other

Contributions on any other issues.

## 6.11 NR positioning enhancements

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

WI has been declared 100% complete.

### 6.11.1 Organizational

Rapporteur input. Incoming LS etc. This AI is reserved for rapporteur and organizational inputs. 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.

### 6.11.2 Essential corrections

No documents should be submitted to 6.11.2. Please submit to 6.11.2.x.

#### 6.11.2.1 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.

#### 6.11.2.2 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.

#### 6.11.2.3 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.

#### 6.11.2.4 GNSS positioning integrity

Signalling and procedures to support GNSS positioning integrity determination.

#### 6.11.2.5 A-GNSS enhancements

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

#### 6.11.2.6 Accuracy enhancements

Input on the accuracy enhancement objectives led by RAN1.

#### 6.11.2.7 UE capabilities

#### 6.11.2.8 LPP ASN.1 issues

Any contributions related only to the details of ASN.1 in 37.355. CRs should not be submitted to this agenda item except by the specification rapporteur.

#### 6.11.2.9 Positioning RRC ASN.1 issues

Any contributions related only to the details of positioning-specific ASN.1 in 38.331.

### 6.11.3 Other

Any other topics on NR positioning enhancements.

## 6.12 Reduced Capability

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

WI is considered as 100% complete from RAN2 perspective. Exception Sheet in RP-220965 contains RAN4 items.

Tdoc Limitation: 5 tdocs

### 6.12.1 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.

#### 6.12.1.1 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.

#### 6.12.1.2 Rapporteur CRs

CR Rapporteurs to provide input CRs, if needed.

### 6.12.2 Control Plane

#### 6.12.2.1 NCD-SSB aspects

Corrections/clarifications on NCD-SSB aspects

#### 6.12.2.2 Other CP aspects

##### 6.12.2.2.1 Known Corrections

Corrections/clarifications for already known issues (non NCD-SSB related), eg. inter-RAT mobility from LTE to NR, capability for support for Rx branches inclusion in the UERadioPagingInformation inter-node message

##### 6.12.2.2.2 Other

Contributions on any other CP issues.

### 6.12.3 User Plane

#### 6.12.3.1 MAC aspects

### 6.12.4 UE capabilities

#### 6.12.4.1 Known remaining issues

Corrections/clarifications for already known issues, e.g. those not concluded in the discussion for [R2-2203563](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2203563.zip).

#### 6.12.4.2 Other

Contributions on any other issues.

## 6.13 SON/MDT

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

Tdoc Limitation: 5 tdocs

WI is declared 100% complete

### 6.13.1 Organizational

Tdoc Limitation: 0

LS in etc

### 6.13.2 CRs and Rapporteur Resolutions

*Tdoc Limitation: 0.*

*CR Rapporteurs to provide input CRs, and Provide resolution proposals for smaller and editorial corrections.*

### 6.13.3 SON Corrections

### 6.13.4 MDT Corrections

### 6.13.5 UE Capabilities

*Initial discussion on Features / UE caps developed in RAN2, if any. Note that this AI is complementary to AI 6.0.2.*

### 6.13.6 Other

## 6.14 NR QoE

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

Tdoc Limitation: 4 tdocs

WI is declared 100% complete

### 6.14.1 General

#### 6.14.1.1 Organizational

Tdoc Limitation: 0

LS in, WI rapporteur guidance etc. For LSes that need action: One tdoc by contact company (one company) to address the LS and potential reply is considered Rapporteur Input and may be provided.

#### 6.14.1.2 CR Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide baseline correction CRs. For smaller corrections, text clarifications etc please contact CR Rapporteur.

### 6.14.3 Corrections

### 6.14.4 UE capabilities

Features / UE caps developed in RAN2. Note that this AI is complementary to AI 6.0.2.

### 6.14.5 Other

## 6.15 NR Sidelink enhancements

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

WI has been declared 100% complete

Note some agenda item(s) may use pre-meeting discussion based on a summary document.

### 6.15.1 Organizational

Including incoming LSs, rapporteur inputs, etc.

### 6.15.2   Essential corrections

No documents should be submitted to 6.15.2.  Please submit to 6.15.2.x.

### 6.15.2.1       Control plane procedure for UC DRX

Including whether Rx-UE use the message of RRCReconfigurationCompleteSidelink or RRCReconfigurationFailureSidelink to reject a DRX configuration, default SL DRX configuration for non-initial SL DRX configuration when reject happens, whether the TX UE should keep in active time after sending RRCReconfigurationSL, detailed (configuration) information included into each PC5-RRC, etc.

### 6.15.2.2       Configuration aspects

Including TX profile for GC/BC, detailed configuration aspects, value ranges of timers/offsets (including other SL DRX related parameters), etc.

### 6.15.2.3       User plane aspects

Including detailed behavior for timers/offsets, resource reselection, HARQ A/N when grant is dropped due to no RX-UE in activet time, etc.

### 6.15.2.4       Inter-UE Coordination

Including priority order between IUC REQ and IUC MAC CEs, need of timer-based latency bound restriction for condition-based IUC (including details if needed), timer value, maximum number of resource combinations that can be included in IUC INFO MAC CE, etc.

### 6.15.2.5      Power-saving resource allocation

Including details of resource pool and partial-sensing based resource allocation/random selection.

### 6.15.3   Other

Including any other corrections.

## 6.16 NR Non-Public Network enhancements

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

WI has been declared 100% complete

### 6.16.1 General

#### 6.16.1.1 Organizational

Tdoc Limitation: 0

LS in, WI rapporteur guidance etc.

#### 6.16.1.2 CR Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide baseline correction CRs. For smaller corrections, text clarifications etc please contact CR Rapporteur.

### 6.16.3 Corrections

## 6.17 NR feMIMO

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

Tdoc Limitation: 4 tdocs

WI has been declared 100% complete

### 6.17.1 General

#### 6.17.1.1 Organizational

Tdoc Limitation: 0

LS in, WI rapporteur guidance etc.

#### 6.17.1.2 CR Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide baseline correction CRs. For smaller corrections, text clarifications etc please contact CR editor.

### 6.17.3 Corrections

#### 6.17.3.1 RRC centric

FFSes: MPE reporting in ICBM (inter-cell beam management): It is not clear whether explicit additional PCI is needed or not. Epxected updated based on RAN1 reply; For ASN.1 details further input is expected: maxNrofCandidateBeams-r17 is not known yet, maxNrofBFDResourcePerSet-r17 is said in LS 64 but feature discussion might indicate just max 2 per set.

#### MAC centric

FFSes: Details for Enhanced PHR MAC CE with enhanced MPE whether bits for beam presence are needed, if needed the MAC CE format may be updated for optimization; Details for Enhanced PHR for multiple TRP MAC CE; Reporting procedures (which serving cells are reported, how to handle the DC cases, etc), If needed, the MAC CE format may be updated; Need to determine if following feature is supported: Upon reception of a MAC CE to activate an SP SRS resource set for antenna switching, the UE considers any previously activated SP SRS resource set for antenna switching as deactivated; Configuring/Update of explicit BFD-RS set by MAC CE

### 6.17.4 Other

Issues not covered elsewhere.

## 6.18 RACH indication and partitioning

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.

### 6.18.1 Common signalling framework

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

### 6.18.2 Common aspects of RACH procedure

A single CR 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

## 6.19 Coverage Enhancements

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

WI has been declared 100% complete

Tdoc Limitation: 2 tdoc

Common aspects related to RACH indication (in MSG1) / RACH partitioning shall be submitted to 6.18

### 6.19.1 Organizational

Rapporteur input, incoming LS etc.

#### 6.19.1.1 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.

#### 6.19.1.2 Rapporteur CRs

CR Rapporteurs to provide input CRs, if needed.

### 6.19.2 General

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

## 6.20 Extending NR operation to 71GHz

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

Tdoc Limitation: 4 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.

This WI has approved exception sheet in [RP-220991](https://www.3gpp.org/ftp/tsg_ran/TSG_RAN/TSGR_95e/Docs/RP-220991.zip) but no topics are related to RAN2 work.

### 6.20.1 Organizational

Including LSs and any rapporteur inputs (e.g. from ASN.1 ad-hoc meeting).

### 6.20.2 Control plane corrections

Including essential control plane corrections to NR operation up to 71GHz. Proposals that do not provide Stage-3 details will not be treated.

### 6.20.3 User plane corrections

Including essential user plane corrections to NR operation up to 71GHz. Proposals that do not provide Stage-3 details will not be treated.

### 6.20.4 UE capabilities

Please follow the general guidance on UE capabilities under 2.4 - only corrections related to RAN2 parts are discussed in WI-specific agenda. Work for capabilities from RAN1/4 is done under AI 6.0.2

Including essential corrections to UE capabilities related to RAN2-defined features for NR operation up to 71GHz. Proposals that do not provide Stage-3 details will not be treated. Please use draft CRs for 38.331 and 38.306 to help with CR merging.

## 6.21 TEI17

Time budget: 2 TU

### 6.21.1 TEI proposals initiated by other groups

Including incoming LSes.

### 6.21.2 TEI proposals initiated by RAN2

Proposals that has not yet been agreed.

Tdoc limitation: 2 tdocs, except for Operators.

### 6.21.3 Corrections

Corrections CRs (Correction to TEI or TEI + other WI code) or detailed modifications to agreed proposals

## 6.22 NR and MR-DC measurement gap enhancements

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

Tdoc Limitation: 4 tdocs

WI is declared 100% complete.

### 6.22.1 General

#### 6.22.1.1 Organizational

Tdoc Limitation: 0

LS in, WI rapporteur guidance etc.

#### 6.22.1.2 CR Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide baseline correction CRs. For smaller corrections, text clarifications etc please contact CR editor.

### 6.22.3 Corrections

#### 6.22.3.1 Preconfigured Measurement Gaps

FFSes: FFS whether and how to capture the UE behavior on PRS measurements within measurement gaps when a Pre-configured MG is provided by the network (as indicated in RAN4 LS R4-2206789); FFS whether and how the definition of measurement gap should be updated due to pre-configured MG; FFS whether the deactivated MG list configured in BWP or SCell could be configured with size zero.

#### 6.22.3.2 Concurrent Measurement Gaps

FFSes: FFS on maximum number of gap priority; FFS on maximum number of gap ID; FFS whether and how to specify the conditional presence for gap ID

#### 6.22.3.3 Network Configured Small Gaps

### 6.22.4 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 6.0.2. FFSes: FFS whether pre-configured gap should be FR differentiated; FFS whether to have separate bit to indicate support of CA and non-CA case for pre-configured gap; FFS whether to have separate capability bit for UE supporting only two per UE concurrent gap.

## 6.23 Uplink Data Compression (UDC)

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

Tdoc Limitation: 1 tdocs

WI is declared 100% complete.

### 6.23.1 Organizational

Rapporteur input, LS etc.

### 6.23.2 Corrections

## 6.24 NR R17 Other

Includes items and topics without specific R2 Agenda Item. Includes LS in for R17 items not in a specific R2 Agenda Item.

### 6.24.1 RAN4 led Items

### 6.24.2 RAN1 led Items

### 6.24.3 Other

# 7 Rel-17 EUTRA Work Items

## 7.0 EUTRA Rel-17 General

Tdoc Limitation: 10 tdocs

No documents should be submitted to 7.0. Please submit to 7.0.x

### 7.0.1 ASN.1 review

This agenda item may use a summary document (decision made based on ASN.1 ad-hoc meeting outcome, submitted review issues and submitted contributions).

Including ASN.1 review issues not handled during April ASN.1 ad-hoc meeting. Documents that relate to ASN.1 review should indicate the RIL number in the document title.

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

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.

### 7.0.3 Feature Lists and UE capabilities

Including essential corrections to Rel-17 UE capabilities or additions based on new inputs from RAN1/4 that are not covered by other WIs or require discussion in the common session due to affecting multiple Rel-17 LTE WIs.

## 7.1 NB-IoT and eMTC enhancements

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

### 7.1.1 Organizational

LS in

CR Rapporteurs to provide baseline correction CRs, if needed. For smaller corrections, text clarifications etc please contact CR editor.

### 7.1.2 Corrections

### 7.1.3 Other

## 7.2 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: 6 tdocs

Exception Sheet in RP-220943

### 7.2.1 General

#### 7.2.1.1 Organizational

Tdoc Limitation: 0

LS in, WI rapporteur guidance etc.

#### 7.2.1.2 CR Rapporteur Resolutions

Tdoc Limitation: 0.

CR Rapporteurs to provide baseline correction CRs. For smaller corrections, text clarifications etc please contact CR editor.

### 7.2.2 Open Issues

Open issues from exception Sheet in RP 220943:

Prediction of discontinuous coverage: Address the FFS regarding signalled ephemeris type (FFS if two, three of four types and the details on semantics); Address the FFS whether epoch time could be optional and be implicitly derived when not provided; Address the FFS whether in addition to BCCH provide the option to share the information by dedicated RRC signalling; Address the FFS whether anything need to be specified for AS-NAS interaction while the UE is out of coverage.

If time allows, address the open issue on an additional parameter for further enhanced spatial coverage prediction (like satellite footprint reference point on ground, satellite coverage radius); Parameters for prediction of discontinuous coverage and handling of the new SIB;

GNSS Position Validity: Address Signalling details including value range of GNSS position validity remaining time for reporting to the network;

Location Reporting: Address the FFS on UE location information reporting

### 7.2.3 Corrections

#### 7.2.3.1 User Plane

Impacts to 36.321, 36.322, 36.323, 37.324

#### 7.2.3.2 RRC

Impacts to 36.331

#### 7.2.3.3 Idle Inactive mode

Impacts to 36.304

### 7.2.4 UE capabilities

### 7.2.5 Other

## 7.3 EUTRA R17 Other

(Documents relating to Rel-17 LTE but for which there is no existing RAN WI/SI, e.g. LSs from CT/SA requesting RAN2 action)

Including essential corrections to LTE TEI17 and other LTE Rel-17 WIs not covered by other agenda items. Proposals that do not provide Stage-3 details will not be treated.

Documents that relate to ASN.1 review should indicate the RIL number in the document title.

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

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

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

WI has been declared 100% complete.

Including essential corrections to User Plane Integrity Protection support for EPC connected architectures. Proposals that do not provide Stage-3 details will not be treated.

## 7.5 NR and EUTRA Inclusive language

Time budget: N/A

Final inclusive language CRs for RAN2 specifications were approved in RAN#95e.

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

This agenda item will not be treated in this meeting unless urgent actions are needed for RAN#96.