3GPP TSG-RAN WG2 Meeting #110 electronic R2-2005732

Online, June 1st - June 12th 2020

**Agenda item: 8.2**

**Source: Vice Chairman (ZTE Corporation)**

**Title: Report from Break-out session on SRVCC, CLI, PRN, eMIMO, RACS**

**Document for: Approval**

General

Recording of voice or video at meetings is not used in 3GPP. This applies also to this e-Meeting. At this e-Meeting, no specific actions are taken to prevent the recording of web conferences. Companies that have concerns related to recordings, if any, may express those by email in the main meeting organizational thread [AT110e][000]

Organizational

1. With a few exceptions, only email discussions reports and summary discussion papers will be treated during the e-meeting (indicated clearly in the meeting notes)
2. All organization emails and notes will be shared over the following email discussion throughout the two meeting weeks:

* [AT110e][100] Organizational Sergio's session (SRVCC, CLI, PRN, eMIMO, RACS)

Scope:

* + - Share plans for the meeting and list of ongoing email discussions for the sessions related to SRVCC, CLI, PRN, eMIMO, RACS
    - Share meetings notes and agreements for review and endorsement

Schedule/Plan

RACS:

The 36.331 and 38.331 CRs will be discussed and possibly agreed during the web conference call on Thursday June 4th, 12:00 - 13:30 UTC (i.e no preliminary offline email discussion)

SRVCC:

The 38.331 CR will be discussed and possibly agreed during the web conference call on Thursday June 4th, 12:00 - 13:30 UTC (i.e no preliminary offline email discussion)

CLI:

The discussion will initially happen in an offline email discussion (101) kicked off at the e-meeting start and will then continue during the web conference call(s).

Thursday June 4th, 12:00 - 13:30 UTC

* Check the status of email discussion 101 and decide on next steps
* Discuss [R2-2005707](file:///C:\Data\3GPP\RAN2\Docs\R2-2005707.zip) (Stage 2 CR)

eMIMO:

The discussion will initially happen in offline email discussions (102 and 103) kicked off at the e-meeting start and will then continue during the web conference call(s).

Wednesday June 3th, 12:00 - 13:30 UTC:

* Check the status of email discussion 103 and decide on next steps on MAC aspects
* Discuss and take a decision on Timer based BFR MAC CE transmission based on [R2-2005123](file:///C:\Data\3GPP\RAN2\Docs\R2-2005123.zip) and [R2-2005493](file:///C:\Data\3GPP\RAN2\Docs\R2-2005493.zip)

Thursday June 4th, 12:00 - 13:30 UTC

* Check the status of email discussion 102 and decide on next steps on RRC aspects

PRN:

The discussion will initially happen in offline email discussions (104 and 105) kicked off at the e-meeting start and will then continue during the web conference call(s).

Wednesday June 3th, 12:00 - 13:30 UTC:

* Check the status of email discussion 105 and decide on next steps on 38.304 aspects
* Discuss [R2-2004571](file:///C:\Data\3GPP\RAN2\Docs\R2-2004571.zip) (UE capabilities)
* Discuss [R2-2004508](file:///C:\Data\3GPP\RAN2\Docs\R2-2004508.zip) (Stage 2 CR)

Thursday June 4th, 12:00 - 13:30 UTC

* Check the status of email discussion 104 and decide on next steps on RRC aspects
* Discuss [R2-2005451](file:///C:\Data\3GPP\RAN2\Docs\R2-2005451.zip) (Early Implementation of CAG Features) if time allows (otherwise Tuesday June 9th, 13:00 - 14:30 UTC)

List and status of offline email discussions

NOTE: No offline email discussions will be kicked off before Monday June 1st, 07:00 UTC

* [AT110e][101][CLI] RRC and UE capabilities aspects (LG)

Scope: Discuss the 38.331 and 38.306 CR on UE capabilities for CLI based on [R2-2005695](file:///C:\Data\3GPP\RAN2\Docs\R2-2005695.zip), [R2-2005730](file:///C:\Data\3GPP\RAN2\Docs\R2-2005730.zip) and [R2-2004430](file:///C:\Data\3GPP\RAN2\Docs\R2-2004430.zip). Also discuss the changes suggested by RAN1 in [R2-2004347](file:///C:\Data\3GPP\RAN2\Docs\R2-2004347.zip) and the new proposal in [R2-2005309](file:///C:\Data\3GPP\RAN2\Docs\R2-2005309.zip).

Initial intended outcome: summary of the offline discussion with e.g.:

* + - Set of proposals with full consensus, if any (agreeable over email)
    - Set of proposals to discuss in the follow up conference call

Initial deadline (for companies' feedback): Wednesday 2020-06-03 10:00 UTC

Initial deadline (for rapporteur's summary in R2-2005791): Wednesday 2020-06-03 22:00 UTC

Proposed agreements in R2-2005791 indicated for email agreement and not challenged until Thursday 2020-06-04 10:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

Status: Started

* [AT110e][102][EMIMO] RRC CR (Ericsson)

Initial scope: Continue the discussion on RRC open issues, based on [R2-2004465](file:///C:\Data\3GPP\RAN2\Docs\R2-2004465.zip).

Initial intended outcome: summary of the offline discussion with e.g.:

* Set of proposals with full consensus, if any (agreeable over email)
  + - Set of proposals to discuss in the follow up conference call

Initial deadline (for companies' feedback): Wednesday 2020-06-03 10:00 UTC

Initial deadline (for rapporteur's summary in R2-2005792): Wednesday 2020-06-03 22:00 UTC

Proposed agreements in R2-2005792 indicated for email agreement and not challenged until Thursday 2020-06-04 10:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

Status: Started

* [AT110e][103][EMIMO] MAC CR (Samsung)

Initial scope: Continue the discussion on MAC open issues and correction, based on the submitted contributions.

Initial intended outcome: summary of the offline discussion with e.g.:

* Set of proposals with full consensus, if any (agreeable over email)
  + - Set of proposals to discuss in the follow up conference call

Initial deadline (for companies' feedback): Tuesday 2020-06-02 10:00 UTC

Initial deadline (for rapporteur's summary in [R2-2005793](file:///C:\Data\3GPP\RAN2\Inbox\R2-2005793.zip)): Tuesday 2020-06-02 22:00 UTC

Final scope: Continue the discussion on the issues marked as "Continue during the second round of offline [103]" and then update the MAC CR with all meeting agreements

Final intended outcome:

* Summary of the offline discussion
* Agreed MAC CR

Deadline for companies' feedback on open issues: Monday 2020-06-08 12:00 UTC

Deadline for rapporteur's summary in R2-2005796: Tuesday 2020-06-09 00:00 UTC

Proposed agreements in R2-2005796 not challenged until Tuesday 2020-06-09 12:00 UTC will be declared as agreed by the session chair. For the remaining open issues (if any) the vice-chair will indicate how the discussion will continue (i.e. offline or online).

Deadline for companies' feedback on the revised CR: Thursday 2020-06-11 10:00 UTC

Deadline for final version of the MAC CR in R2-2005797: Friday 2020-06-12 10:00 UTC

Status: Started

* [AT110e][104][PRN] RRC CR (Nokia)

Initial scope: Continue the discussion on RRC open issues, based on [R2-2004481](file:///C:\Data\3GPP\RAN2\Docs\R2-2004481.zip), considering the new LSs from SA1 and the proposals marked "to be discussed in offline [104]". Also discuss RILs: Z112, B200 and H422.

Initial intended outcome: summary of the offline discussion with e.g.:

* Set of proposals with full consensus agreeable over email (based on the list in Section 3.1 of [R2-2004481](file:///C:\Data\3GPP\RAN2\Docs\R2-2004481.zip), possibly extended with new easy agreements)
  + - Set of proposals to discuss in the follow up conference call

Initial deadline (for companies' feedback): Wednesday 2020-06-03 10:00 UTC

Initial deadline (for rapporteur's summary in R2-2005794): Wednesday 2020-06-03 22:00 UTC

Proposed agreements in R2-2005794 indicated for email agreement and not challenged until Thursday 2020-06-04 10:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

Status: Started

* [AT110e][105][PRN] 38.304 CR (Qualcomm)

Initial scope: Continue the discussion on 38.304 open issues, based on [R2-2005674](file:///C:\Data\3GPP\RAN2\Docs\R2-2005674.zip), and the proposals marked "to be discussed in offline [105]".

Initial intended outcome: summary of the offline discussion with e.g.:

* Set of proposals with full consensus, if any (agreeable over email)
  + - Set of proposals to discuss in the follow up conference call

Initial deadline (for companies' feedback): Tuesday 2020-06-02 10:00 UTC

Initial deadline (for rapporteur's summary in [R2-2005795](file:///C:\Data\3GPP\RAN2\Inbox\R2-2005795.zip)): Tuesday 2020-06-02 22:00 UTC

Final scope: update the 38.304 CR with all meeting agreements.

Final intended outcome: Agreed MAC CR

Deadline for companies' feedback on the revised CR: Thursday 2020-06-11 10:00 UTC

Deadline for final version of the MAC CR in R2-2005798: Friday 2020-06-12 10:00 UTC

Status: Started

* [AT110e][106][PRN] 38.306 CR (ZTE)

Scope: Discuss the 38.306 CR for PRN, based on [R2-2004571](file:///C:\Data\3GPP\RAN2\Docs\R2-2004571.zip).

Intended outcome: Endorsed 38.306 CR

Deadline for companies' feedback on the revised CR: Friday 2020-06-05 08:00 UTC

Deadline for final version of the 38.306 CR in R2-2005799: Friday 2020-06-05 10:00 UTC

Status: Started

## 6.5 Optimisations on UE radio capability signalling

(RACS-RAN-Core; leading WG: RAN2; REL-16; started: Mar 19; target; Jun 20; WID: [RP-191088](file:///C:\Data\3GPP\archive\RAN\RAN%2384\Tdocs\RP-191088.zip), SR: RP-200163). Documents in this agenda item will be handled in a break out session.

R2 part is 100%. Only corrections.

Tdoc limitation: 1 per company

### 6.5.1 Organisational

Including incoming LSs, rapporteur inputs, etc.

Contributions in this AI are reserved for WI rapporteur inputs and do not count towards the tdoc limits.

Workplan

[R2-2004711](file:///C:\Data\3GPP\RAN2\Docs\R2-2004711.zip) Work plan for RACS-RAN work item MediaTek Inc., CATT discussion Rel-16 RACS-RAN-Core

* Noted

Incoming LSs

[R2-2004321](file:///C:\Data\3GPP\RAN2\Docs\R2-2004321.zip) Reply LS on RACS and signalling of UE capabilities at handover (S2-2003483; contact: Ericsson) SA2 LS in Rel-16 RACS-RAN-Core To:RAN2, RAN3

* Noted (no further RAN2 impact)

[R2-2004324](file:///C:\Data\3GPP\RAN2\Docs\R2-2004324.zip) LS on different coding formats (S2-2003507; contact: Samsung) SA2 LS in Rel-16 RACS-RAN-Core To:RAN2, RAN3, CT4, CT3

* Noted (no RAN2 impact)

Rapporteur CRs

[R2-2004710](file:///C:\Data\3GPP\RAN2\Docs\R2-2004710.zip) Correction to transfer of UE capabilities at HO for RACS and correction of ASN.1 review issues [N012][N013] MediaTek Inc., Ericsson, ZTE Corporation, Sanechips CR Rel-16 36.331 16.0.0 4256 2 F RACS-RAN-Core [R2-2003906](file:///C:\Data\3GPP\archive\RAN2\RAN2%23109bis\Tdocs\R2-2003906.zip)

* …

[R2-2005539](file:///C:\Data\3GPP\RAN2\Docs\R2-2005539.zip) Correction to transfer of UE capabilities at HO for RACS and minor ASN.1 correction (38.331) ZTE Corporation, Ericsson, MediaTek Inc.,Sanechips,OPPO CR Rel-16 38.331 16.0.0 1553 2 F RACS-RAN-Core [R2-2003905](file:///C:\Data\3GPP\archive\RAN2\RAN2%23109bis\Tdocs\R2-2003905.zip)

* …

### 6.5.2 Corrections

Including contributions/TPs on RACS-specific Class 3 ASN.1 review aspects, if any. For these, no individual company CRs should be submitted: please consult with the RRC CR rapporteurs first (Nathan.Tenny@mediatek.com for 36.331 and Gao.Yuan66@zte.com.cn for 38.331).

## 6.14 Single Radio Voice Call Continuity from 5G to 3G

(SRVCC\_NR\_to\_UMTS-Core; leading WG: RAN2; REL-16; started: Dec 18; target; Mar 20; WID: [RP-190713](file:///C:\Data\3GPP\archive\RAN\RAN%2383\Tdocs\RP-190713.zip); SR: RP-200436) Documents in this agenda item will be handled in a break out session

Tdoc Limitation: 1 tdoc

The Core part of this WI is 100% Only corrections.

### 6.14.1 Organisational

Including incoming LSs, rapporteur inputs, etc.

Contributions in this AI are reserved for WI rapporteur inputs and do not count towards the tdoc limits.

### 6.14.2 Corrections

Including contributions/TPs on SRVCC-specific Class 3 ASN.1 review aspects, if any. For these, no individual company CRs should be submitted: please consult with the RRC CR rapporteur first (tangxun@huawei.com).

[R2-2005066](file:///C:\Data\3GPP\RAN2\Docs\R2-2005066.zip) CR on 38.331 for SRVCC from 5G to 3G Huawei, HiSilicon, Lenovo, Motorola Mobility, China Unicom CR Rel-16 38.331 16.0.0 1645 - F SRVCC\_NR\_to\_UMTS-Core

* …

## 6.15 Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR

(NR\_CLI\_RIM; leading WG: RAN1; REL-16; started: Dec 18; target; Jun 20; WID: [RP-191997](file:///C:\Data\3GPP\archive\RAN\RAN%2385\Tdocs\RP-191997.zip); SR: RP-200453) Documents in this agenda item will be handled in a break out session.

Tdoc Limitation: 1 tdoc

### 6.15.1 Organisational

Including incoming LSs, rapporteur inputs, etc.

Contributions in this AI are reserved for WI rapporteur inputs and do not count towards the tdoc limits.

Incoming LSs

[R2-2004347](file:///C:\Data\3GPP\RAN2\Docs\R2-2004347.zip) LS on subcarrier spacing for CLI-RSSI measurement (R1-2002966; contact: LGE) RAN1 LS in Rel-16 NR\_CLI\_RIM-Core To:RAN2 Cc:RAN4

* to be discussed in offline [101]
* Noted

[R2-2004365](file:///C:\Data\3GPP\RAN2\Docs\R2-2004365.zip) Reply LS on CLI measurement and reporting (R4-2005297; contact: LGE) RAN4 LS in Rel-16 NR\_CLI\_RIM-Core To:RAN1 Cc:RAN2

* Noted (no RAN2 impact)

Stage 2:

[R2-2005707](file:///C:\Data\3GPP\RAN2\Docs\R2-2005707.zip) CLI Corrections Nokia (Rapporteur) CR Rel-16 38.300 16.1.0 0217 2 F NR\_CLI\_RIM-Core R2-2005277 Late

* …

UE capabilities

[R2-2004430](file:///C:\Data\3GPP\RAN2\Docs\R2-2004430.zip) UE capabilities for CLI Qualcomm Incorporated CR Rel-16 38.306 16.0.0 0301 - F NR\_CLI\_RIM-Core

* to be discussed in offline [101]

[R2-2005695](file:///C:\Data\3GPP\RAN2\Docs\R2-2005695.zip) CR on UE capabilities for CLI LG Electronics Inc. CR Rel-16 38.331 16.0.0 1689 - F NR\_CLI\_RIM-Core

* to be discussed in offline [101]
* Revised in R2-2006000
* [AT110e][101][CLI] RRC and UE capabilities aspects (LG)

Scope: Discuss the 38.331 and 38.306 CR on UE capabilities for CLI based on [R2-2005695](file:///C:\Data\3GPP\RAN2\Docs\R2-2005695.zip), [R2-2005730](file:///C:\Data\3GPP\RAN2\Docs\R2-2005730.zip) and [R2-2004430](file:///C:\Data\3GPP\RAN2\Docs\R2-2004430.zip). Also discuss the changes suggested by RAN1 in [R2-2004347](file:///C:\Data\3GPP\RAN2\Docs\R2-2004347.zip) and the new proposal in [R2-2005309](file:///C:\Data\3GPP\RAN2\Docs\R2-2005309.zip).

Initial intended outcome: summary of the offline discussion with e.g.:

* + - Set of proposals with full consensus, if any (agreeable over email)
    - Set of proposals to discuss in the follow up conference call

Initial deadline (for companies' feedback): Wednesday 2020-06-03 10:00 UTC

Initial deadline (for rapporteur's summary in R2-2005791): Wednesday 2020-06-03 22:00 UTC

Proposed agreements in R2-2005791 indicated for email agreement and not challenged until Thursday 2020-06-04 10:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2005791 Offline discussion 101: CLI - RRC and UE capabilities aspects LG (Rapporteur) discussion Rel-16 NR\_CLI\_RIM-Core

R2-2006000 CR on UE capabilities for CLI LG Electronics Inc. CR Rel-16 38.331 16.0.0 1689 1 F NR\_CLI\_RIM-Core

[R2-2005730](file:///C:\Data\3GPP\RAN2\Docs\R2-2005730.zip) UE capabilities for CLI Ericsson CR Rel-16 38.331 16.0.0 1693 - F NR\_CLI\_RIM Late

* to be discussed in offline [101]
* Noted

Withdrawn:

R2-2005277 CLI Featurre overview - Additional changes Nokia (Rapporteur) CR Rel-16 38.300 16.1.0 0217 1 D NR\_CLI\_RIM-Core [R2-2003365](file:///C:\Data\3GPP\archive\RAN2\RAN2%23109bis\Tdocs\R2-2003365.zip) Withdrawn

### 6.15.2 Remaining open issues

Including contributions/TPs on corrections and CLI-specific Class 3 ASN.1 review aspects, if any. For these, no individual company CRs should be submitted: please consult with the RRC CR rapporteur first (sangwon7.kim@lge.com).

[R2-2005309](file:///C:\Data\3GPP\RAN2\Docs\R2-2005309.zip) On the impact of DRX on CLI SRS-RSRP measurement Huawei, HiSilicon discussion Rel-16

* to be discussed in offline [101]
* Noted

For the following paper, feedback from RAN3 (on exchange of information related to SRS-RSRP measurement resource configuration) is needed first

[R2-2005603](file:///C:\Data\3GPP\RAN2\Docs\R2-2005603.zip) Potential correction on SRS resource for Xn exchange ZTE Corporation, Sanechips discussion Rel-16 NR\_CLI\_RIM-Core

* …

## 6.16 Enhancements on MIMO for NR

(NR\_eMIMO-Core; leading WG: RAN1; REL-16; started: Jun 18; target; June 20; WID: RP-200474; SR: RP-200473). Documents in this agenda item will be handled in a break out session.

Tdoc Limitation: 2 tdocs

### 6.16.1 Organisational

Including incoming LSs, rapporteur inputs, etc.

Contributions in this AI are reserved for WI rapporteur inputs and do not count towards the tdoc limits.

[R2-2004833](file:///C:\Data\3GPP\RAN2\Docs\R2-2004833.zip) Miscellaneous corrections on eMIMO Samsung, Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.0.0 0711 3 F NR\_eMIMO-Core R2-2003911

* Endorsed as baseline to capture further agreements from this meeting

### 6.16.2 RRC aspects

Including output of email discussion [Post109bis-e][933][eMIMO] RRC Open issues (Ericsson).

Including contributions/TPs on eMIMO-specific Class 3 ASN.1 review aspects (such aspects should anyway be raised in the email discussion [933]). No individual company CRs should be submitted.

Also including contributions on UE capability aspects.

[R2-2004465](file:///C:\Data\3GPP\RAN2\Docs\R2-2004465.zip) [Post109bis-e][933][eMIMO] RRC Open Issues (Ericsson) Ericsson report Rel-16 NR\_eMIMO-Core

* Moved to offline email discussion [102] with the intention to go back online during the web conference call(s)
* [AT110e][102][EMIMO] RRC CR (Ericsson)

Initial scope: Continue the discussion on RRC open issues, based on [R2-2004465](file:///C:\Data\3GPP\RAN2\Docs\R2-2004465.zip).

Initial intended outcome: summary of the offline discussion with e.g.:

* Set of proposals with full consensus, if any (agreeable over email)
  + - Set of proposals to discuss in the follow up conference call

Initial deadline (for companies' feedback): Wednesday 2020-06-03 10:00 UTC

Initial deadline (for rapporteur's summary in R2-2005792): Wednesday 2020-06-03 22:00 UTC

Proposed agreements in R2-2005792 indicated for email agreement and not challenged until Thursday 2020-06-04 10:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2005792 Offline discussion 102: eMIMO - RRC open issues - first round Ericsson report Rel-16 NR\_eMIMO-Core

### 6.16.3 Other aspects

Including contributions/TPs on MAC corrections. For these, no individual company CRs should be submitted: please consult with the MAC CR rapporteur first (seungri.jin@samsung.com).

If needed, a summary document may also be utilized to treat this agenda item.

MAC Corrections. The proposals in the following papers will be handled in offline email discussion [103]

[R2-2004463](file:///C:\Data\3GPP\RAN2\Docs\R2-2004463.zip) On pathloss reference RS MAC CE for SRS and PUSCH Ericsson discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004464](file:///C:\Data\3GPP\RAN2\Docs\R2-2004464.zip) On SRS activation/deactivation MAC CE for the list of serving cells Ericsson discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004524](file:///C:\Data\3GPP\RAN2\Docs\R2-2004524.zip) Issues - Beam Failure Recovery Samsung Electronics Co., Ltd discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004646](file:///C:\Data\3GPP\RAN2\Docs\R2-2004646.zip) Discussion on the priority of the BFR MAC CE and SR vivo, Samsung discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004647](file:///C:\Data\3GPP\RAN2\Docs\R2-2004647.zip) RACH cancellation after the transmission of Msg3 or MsgA vivo discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004832](file:///C:\Data\3GPP\RAN2\Docs\R2-2004832.zip) Remaining issues on the MAC CEs for beam enhancements Samsung discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004897](file:///C:\Data\3GPP\RAN2\Docs\R2-2004897.zip) Open issues for PUSCH Pathloss Reference RS Update MAC CE OPPO discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004898](file:///C:\Data\3GPP\RAN2\Docs\R2-2004898.zip) Open issues on Spcell BFR OPPO discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2005122](file:///C:\Data\3GPP\RAN2\Docs\R2-2005122.zip) The Remaining issue on stopping the sr-ProhibitTimer ZTE, Sanechips discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2005185](file:///C:\Data\3GPP\RAN2\Docs\R2-2005185.zip) Remaining issues on DL MIMO MAC CE Qualcomm Incorporated discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2005366](file:///C:\Data\3GPP\RAN2\Docs\R2-2005366.zip) Consideration on timer based BFR MAC CE transmission LG Electronics Inc. discussion NR\_eMIMO-Core

* Noted

[R2-2005568](file:///C:\Data\3GPP\RAN2\Docs\R2-2005568.zip) Clarification on generation of BFR MAC CE ASUSTeK discussion Rel-16 38.321 NR\_eMIMO-Core

* Noted
* [AT110e][103][EMIMO] MAC CR (Samsung)

Initial scope: Continue the discussion on MAC open issues and correction, based on the submitted contributions.

Initial intended outcome: summary of the offline discussion with e.g.:

* Set of proposals with full consensus, if any (agreeable over email)
  + - Set of proposals to discuss in the follow up conference call

Initial deadline (for companies' feedback): Tuesday 2020-06-02 10:00 UTC

Initial deadline (for rapporteur's summary in [R2-2005793](file:///C:\Data\3GPP\RAN2\Inbox\R2-2005793.zip)): Tuesday 2020-06-02 22:00 UTC

Final scope: Continue the discussion on the issues marked as "Continue during the second round of offline [103]" and then update the MAC CR with all meeting agreements

Final intended outcome:

* Summary of the offline discussion
* Agreed MAC CR

Deadline for companies' feedback on open issues: Monday 2020-06-08 12:00 UTC

Deadline for rapporteur's summary in R2-2005796: Tuesday 2020-06-09 00:00 UTC

Proposed agreements in R2-2005796 not challenged until Tuesday 2020-06-09 12:00 UTC will be declared as agreed by the session chair. For the remaining open issues (if any) the vice-chair will indicate how the discussion will continue (i.e. offline or online).

Deadline for companies' feedback on the revised CR: Thursday 2020-06-11 10:00 UTC

Deadline for final version of the MAC CR in R2-2005797: Friday 2020-06-12 10:00 UTC

[R2-2005793](file:///C:\Data\3GPP\RAN2\Inbox\R2-2005793.zip) Offline discussion 103: eMIMO - MAC corrections - first round Samsung report Rel-16 NR\_eMIMO-Core

Proposal 1: For a pending SR triggered prior to the MAC PDU assembly for beam failure recovery of an SCell sr-ProhibitTimer shall be stopped when the MAC PDU is transmitted and this PDU includes an BFR MAC CE or Truncated BFR MAC CE which contains beam failure recovery information of that Scell.

* Nokia thinks this does not fully align to BSR (which was the intent), for the truncated BFR MAC CE case
* Samsung thinks the proposal is for the case the truncated BFR MAC CE includes full information
* ZTE agrees with Nokia
* Agree that some revision is needed along the lines of P1. Check the details regarding truncated BFR MAC CE case. Continue during the second round of offline [103]

Proposal 2: Clarify that a MAC PDU shall contain at most one BFR MAC CE.

* Agreed

Proposal 3: Design new SP/AP SRS spatial relation indication MAC CE for multiple serving cells case. Annexure 6 is the baseline.

* QC agrees with the proposal but would like to discuss the exact details (not agree immediately on Annex 6). QC wonders whether we need an A/D field.
* Agreed. Check the exact details (Annex 6 is a baseline for discussion but not endorsed yet). Continue during the second round of offline [103]

Proposal 4: Clarify that the pathloss reference RS is updated by this MAC CE in the SRI-PUSCH-powercontrol mappings provided in the same MAC CE.

* Agreed

Proposal 5: RAN2 confirm that the multiple PUCCH resources can be indicated in an Enhanced PUCCH spatial relation Activation/Deactivation MAC CE.

* Agreed

Agreements via email (from [103][EMIMO]):

1. Clarify that a MAC PDU shall contain at most one BFR MAC CE.
2. Design new SP/AP SRS spatial relation indication MAC CE for multiple serving cells case. Annexure 6 is the baseline for discussion but not endorsed yet.
3. Clarify that the pathloss reference RS is updated by this MAC CE in the SRI-PUSCH-powercontrol mappings provided in the same MAC CE.
4. RAN2 confirm that the multiple PUCCH resources can be indicated in an Enhanced PUCCH spatial relation Activation/Deactivation MAC CE.

R2-2005796 Offline discussion 103: eMIMO - MAC corrections - second round Samsung report Rel-16 NR\_eMIMO-Core

R2-2005797 Miscellaneous corrections on eMIMO Samsung, Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.0.0 0711 4 F NR\_eMIMO-Core

Timer based BFR MAC CE transmission

[R2-2005123](file:///C:\Data\3GPP\RAN2\Docs\R2-2005123.zip) Discussion on Beam Failure Recovery for SCell ZTE , Sanechips, Nokia, Nokia Shanghai Bell, Huawei, HiSilicon, OPPO, Sharp, Lenovo, Apple, Asia Pacific Telecom, Futurewei discussion Rel-16 NR\_eMIMO-Core

* Discussed together with the next document

[R2-2005493](file:///C:\Data\3GPP\RAN2\Docs\R2-2005493.zip) Discussion on timer based BFR MAC CE transmission Qualcomm Incorporated, vivo, Ericsson, Samsung, MediaTek, CATT discussion Rel-16 NR\_eMIMO-Core

* Nokia thinks that when in active time, BFR triggers can be frequent enough and still require a fix. QC thinks that the same requirement applies both in DRX and active state. LG has the same understanding
* CATT thinks that to justify the proposal we still need more evidence that there is a problem
* Lenovo does not agree with interpretation of MAC specs in this paper: whenever there is UL grant the UE needs to send a BFR MAC CE. QC thinks MAC spec does not mandate the UE to send a BFR MAC CE in this case.
* Nokia suggests that we enable the use of the timer by configuration
* Oppo thinks a timer is needed to guarantee BFR retransmission
* We confirm that that MAC spec mandates the UE to perform LCP when an UL grant is received and include a BFR MAC CE in this case

Withdrawn:

[R2-2005257](file:///C:\Data\3GPP\RAN2\Docs\R2-2005257.zip) Remaining issues on SCell BFR Huawei, HiSilicon discussion Rel-16 NR\_eMIMO-Core Withdrawn

## 6.18 Private Network Support for NG-RAN

(NG\_RAN\_PRN-Core; leading WG: RAN3; REL-16; started: Mar 19; target; June 20; WID: RP-200122 SR; RP-200441) Documents in this agenda item will be handled in a break out session.

Tdoc Limitation: 2 tdocs

### 6.18.1 Organisational

Including incoming LSs, rapporteur inputs, etc.

Contributions in this AI are reserved for WI rapporteur inputs and do not count towards the tdoc limits.

Incoming LSs:

[R2-2005739](file:///C:\Data\3GPP\RAN2\Docs\R2-2005739.zip) Reply LS on CMAS/ETWS and emergency services for SNPNs (S1-202220; contact: Nokia) SA1 LS in Rel-16 NG\_RAN\_PRN To:RAN2, SA2 Cc:CT1

* to be discussed in offline [104]
* Noted

[R2-2005991](file:///C:\Data\3GPP\RAN2\Docs\R2-2005991.zip) Reply LS on Manual CAG ID selection and granularity of UAC parameters for PNI-NPNs (S1-202265; contact: CMCC) SA1 LS in Rel-16 NG\_RAN\_PRN-Core To:RAN2 Cc: CT1, SA2, RAN3

* to be discussed in offline [104]
* Noted

[R2-2005993](file:///C:\Data\3GPP\RAN2\Docs\R2-2005993.zip) Reply LS on manual CAG selection (S1-202277; contact: Qualcomm) SA1 LS in Rel-16 Vertical\_LAN, NG\_RAN\_PRN-Core To:RAN2, CT1 Cc: SA2, RAN3

* to be discussed in offline [104]
* Noted

Stage 2:

[R2-2004508](file:///C:\Data\3GPP\RAN2\Docs\R2-2004508.zip) Miscellaneous corrections to NPN Nokia (Rapporteur) CR Rel-16 38.300 16.1.0 0225 - F NG\_RAN\_PRN-Core

* Endorsed (we will come back at the end of the meeting to see whether this can actually be agreed)

### 6.18.2 RRC aspects

Including output of email discussion [Post109bis-e][934][PRN] Remaining open issues (Nokia). Contributions related to issues addressed by this email discussions should be avoided and are discouraged for this AI.

Including contributions/TPs on PRN-specific Class 3 ASN.1 review aspects (such aspects should anyway be raised in the email discussion [934]). No individual company CRs should be submitted.

Also including contributions on UE capability aspects.

[R2-2004481](file:///C:\Data\3GPP\RAN2\Docs\R2-2004481.zip) Report from email discussion [Post109bis-e][934][PRN] Remaining open issues Nokia (Rapporteur) discussion Rel-16 NG\_RAN\_PRN-Core

* Moved to offline email discussion [104] with the intention to go back online during the web conference call(s)
* [AT110e][104][PRN] RRC CR (Nokia)

Initial scope: Continue the discussion on RRC open issues, based on [R2-2004481](file:///C:\Data\3GPP\RAN2\Docs\R2-2004481.zip), considering the new LSs from SA1 and the proposals marked "to be discussed in offline [104]". Also discuss RILs: Z112, B200 and H422.

Initial intended outcome: summary of the offline discussion with e.g.:

* Set of proposals with full consensus agreeable over email (based on the list in Section 3.1 of [R2-2004481](file:///C:\Data\3GPP\RAN2\Docs\R2-2004481.zip), possibly extended with new easy agreements)
  + - Set of proposals to discuss in the follow up conference call

Initial deadline (for companies' feedback): Wednesday 2020-06-03 10:00 UTC

Initial deadline (for rapporteur's summary in R2-2005794): Wednesday 2020-06-03 22:00 UTC

Proposed agreements in R2-2005794 indicated for email agreement and not challenged until Thursday 2020-06-04 10:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2005794 Offline discussion 104: PRN - RRC open issues - first round Nokia (Rapporteur) discussion Rel-16 NG\_RAN\_PRN-Core

R2-2004484 Finalization of the support of Non-Public Networks Nokia (Rapporteur) CR Rel-16 38.331 16.0.0 1513 1 F NG\_RAN\_PRN-Core R2-2002658 Late

Definition of selected PNI-NPN

[R2-2004482](file:///C:\Data\3GPP\RAN2\Docs\R2-2004482.zip) Selected NPN issue (ASN.1 Z102) Nokia, Nokia Shanghai Bell discussion Rel-16 NG\_RAN\_PRN-Core

* to be discussed in offline [104]
* Noted

NPN indexing

[R2-2004483](file:///C:\Data\3GPP\RAN2\Docs\R2-2004483.zip) Discussion on NPN indexing Nokia, Nokia Shanghai Bell discussion Rel-16 NG\_RAN\_PRN-Core

* to be discussed in offline [104]
* Noted

[R2-2005592](file:///C:\Data\3GPP\RAN2\Docs\R2-2005592.zip) Discussion on network indexing Huawei, HiSilicon discussion Rel-16 NG\_RAN\_PRN-Core

* to be discussed in offline [104]
* Noted

PCI range

[R2-2004521](file:///C:\Data\3GPP\RAN2\Docs\R2-2004521.zip) Consideration on Cells in PCI Range for CAG CATT discussion Rel-16 38.331 NG\_RAN\_PRN-Core

* to be discussed in offline [104]
* Noted

[R2-2004572](file:///C:\Data\3GPP\RAN2\Docs\R2-2004572.zip) Remaining issues for NPN ZTE Corporation, Sanechips discussion Rel-16 NG\_RAN\_PRN-Core

* moved from 6.18.3
* to be discussed in offline [104]
* Noted

[R2-2004690](file:///C:\Data\3GPP\RAN2\Docs\R2-2004690.zip) Remaining aspects of NPN Ericsson discussion Rel-16 NG\_RAN\_PRN-Core

* moved from 6.18.3
* proposals 1 and 3 to be discussed in offline [104]
* proposal 4 can be discussed in offline [105]
* Noted

[R2-2005148](file:///C:\Data\3GPP\RAN2\Docs\R2-2005148.zip) UE behavior for CAG PCI range Sony discussion Rel-16 NG\_RAN\_PRN-Core

* moved from 6.18.3
* to be discussed in offline [104]
* Noted

[R2-2005689](file:///C:\Data\3GPP\RAN2\Docs\R2-2005689.zip) PCI List for CAG QUALCOMM Europe Inc. - Italy discussion

* moved from 6.16.3
* can be discussed in offline [104]
* Noted

SIB10 on demand

[R2-2005593](file:///C:\Data\3GPP\RAN2\Docs\R2-2005593.zip) Discussion on remaining issues on NPN Huawei, HiSilicon discussion Rel-16 NG\_RAN\_PRN-Core

* to be discussed in offline [104]
* Noted

Early implementation

[R2-2005451](file:///C:\Data\3GPP\RAN2\Docs\R2-2005451.zip) Early Implementation of CAG Features CMCC, China Telecom, CATT, ZTE, Huawei, Sony discussion Rel-16 NG\_RAN\_PRN-Core

* …

[R2-2005452](file:///C:\Data\3GPP\RAN2\Docs\R2-2005452.zip) CR for Early Implementation of CAG Features CMCC, China Telecom, CATT, ZTE, Huawei, Sony CR Rel-16 38.331 16.0.0 1674 - B NG\_RAN\_PRN-Core

UE capability

[R2-2004571](file:///C:\Data\3GPP\RAN2\Docs\R2-2004571.zip) draft CR on introdcution of UE capability for non-public network ZTE Corporation, Sanechips draftCR Rel-16 38.306 16.0.0 B NG\_RAN\_PRN-Core

* Huawei suggests to add "-r16" suffix to the capability
* continue in offline discussion [106]
* [AT110e][106][PRN] 38.306 CR (ZTE)

Scope: Discuss the 38.306 CR for PRN, based on [R2-2004571](file:///C:\Data\3GPP\RAN2\Docs\R2-2004571.zip).

Intended outcome: Endorsed 38.306 CR

Deadline for companies' feedback on the revised CR: Friday 2020-06-05 08:00 UTC

Deadline for final version of the 38.306 CR in R2-2005799: Friday 2020-06-05 10:00 UTC

R2-2005799 Introduction of UE capability for non-public network ZTE Corporation, Sanechips CR Rel-16 38.306 16.0.0 B NG\_RAN\_PRN-Core

Other

[R2-2004743](file:///C:\Data\3GPP\RAN2\Docs\R2-2004743.zip) Discussion on ANR for NPN vivo discussion

* can be discussed in offline [104]
* Noted

[R2-2005658](file:///C:\Data\3GPP\RAN2\Docs\R2-2005658.zip) Need code of hrnn-List in SIB10 LG Electronics France discussion

* can be discussed in offline [104]
* Noted

[R2-2005659](file:///C:\Data\3GPP\RAN2\Docs\R2-2005659.zip) Prioritization of CAG for mobility LG Electronics France discussion NG\_RAN\_PRN-Core

* can be discussed in offline [104]
* Noted

### 6.18.3 Other aspects

Including non-RRC issues not addressed in email discussion [934].

Including contributions/TPs on TS 38.304 corrections. For these, no individual company CRs should be submitted: please consult with the 38.304 CR rapporteur first (rprakash@qti.qualcomm.com).

If needed, a summary document may also be utilized to treat this agenda item.

[R2-2005674](file:///C:\Data\3GPP\RAN2\Docs\R2-2005674.zip) PRN 38304 rapporteur summary of open issues QUALCOMM Europe Inc. - Italy discussion Rel-16

* Moved to offline email discussion [105] with the intention to go back online during the web conference call(s)
* [AT110e][105][PRN] 38.304 CR (Qualcomm)

Initial scope: Continue the discussion on 38.304 open issues, based on [R2-2005674](file:///C:\Data\3GPP\RAN2\Docs\R2-2005674.zip), and the proposals marked "to be discussed in offline [105]".

Initial intended outcome: summary of the offline discussion with e.g.:

* Set of proposals with full consensus, if any (agreeable over email)
  + - Set of proposals to discuss in the follow up conference call

Initial deadline (for companies' feedback): Tuesday 2020-06-02 10:00 UTC

Initial deadline (for rapporteur's summary in [R2-2005795](file:///C:\Data\3GPP\RAN2\Inbox\R2-2005795.zip)): Tuesday 2020-06-02 22:00 UTC

Final scope: update the 38.304 CR with all meeting agreements.

Final intended outcome: Agreed MAC CR

Deadline for companies' feedback on the revised CR: Thursday 2020-06-11 10:00 UTC

Deadline for final version of the MAC CR in R2-2005798: Friday 2020-06-12 10:00 UTC

[R2-2005795](file:///C:\Data\3GPP\RAN2\Inbox\R2-2005795.zip) Offline discussion 105: PRN - 38304 open issues - first round Qualcomm (Rapporteur) discussion Rel-16 NG\_RAN\_PRN-Core

Proposals agreeable via email:

Proposal 2.4: No change is needed for inter-RAT case with selection to CAG cells on NR.

* Agreed

Proposal 3.1: Change “registered SNPN” to “registered or selected SNPN” in the case of highest ranked cell or best not allowed.

* Agreed

Proposal 3.2: Change “cellReservedForFutureUse IE is not indicated as “true” ” to “not “true” for future use” in Section 5.3.1.

* Agreed

Proposal 3.3: Add a clarification about shared spectrum in SNPN case in Section 5.1.2.2, allowing the UE to search for multiple cells on the same frequency.

* Agreed

Agreements via email (from [105][PRN]):

1. No change is needed for inter-RAT case with selection to CAG cells on NR.
2. Change “registered SNPN” to “registered or selected SNPN” in the case of highest ranked cell or best not allowed.
3. Change “cellReservedForFutureUse IE is not indicated as “true” ” to “not “true” for future use” in Section 5.3.1.
4. Add a clarification about shared spectrum in SNPN case in Section 5.1.2.2, allowing the UE to search for multiple cells on the same frequency.

Other proposals:

Proposal 3.4: Delete SNPN from the following sentence in Section 4.1 “For the selected PLMN/SNPN, associated RAT(s) may be set, as specified in TS 23.122 [9].”

* Keep a reference to SNPN

Proposal 3.5: Current 38.304 text (“PLMN is broadcast by the cell with no associated CAG-IDs…” in suitable cell definition) is sufficiently clear and no need for change.

* Agree

Proposal 2.2.2: Current 38.304 text (for suitable cell definition) is sufficiently clear and no need for change to suitable cell definition considering the case of “selected CAG”.

* Discuss in offline [104]

Proposal 2.3.1: There is no need to add a definition of NPN-capable, and current text is adequate.

* China Telecom still thinks the current text is not sufficient. Lenovo shares the view from China Telecom: a NPN-capable UE is a UE configured with SNPN access mode. ZTE/Nokia have a different view and don't think we need to change anything.
* Agree

Proposal 2.3.2: No change needed to existing text regarding emergency calling restrictions for UEs that are not NPN-capable.

* Agree

Proposal 2.2.3: During manual CAG selection, along-with the PLMN-ID and associated CAG ID, the UE AS shall report operator policy indicator in the SIB, if present, to UE NAS (i.e. indicator of whether operator allows a user to manually select a CAG-ID supported by the CAG cell but outside the UE’s allowed CAG list).

* QC thinks that NAS specs expect this information is transmitted from AS to NAS
* VDF is fine with the proposal
* Agree

Proposal 2.1: For the case of shared spectrum and forbidden TA, UE follows the behaviour in 38.304v16.0.0, and the changes in the running CR is reverted.

* Nokia thinks this was a conscious decision in NR-U. We might re-discuss this but it should be a common decision with NR-U
* Huawei prefers to keep the text in the current CR
* Intel thinks we should not revert NR-U decision
* ZTE thinks this is not a PRN only discussion. If the last part of 2.1 is removed the proposal is agreeable
* For the case of shared spectrum and forbidden TA, UE follows the behaviour in 38.304v16.0.0

Agreements online:

1. Keep SNPN in the following sentence in Section 4.1 “For the selected PLMN/SNPN, associated RAT(s) may be set, as specified in TS 23.122 [9].”
2. Current 38.304 text (“PLMN is broadcast by the cell with no associated CAG-IDs…” in suitable cell definition) is sufficiently clear and no need for change.
3. There is no need to add a definition of NPN-capable, and current text is adequate
4. No change needed to existing text regarding emergency calling restrictions for UEs that are not NPN-capable.
5. During manual CAG selection, along-with the PLMN-ID and associated CAG ID, the UE AS shall report operator policy indicator in the SIB, if present, to UE NAS (i.e. indicator of whether operator allows a user to manually select a CAG-ID supported by the CAG cell but outside the UE’s allowed CAG list).
6. For the case of shared spectrum and forbidden TA, UE follows the behaviour in 38.304v16.0.0

[R2-2005676](file:///C:\Data\3GPP\RAN2\Docs\R2-2005676.zip) PRN 38304 CR (rapporteur update) QUALCOMM Europe Inc. - Italy CR Rel-16 38.304 16.0.0 0156 2 F NG\_RAN\_PRN R2-2003908

* To continue in the second round of offline [105] to update the CR based on the agreements during the meeting.

R2-2005798 PRN 38304 CR (rapporteur update) QUALCOMM Europe Inc. - Italy CR Rel-16 38.304 16.0.0 0156 3 F NG\_RAN\_PRN R2-2003908

[R2-2004522](file:///C:\Data\3GPP\RAN2\Docs\R2-2004522.zip) Remaining Issues related to 38.304 CATT discussion Rel-16 38.304 NG\_RAN\_PRN-Core

* to be discussed in offline [105]
* Noted

[R2-2004603](file:///C:\Data\3GPP\RAN2\Docs\R2-2004603.zip) Remaining open issues in the specification of NPN Lenovo, Motorola Mobility discussion Rel-16 NG\_RAN\_PRN-Core

* proposal 1 to be discussed in offline [104]
* other can be discussed in offline [105]
* Noted

[R2-2004689](file:///C:\Data\3GPP\RAN2\Docs\R2-2004689.zip) Purpose and consequences of manual CAG selection Ericsson discussion Rel-16 NG\_RAN\_PRN-Core

* Covered by [R2-2004481](file:///C:\Data\3GPP\RAN2\Docs\R2-2004481.zip)
* Noted

[R2-2004728](file:///C:\Data\3GPP\RAN2\Docs\R2-2004728.zip) Remaining issues for Manual CAG selection Intel Corporation discussion Rel-16 NG\_RAN\_PRN-Core

* Generally covered by [R2-2004481](file:///C:\Data\3GPP\RAN2\Docs\R2-2004481.zip) and offline [104]. Wording can be discussed in offline [105]
* Noted

[R2-2004744](file:///C:\Data\3GPP\RAN2\Docs\R2-2004744.zip) Discussion on manual CAG selection vivo discussion

* can be discussed in offline [105]
* Noted

[R2-2005364](file:///C:\Data\3GPP\RAN2\Docs\R2-2005364.zip) Clarification of cell reselection for NPN-capable U China Telecom discussion Rel-16

* can be discussed in offline [105]
* Noted

[R2-2005365](file:///C:\Data\3GPP\RAN2\Docs\R2-2005365.zip) Further consideration of UAC in PRN China Telecom discussion Rel-16

* Covered by [R2-2004481](file:///C:\Data\3GPP\RAN2\Docs\R2-2004481.zip) and offline [104]
* Noted

[R2-2005680](file:///C:\Data\3GPP\RAN2\Docs\R2-2005680.zip) Emergency Calls in CAG Cells for UE supporting NPN-ANR QUALCOMM Europe Inc. - Italy discussion

* can be discussed in offline [105]
* Noted

## Summary

TBD