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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005707.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005123.zip) and [R2-2005493](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005493.zip)

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

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

Tuesday June 9th, 13:00 - 14:30 UTC

* Check the status of email discussion 102
* Check the status of email discussion 103

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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004571.zip) (UE capabilities)
* Discuss [R2-2004508](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004508.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

Tuesday June 9th, 13:00 - 14:30 UTC

* Check the status of email discussion 104
* Discuss [R2-2005451](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005451.zip) (Early Implementation of CAG Features)

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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005695.zip), [R2-2005730](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005730.zip) and [R2-2004430](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004430.zip). Also discuss the changes suggested by RAN1 in [R2-2004347](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004347.zip) and the new proposal in [R2-2005309](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005309.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](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005791.zip)): Wednesday 2020-06-03 22:00 UTC

Final intended outcome:

* Endorsed 38.306 and 38.331 CRs on UE capabilities for CLI in [R2-2005800](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005800.zip) and [R2-2006000](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2006000.zip)
* Agreed 38.331 CR on non-capability related CLI corrections in [R2-2005805](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005805.zip)

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

Deadline for final version of the capability CRs: Friday 2020-06-05 10:00 UTC

Deadline for feedback on the non-capability RRC CR: Tuesday 2020-06-09 10:00 UTC

Deadline for final version of the non-capability RRC CR: Wednesday 2020-06-10 10:00 UTC

Status: Closed

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

Initial scope: Continue the discussion on RRC open issues, based on [R2-2004465](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004465.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](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005792.zip)): Wednesday 2020-06-03 22:00 UTC

Updated scope: RRC CR with all meeting agreements.

Updated intended outcome: eMIMO RRC CR

Deadline for companies' feedback on the RRC CR: Monday 2020-06-08 22:00 UTC

Deadline for the final version of the CR in [R2-2005803](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005803.zip): Tuesday 2020-06-09 12:00 UTC

Final scope: update the RRC CR with all meeting agreements, also taking into account the outcome from [065][066] on eMIMO specific aspects

Final intended outcome: Agreed RRC CR

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

Deadline for final version of the RRC CR in [R2-2005810](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005810.zip): Friday 2020-06-12 10:00 UTC

Status: Closed

* [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%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005793.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 on the MAC CE implications of DCI format 1\_2 applicability, based on the feedback in reply LS from RAN1 in [R2-2006057](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2006057.zip). Also 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: Tuesday 2020-06-09 02:00 UTC

Deadline for rapporteur's summary in [R2-2005796](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005796.zip): Tuesday 2020-06-09 03:00 UTC

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](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005797.zip): Friday 2020-06-12 10:00 UTC

Status: Closed

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

Initial scope: Continue the discussion on RRC open issues, based on [R2-2004481](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004481.zip), Initial scope: Continue the discussion on RRC open issues, based on [R2-2004481](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-2004481-Post109e-934-PRN-OpenIssues.docx), 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%3A%5CData%5C3GPP%5CExtracts%5CR2-2004481-Post109e-934-PRN-OpenIssues.docx), 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](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005794.zip)): Wednesday 2020-06-03 22:00 UTC

Updated scope: Continue the discussion on the issues marked as "Continue during the second round of offline [104]" and update the RRC CR with all meeting agreements

Updated intended outcome:

* Summary of the offline discussion (with set of proposals with full consensus agreeable over email and with set of proposals to discuss online)
* Updated version of the RRC CR

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

Deadline for rapporteur's summary in [R2-2005804](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005804.zip): Tuesday 2020-06-09 00:00 UTC

Deadline for the updated RRC CR in [R2-2004484](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2004484.zip): Tuesday 2020-06-09 12:00 UTC

Final scope: update the RRC CR with all meeting agreements

Final intended outcome: Agreed RRC CR

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

Deadline for final version of the 38.331 CR in [R2-2005809](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005809.zip): Friday 2020-06-12 10:00 UTC

Status: Closed

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

Initial scope: Continue the discussion on 38.304 open issues, based on [R2-2005674](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005674.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%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005795.zip)): Tuesday 2020-06-02 22:00 UTC

Final scope: update the 38.304 CR with all meeting agreements and taking into account the LS from SA1 in [R2-2005739](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005739.zip).

Final intended outcome: offline report and agreed 38.304 CR

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

Deadline for final version of the 38.304 CR in [R2-2005798](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005798.zip): Friday 2020-06-12 10:00 UTC

 Status: Closed

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

Scope: Discuss the 38.306 CR for PRN, based on [R2-2004571](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004571.zip) and draft a corresponding 38.331 CR.

Intended outcome: Endorsed 38.306 in [R2-2005799](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005799.zip) and 38.331 CR in [R2-2005807](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005807.zip)

Deadline for companies' feedback: Monday 2020-06-08 10:00 UTC

Deadline for final version of the CRs: Monday 2020-06-08 12:00 UTC

 Status: Closed

* [AT110e][107][CLI] Stage 2 CR (Nokia)

Scope: Discuss the 38.300 CR for CLI, based on [R2-2005707](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005707.zip).

Intended outcome: Agreed 38.300 CR

Deadline for companies' feedback on the revised CR: Monday 2020-06-08 12:00 UTC

Deadline for final version of the 38.300 CR in [R2-2005801](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005801.zip): Tuesday 2020-06-09 12:00 UTC

 Status: Closed

* [AT110e][108][EMIMO] LS to RAN1 (Samsung)

Scope: Draft LS to RAN1:

1. asking whether restrictions on TCI states mapping when DCI format 1\_2 has smaller length of bits than the conventional DCI format can be clarified in RAN1 specs
2. informing of RAN2 decision of not including A/D field for Serving Cell set based SRS spatial relation indication MAC CE and asking for confirmation if this consistent with the expected functionality. Also asking for confirmation about the introduction of the SUL field

Intended outcome: Agreed LS out to RAN1

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

Deadline for final version of the LS in [R2-2005811](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005811.zip): Friday 2020-06-12 10:00 UTC

 Status: Closed

## 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%3A%5CData%5C3GPP%5Carchive%5CRAN%5CRAN%2384%5CTdocs%5CRP-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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004711.zip) Work plan for RACS-RAN work item MediaTek Inc., CATT discussion Rel-16 RACS-RAN-Core

* Noted

Incoming LSs

[R2-2004321](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004321.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004324.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004710.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%3A%5CData%5C3GPP%5Carchive%5CRAN2%5CRAN2%23109bis%5CTdocs%5CR2-2003906.zip)

* Agreed

[R2-2005539](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005539.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%3A%5CData%5C3GPP%5Carchive%5CRAN2%5CRAN2%23109bis%5CTdocs%5CR2-2003905.zip)

* Lenovo suggests to add "as specified in 23.502 [43]" also for E-UTRAN in the last part of the CR
* add "as specified in 23.502 [43]" also for E-UTRAN
* Revised in [R2-2005802](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005802.zip)

[R2-2005802](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005802.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 3 F RACS-RAN-Core [R2-2003905](file:///C%3A%5CData%5C3GPP%5Carchive%5CRAN2%5CRAN2%23109bis%5CTdocs%5CR2-2003905.zip)

* Agreed (unseen)
* **The Work Item is concluded from RAN2 perspective (with no new UE capability)**

### 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%3A%5CData%5C3GPP%5Carchive%5CRAN%5CRAN%2383%5CTdocs%5CRP-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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005066.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

* Agreed
* **The Work Item is concluded (including the UE capability part)**

## 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%3A%5CData%5C3GPP%5Carchive%5CRAN%5CRAN%2385%5CTdocs%5CRP-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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004347.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004365.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005707.zip) CLI Corrections Nokia (Rapporteur) CR Rel-16 38.300 16.1.0 0217 2 F NR\_CLI\_RIM-Core R2-2005277 Late

* QC/ZTE suggest to undo the removal on "transmissions of one or multiple aggressor UEs". Nokia is fine with this
* ZTE would also like to keep the part "…can adjust its transmission pattern to avoid (causing) the CLI"
* Huawei thinks this is a cat D CR
* LG thinks that we should keep the terminology "victim" as well. Nokia agrees
* Undo the removal on "transmissions of one or multiple aggressor UEs" and do the necessary adaptation
* Keep category F
* Revised in [R2-2005801](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005801.zip)
* [AT110e][107][CLI] Stage 2 CR (Nokia)

Scope: Discuss the 38.300 CR for CLI, based on [R2-2005707](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005707.zip).

Intended outcome: Agreed 38.300 CR

Deadline for companies' feedback on the revised CR: Monday 2020-06-08 12:00 UTC

Deadline for final version of the 38.300 CR in [R2-2005801](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005801.zip): Tuesday 2020-06-09 12:00 UTC

[R2-2005801](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005801.zip) CLI Corrections Nokia (Rapporteur) CR Rel-16 38.300 16.1.0 0217 3 F NR\_CLI\_RIM-Core

* Agreed

UE capabilities

[R2-2004430](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004430.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]
* Modify the wording in 38.306 to remove "can be configured to the UE"
* change CR author to "NR\_CLI\_RIM"
* Revised in [R2-2005800](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005800.zip)

[R2-2005800](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005800.zip) UE capabilities for CLI Qualcomm Incorporated CR Rel-16 38.306 16.0.0 0301 1 F NR\_CLI\_RIM-Core

* Endorsed

[R2-2005695](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005695.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]
* reflect agreements from the meeting
* change CR author to "NR\_CLI\_RIM"
* remove non UE capability related changes and include them in a separate CR in [R2-2005805](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005805.zip)
* Revise the CR on UE capabilities for CLI in [R2-2006000](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2006000.zip)
* [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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005695.zip), [R2-2005730](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005730.zip) and [R2-2004430](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004430.zip). Also discuss the changes suggested by RAN1 in [R2-2004347](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004347.zip) and the new proposal in [R2-2005309](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005309.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](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005791.zip)): Wednesday 2020-06-03 22:00 UTC

Final intended outcome:

* Endorsed 38.306 and 38.331 CRs on UE capabilities for CLI in [R2-2005800](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005800.zip) and [R2-2006000](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2006000.zip)
* Agreed 38.331 CR on non-capability related CLI corrections in [R2-2005805](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005805.zip)

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

Deadline for final version of the capability CRs: Friday 2020-06-05 10:00 UTC

Deadline for feedback on the non-capability RRC CR: Tuesday 2020-06-09 10:00 UTC

Deadline for final version of the non-capability RRC CR: Wednesday 2020-06-10 10:00 UTC

[R2-2005791](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005791.zip) Offline discussion 101: CLI - RRC and UE capabilities aspects LG (Rapporteur) discussion Rel-16 NR\_CLI\_RIM-Core

Proposal 1: (from the e-mail discussion) For maxNumberCLI-RSSI-r16, maxNumberCLI-SRS-RSRP-r16 and maxNumberPerSlotCLI-SRS-RSRP-r16, “FR1/FR2 DIFF” is set to “NO”.

* Agreed

Proposal 2: Move maxNumberCLI-RSSI-r16, maxNumberCLI-SRS-RSRP-r16 and maxNumberPerSlotCLI-SRS-RSRP-r16 to MeasAndMobParametersCommon.

* Agreed

Proposal 3: Keep cli-RSSI-Meas-r16 and cli-SRS-RSRP-Meas-r16 in MeasAndMobParametersFRX-Diff.

* Agreed

Proposal 4: No change in TS 38.306 CR, R2-2004430.

* ZTE still has a concern on the wording: suggest to remove "can be configured to the UE" as this gives the wrong impression that the UE can measure fewer values. This would also align to other measurement capabilities. Samsung is fine with this suggestion. QC can also accept this with the understanding that this does not change anything. ZTE confirms
* LG thinks there is no problem with the wording in the current CR but could also live the proposal
* Modify the wording in 38.306 to remove "can be configured to the UE"

Proposal 5: Update the description of rssi-SCS-r16 in the IE MeasObjectCLI as suggested by RAN1.

* Agreed

Proposal 6: No enhancement based on DRX.

* Agreed

Agreements:

1. For maxNumberCLI-RSSI-r16, maxNumberCLI-SRS-RSRP-r16 and maxNumberPerSlotCLI-SRS-RSRP-r16, “FR1/FR2 DIFF” is set to “NO”.
2. Move maxNumberCLI-RSSI-r16, maxNumberCLI-SRS-RSRP-r16 and maxNumberPerSlotCLI-SRS-RSRP-r16 to MeasAndMobParametersCommon.
3. Keep cli-RSSI-Meas-r16 and cli-SRS-RSRP-Meas-r16 in MeasAndMobParametersFRX-Diff.
4. Modify the wording in 38.306 to remove "can be configured to the UE"
5. Update the description of rssi-SCS-r16 in the IE MeasObjectCLI as suggested by RAN1
6. No enhancement based on DRX.

[R2-2006000](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2006000.zip) CR on UE capabilities for CLI LG Electronics Inc. CR Rel-16 38.331 16.0.0 1689 1 F NR\_CLI\_RIM-Core

* Endorsed

[R2-2005805](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005805.zip) Corrections for CLI LG Electronics Inc. CR Rel-16 38.331 16.0.0 1700 - F NR\_CLI\_RIM-Core

* Agreed
* **The Work Item is concluded from RAN2 perspective (including the UE capability part)**

[R2-2005730](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005730.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%3A%5CData%5C3GPP%5Carchive%5CRAN2%5CRAN2%23109bis%5CTdocs%5CR2-2003365.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005309.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005603.zip) Potential correction on SRS resource for Xn exchange ZTE Corporation, Sanechips discussion Rel-16 NR\_CLI\_RIM-Core

* Noted

## 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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004833.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004465.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004465.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](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005792.zip)): Wednesday 2020-06-03 22:00 UTC

Updated scope: RRC CR with all meeting agreements.

Updated intended outcome: eMIMO RRC CR

Deadline for companies' feedback on the RRC CR: Monday 2020-06-08 22:00 UTC

Deadline for the final version of the CR in [R2-2005803](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005803.zip): Tuesday 2020-06-09 12:00 UTC

Final scope: update the RRC CR with all meeting agreements, also taking into account outcome from [065][066] on eMIMO specific aspects

Final intended outcome: Agreed RRC CR

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

Deadline for final version of the RRC CR in [R2-2005810](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005810.zip): Friday 2020-06-12 10:00 UTC

[R2-2005792](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005792.zip) Offline discussion 102: eMIMO - RRC open issues - first round Ericsson report Rel-16 NR\_eMIMO-Core

Proposals agreeable via email:

Proposal 1 Agree with TP in Appendix A and inform RAN1 that parameter nrofReportedRS-ForSINR-r16 is removed

* Agreed

Proposal 3 Agree with the proposed change as for the field description of “simultaneousTCI-UpdateList1, simultaneousTCI-UpdateList2”.

* Agreed

Proposal 4 Conclude CongReject on RIL: V104 (addition of the new parameter is separate discussion)

* Agreed

Proposal 5 Agree with the below field description for schedulingRequestID-BFR-SCell:

schedulingRequestID-BFR-SCell

Indicates the scheduling request configuration applicable for BFR on SCell, as specified in TS 38.321 [3]. ~~The network does not configure this field if BFR on SCell is not configured.~~

* Agreed

Proposal 6 Agree have Need S for both coresetPoolIndex-r16

* Agreed

Proposal 8 Agree with the proposed change as marked blue in TP in Appendix B. Further consider to use BOOLEAN

* Agreed

Proposal 9 Use ‘CHOICE’ instead of ‘SEQUENCE’ in RepetitionSchemeConfig

* Agreed

Agreements via email (from offline [102])

1. Agree with TP in Appendix A and inform RAN1 that parameter nrofReportedRS-ForSINR-r16 is removed
2. Agree with the proposed change as for the field description of “simultaneousTCI-UpdateList1, simultaneousTCI-UpdateList2”.
3. Conclude CongReject on RIL: V104 (addition of the new parameter is separate discussion)
4. Agree with the below field description for schedulingRequestID-BFR-SCell:

 *schedulingRequestID-BFR-SCell*

 *Indicates the scheduling request configuration applicable for BFR on SCell, as specified in TS 38.321 [3]. ~~The network does not configure this field if BFR on SCell is not configured.~~*

1. Agree have Need S for both coresetPoolIndex-r16
2. Agree with the proposed change as marked blue in TP in Appendix B. Further consider to use BOOLEAN
3. Use ‘CHOICE’ instead of ‘SEQUENCE’ in RepetitionSchemeConfig

Other proposals:

New proposal 2 (agreed in the main session with text proposal being discussed the offline [066]). Remove conditional presence for SetupRelease fields and move the intended network behaviour to field description.

* Reflect the final outcome of offline [066] in the eMIMO RRC CR

Proposal 7 Agree have Need S controlResourceSetId-r16 and add in field description:

“If the field controlResourceSetId-r16 is absent, the UE shall use the controlResourceSetId field (without suffix).”

* HW thinks that controlResourceSetId is a mandatory field, as for all mandatory fields, the UE shall use it unless specified otherwise. Therefore, there is no need for a sentence such as "The UE shall use controlResourceSetId if ...". Ericsson/Nokia agree
* Agree have Need S controlResourceSetId-r16

Agreement online:

1. Agree have Need S controlResourceSetId-r16

[R2-2005803](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005803.zip) eMIMO corrections Ericsson CR Rel-16 38.331 16.0.0 1696 - F NR\_eMIMO-Core

* Ericsson reports that in offline [065] there was a different understanding of need codes. HW thinks the intention was not to have a conflict with the eMIMO CR and will try to align.
* Ericsson thinks that the original AddMod list should not be used. HW wonders whether this approach should be only for this case or in general
* outcome from [065][066] on eMIMO specific aspects should be considered in a follow up of the [102] discussion and in the eMIMO RRC CR
* revised in [R2-2005810](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005810.zip)

[R2-2005810](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005810.zip) eMIMO corrections Ericsson CR Rel-16 38.331 16.0.0 1696 1 F NR\_eMIMO-Core

* still does not include the outcome of [065][066] as they are not concluded yet.
* Endorsed as a basis for a 1-week email discussion
* [POST110e][102][EMIMO] RRC CR (Ericsson)

Scope: update the RRC CR, also taking into account the outcome from [065][066][075] on eMIMO specific aspects and latest RAN1 input

Final intended outcome: Agreed RRC CR

Deadline for companies' feedback on the revised CR: Thursday 2020-06-18 10:00 UTC

Deadline for final version of the RRC CR in R2-2005812: Friday 2020-06-19 10:00 UTC

* **The Work Item is concluded from RAN2 perspective (UE capability part not fully completed)**

### 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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004463.zip) On pathloss reference RS MAC CE for SRS and PUSCH Ericsson discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004464](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004464.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004524.zip) Issues - Beam Failure Recovery Samsung Electronics Co., Ltd discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004646](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004646.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004647.zip) RACH cancellation after the transmission of Msg3 or MsgA vivo discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004832](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004832.zip) Remaining issues on the MAC CEs for beam enhancements Samsung discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004897](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004897.zip) Open issues for PUSCH Pathloss Reference RS Update MAC CE OPPO discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2004898](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004898.zip) Open issues on Spcell BFR OPPO discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2005122](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005122.zip) The Remaining issue on stopping the sr-ProhibitTimer ZTE, Sanechips discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2005185](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005185.zip) Remaining issues on DL MIMO MAC CE Qualcomm Incorporated discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2005366](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005366.zip) Consideration on timer based BFR MAC CE transmission LG Electronics Inc. discussion NR\_eMIMO-Core

* Noted

[R2-2005568](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005568.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%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005793.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 on the MAC CE implications of DCI format 1\_2 applicability, based on the feedback in reply LS from RAN1 in [R2-2006057](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2006057.zip). Also 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: Tuesday 2020-06-09 02:00 UTC

Deadline for rapporteur's summary in [R2-2005796](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005796.zip): Tuesday 2020-06-09 03:00 UTC

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](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005797.zip): Friday 2020-06-12 10:00 UTC

[R2-2005793](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005793.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](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005796.zip) Offline discussion 103: eMIMO - MAC corrections - second round Samsung report Rel-16 NR\_eMIMO-Core

Proposals agreeable via email:

Proposal 1: sr-ProhibitTimer is stopped when the MAC PDU is transmitted and this PDU includes Truncated BFR MAC CE which contains beam failure recovery information of SCell(s).

* LG thinks the original intention was to align to BSR case, whose behaviour is different in this case. Samsung agrees, but also SR cancellation is slightly different and this should not be a motivation to agree or disagree the proposal and are fine to go with the majority. Nokia agrees this is different than for BSR but are ok to go for the proposal. ZTE had a different preference but they are also ok to go for the majority. LG can also accept this
* Agreed

Proposal 2: sr-ProhibitTimer is stopped when the MAC PDU is transmitted and this PDU includes an BFR MAC CE for SCell BFR (this is based on first round of discussion).

* Agreed

Proposal 3: Adopt the TP in annex 1.

* Agreed

Proposal 7: RAN2 understand that the current RAN2 specification is already clear for the restrictions on TCI states mapping when DCI format 1\_2 has smaller length of bits than the conventional DCI format.

* Ericsson still think that a clarification in RAN1 (or RAN2) specs would be beneficial. Samsung has the same understanding that a clarification is needed.
* QC is not sure a clarification is needed but in case it should be in RAN1 spec. That was Ericsson preference as well but if not covered by RAN1 it should be clarified in RAN2.
* Ericsson/Vivo/Samsung/LG think we could send a LS to RAN1 to clarify this in their spec
* Draft an LS to RAN1 asking to clarify this in their spec

Agreements via email (from second round of [103][EMIMO]):

1. sr-ProhibitTimer is stopped when the MAC PDU is transmitted and this PDU includes an BFR MAC CE for SCell BFR
2. sr-ProhibitTimer is stopped when the MAC PDU is transmitted and this PDU includes Truncated BFR MAC CE which contains beam failure recovery information of SCell(s).
3. Adopt the TP in annex 1

Other proposals:

Alternative 1: in case A/D field is accepted

Proposal 4: Introduce the A/D field for Serving Cell set based SRS spatial relation indication MAC CE.

Proposal 5: For the detail design for Enhanced SP/AP SRS spatial relation indication MAC CE, followings are accepted:

- Keep SUL field in the MAC CE format, so A/D, C, and SUL field can be placed at the first two octets.

- Clarify that A/D field applies only when the SRS resource set the resources belong to is SP SRS resource set.

- Accept the TP changes for SRS Resource’s Cell ID that this cell should always be the configured cell list.

Proposal 6: Adopt the TP in annex 4.

Alternative 2: in case A/D field is not accepted

Proposal 4: No need A/D field for Serving Cell set based SRS spatial relation indication MAC CE.

Proposal 5: For the detail design for Enhanced SP/AP SRS spatial relation indication MAC CE, followings are accepted:

- Keep SUL field in the MAC CE format.

- Accept the TP changes for SRS Resource’s Cell ID that this cell should always be the configured cell list.

Proposal 6: Adopt the TP in annex 4 with removing A/D field aspect.

* Vivo thinks we can consider a reserved field for A/D field
* Samsung thinks we can go either way and then ask for confirmation to RAN1
* Ericsson thinks we should ask RAN1 about the functionality, not about the actual need for the A/D field or not.
* ZTE thinks the A/D field could have the same intention as in the legacy case.
* Ericsson also wonders about the SUL field. QC thinks this should be kept
* Agree to go for Alternative 2 and send an LS to RAN1 asking for confirmation, i.e. whether the functionality is ok. Also ask confirmation about the introduction of the SUL field.

Agreements:

1. No need A/D field for Serving Cell set based SRS spatial relation indication MAC CE.

2. For the detail design for Enhanced SP/AP SRS spatial relation indication MAC CE, followings are accepted:

- Keep SUL field in the MAC CE format.

- Accept the TP changes for SRS Resource’s Cell ID that this cell should always be the configured cell list.

3. TP in annex 4 with removing A/D field aspect is the baseline for the followup discussion

[R2-2005797](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005797.zip) Miscellaneous corrections on eMIMO Samsung, Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.0.0 0711 4 F NR\_eMIMO-Core

* Vice-chairman's note: the Serving cell set based SRS spatial relation indication MAC CE, for which we are sending the LS to RAN1, might need some further work once we get the reply.
* Agreed
* [AT110e][108][EMIMO] LS to RAN1 (Samsung)

Scope: Draft LS to RAN1:

1. asking whether restrictions on TCI states mapping when DCI format 1\_2 has smaller length of bits than the conventional DCI format can be clarified in RAN1 specs
2. informing of RAN2 decision of not including A/D field for Serving Cell set based SRS spatial relation indication MAC CE and asking for confirmation if this consistent with the expected functionality. Also asking for confirmation about the introduction of the SUL field

Intended outcome: Agreed LS out to RAN1

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

Deadline for final version of the LS in [R2-2005811](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005811.zip): Friday 2020-06-12 10:00 UTC

[R2-2005811](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005811.zip) LS on Remaining eMIMO issues Samsung LS out Rel-16 NR\_eMIMO-Core To:RAN1

* Agreed

Timer based BFR MAC CE transmission

[R2-2005123](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005123.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005493.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005257.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005739.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 [105]
* Noted

[R2-2005991](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005991.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005993.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

[R2-2006041](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2006041.zip) Reply LS on manual CAG ID selection and granularity of UAC parameters for PNI-NPNs (S2-2004335; contact: vivo) SA2 LS in Rel-16 Vertical\_LAN, NG\_RAN\_PRN-Core To:RAN2 Cc: CT1, RAN3, SA1

* to be considered in offline [104]
* Noted

Stage 2:

[R2-2004508](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004508.zip) Miscellaneous corrections to NPN Nokia (Rapporteur) CR Rel-16 38.300 16.1.0 0225 - F NG\_RAN\_PRN-Core

* Revised in [R2-2005814](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005814.zip) to reflect decisions in offline [105] to change “Emergency services are not supported in SNPN” to “Emergency services and ETWS /CMAS are not supported in SNPN” in section 16.6.1.

[R2-2005814](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005814.zip) Miscellaneous corrections to NPN Nokia (Rapporteur) CR Rel-16 38.300 16.1.0 0225 2 F NG\_RAN\_PRN-Core

* 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%3A%5CData%5C3GPP%5CExtracts%5CR2-2004481-Post109e-934-PRN-OpenIssues.docx) 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%3A%5CData%5C3GPP%5CExtracts%5CR2-2004481-Post109e-934-PRN-OpenIssues.docx), 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%3A%5CData%5C3GPP%5CExtracts%5CR2-2004481-Post109e-934-PRN-OpenIssues.docx), 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](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005794.zip)): Wednesday 2020-06-03 22:00 UTC

Updated scope: Continue the discussion on the issues marked as "Continue during the second round of offline [104]" and update the RRC CR with all meeting agreements

Updated intended outcome:

* Summary of the offline discussion (with set of proposals with full consensus agreeable over email and with set of proposals to discuss online)
* Updated version of the RRC CR

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

Deadline for rapporteur's summary in [R2-2005804](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005804.zip): Tuesday 2020-06-09 00:00 UTC

Deadline for the updated RRC CR in [R2-2004484](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2004484.zip): Tuesday 2020-06-09 12:00 UTC

Final scope: update the RRC CR with all meeting agreements

Final intended outcome: Agreed RRC CR

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

Deadline for final version of the 38.331 CR in [R2-2005809](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005809.zip): Friday 2020-06-12 10:00 UTC

[R2-2005794](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005794.zip) Offline discussion 104: PRN - RRC open issues - first round Nokia (Rapporteur) discussion Rel-16 NG\_RAN\_PRN-Core

Proposals agreeable via email:

Proposal 2a: The SNPN ID is never added to the RRCResumeComplete.

* Agreed

Proposal 3: UAC parameter set for a PNI-NPN is selected based on the PLMN ID of PNI-NPNs. There is no need to broadcast CAG ID specific UAC parameter sets.

* Agreed

Proposal 4a: The PNI-NPNs belonging to the same PLMN have a common (shared) index value.

* Agreed

Proposal 5: Solution B (in R2-2005794, Section 2.5) will be used as baseline for indicating if it is allowed to manually select a CAG-ID supported by the CAG cell but outside the UE’s allowed CAG list.

* Agreed

Proposal 6a: No changes are needed in 38.331 due to comment in RIL Q006.

* Agreed

Proposal 8: To resolve RIL Z103 the following changes are needed in 5.2.2.4.2 of 38.331:

3> if trackingAreaCode is not provided for the selected PLMN nor the registered PLMN nor PLMN of the equivalent PLMN list ~~nor the selected NPN nor the registered NPN~~:

* Agreed

Proposal 9: To resolve RIL I902 and I903 the following changes are needed in 5.3.3.4 of 38.331:

~~2> if upper layers selected a PLMN or an SNPN (TS 24.501 [23]):~~

~~3~~2> set the selectedPLMN-Identity to the PLMN or SNPN selected by upper layers (TS 24.501 [23]) from the PLMN(s) included in the plmn-IdentityList or the PLMN(s) or SNPN(s) included in the npn-IdentityInfoList in SIB1;

~~Editor's Note: It is FFS how to set the the selectedPLMN-Identity when a PNI-NPN is selected.~~

* Agreed

Proposal 13: Remove the duplicated field description for TAC from NPN-IdentitityInfoList as proposed in RIL H422.

* Agreed

Agreements via email (from [104][PRN]):

1. The SNPN ID is never added to the RRCResumeComplete.
2. UAC parameter set for a PNI-NPN is selected based on the PLMN ID of PNI-NPNs. There is no need to broadcast CAG ID specific UAC parameter sets.
3. The PNI-NPNs belonging to the same PLMN have a common (shared) index value.
4. Solution B (in R2-2005794, Section 2.5) will be used as baseline for indicating if it is allowed to manually select a CAG-ID supported by the CAG cell but outside the UE’s allowed CAG list.
5. No changes are needed in 38.331 due to comment in RIL Q006.
6. To resolve RIL Z103 the following changes are needed in 5.2.2.4.2 of 38.331:

 *3> if trackingAreaCode is not provided for the selected PLMN nor the registered PLMN nor PLMN of the equivalent PLMN list ~~nor the selected NPN nor the registered NPN~~:*

1. To resolve RIL I902 and I903 the following changes are needed in 5.3.3.4 of 38.331:

*~~2> if upper layers selected a PLMN or an SNPN (TS 24.501 [23]):~~*

 *~~3~~2> set the selectedPLMN-Identity to the PLMN or SNPN selected by upper layers (TS 24.501 [23]) from the PLMN(s) included in the plmn-IdentityList or the PLMN(s) or SNPN(s) included in the npn-IdentityInfoList in SIB1;*

 *~~Editor's Note: It is FFS how to set the the selectedPLMN-Identity when a PNI-NPN is selected.~~*

1. Remove the duplicated field description for TAC from NPN-IdentitityInfoList as proposed in RIL H422.

Other proposals:

Proposal 1a: RAN2 assumes that the manually selected CAG ID has no impact to cell reselection. (This requires no change in the existing draft CRs.) The final decision will happen after reply LS from SA2 on this issue is received.

(Comment from rapporteur: reply LS from SA2 arrived in R2-2006041 after the email discussion deadline, and the rapporteur's view is that it confirms this working assumption.)

* Agreed

Proposal 1b: RAN2 assumes that the UE shall select a cell supporting the manually selected CAG ID provided by NAS for initial cell selection. The relevant changes should be added to the running 38.304 CR. The final decision will happen after reply LS from SA2 on this issue is received.

(Comment from rapporteur: reply LS from SA2 arrived in R2-2006041 after the email discussion deadline, and the rapporteur's view is that it confirms this working assumption.)

* Ericsson is concerned that by doing this we would end up on a non-best cell. Lenovo wonders why. Also Nokia/Huawei/LG don't see the problem.
* Agreed

Proposal 2b: RAN2 assumes that the CAG ID is never added to the RRCResumeComplete. (This assumption is to be captured in the running RRC CR.) The final decision will happen after reply LS from SA2 on this issue is received.

(Comment from rapporteur: reply LS from SA2 arrived in R2-2006041 after the email discussion deadline, and the rapporteur's view is that it confirms this working assumption.)

* Agreed

Proposal 6b: No additional specification is needed for SIB10.

* HW thinks we should discuss whether on demand SI is supported for this
* LG/Lenovo/Samsung suggest to discuss on demand SI for SIB10 in this session. Lenovo thinks this is useful. Samsung thinks that on demand SI in connected is not useful.
* Agreed
* On demand SI in connected is not supported for SIB10

Proposal 7: Use the changes in Proposal 7 in R2-2005794 to address Z102 (TP from QC)

* Agreed

Proposal 12: It is proposed not to agree in the proposal of RIL B200.

* Agreed

Proposal 14: Only cells supporting CAG(s), including CAG only cells and shared CAG cells, may be listed in the new CAG PCI lists.

* Ericsson wonders if this means that ALL cells need to be listed, as this would put a requirement on operators not to forget any cell. ZTE agreed this is a valid comment and we could remove "all"
* Sony wonders about cells indicating cell for other use
* HW would like to keep "all" and remove "only".
* Only cells supporting CAG(s), including CAG only cells and shared CAG cells, may be listed in the new CAG PCI lists (can come back to this if we find some issues)

Proposal 16a: Agree the CR text included in Annex 1 of R2-2004690 to a CR on 38.306 for inclusion of CGI reporting capability for NPN.

* Already agreed in principle. Actual CR discussed in offline [106]

Proposal 16b: Include SIB10 in SI-SchedulingInfo using valueTags as for any other SIB (except SIB6,7,8) as proposed in Annex 2 of R2-2004690

* Agreed

Agreements online:

1. RAN2 assumes that the manually selected CAG ID has no impact to cell reselection. (This requires no change in the existing draft CRs.)
2. RAN2 assumes that the UE shall select a cell supporting the manually selected CAG ID provided by NAS for initial cell selection. The relevant changes should be added to the running 38.304 CR.
3. RAN2 assumes that the CAG ID is never added to the RRCResumeComplete. (This assumption is to be captured in the running RRC CR.)
4. No additional specification is needed for SIB10.
5. On demand SI in connected is not supported for SIB10
6. Use the changes in Proposal 7 in R2-2005794 to address Z102 (TP from QC)
7. Not agree in the proposal of RIL B200.
8. Only cells supporting CAG(s), including CAG only cells and shared CAG cells, may be listed in the new CAG PCI lists (can come back to this if we find some issues)
9. Include SIB10 in SI-SchedulingInfo using valueTags as for any other SIB (except SIB6,7,8) as proposed in Annex 2 of R2-2004690

Proposal 4: Further discussion is needed on network indexing, more specifically

* Whether option A (the PLMN and PNI-NPNs with the same PLMN ID share an index) or option B (PNI-NPNs with same PLMN ID share an index, but the sharing does not involve PLMNs) is used;
* Whether the network should be aware that the UE is accessing the cell through PLMN or PNI-NPN.
* Continue during the second round of offline [104]

Proposal 11: Proposal of RIL Z112 to be discussed after issue 14 (see proposal 14) has been concluded.

* Continue during the second round of offline [104]

Proposal 15: It is proposed to discuss the following proposals:

* R2-2004572
	+ Proposal 1: The validity area of the PCI range can be the entire PLMN.
* Continue during the second round of offline [104]
* R2-2005148
	+ Proposal 2: RAN2 to discuss if this is the common understanding that there is no associated UE behaviour defined for a CAG capable UE for PCI range.
	+ Proposal 3: RAN2 to discuss that if the IE cellReservedForOtherUse=true condition is added to the definition of CAG cell then non-CAG capable UE “may” ignore the cells in the PCI range
* Continue during the second round of offline [104]
* R2-2005689
	+ Proposal 2: UE may use knowledge of the CAG PCIs to improve implementation dependent search procedures for CAGs.
* Continue during the second round of offline [104]

Proposal 16c: It is proposed to discuss the following proposals:

* R2-2004743,
	+ Proposal 1: For NPN-only cell, the plmn-IdentityInfoList is not reported
* Continue during the second round of offline [104]
* R2-2005593:
	+ Proposal 1: The following solutions for network controlled manual CAG selection should be discussed:
		- Option 1: The CAG cell broadcasts a new indication to indicate whether a CAG-ID supported by the cell can be selected manually, and the new indication can be include in SIB1 or SIB10.
		- Option 2: The UE is pre-configured with an allowed manually selected CAG list, which contains the CAGs that the UE is allowed to select manually.
		- Option 3: UE reports that the access is based on manual CAG selection in RRC message.
	+ Proposal 2: SIB10 can be requested on-demand by UEs in RRC\_CONNECTED.
* Continue the discussion on option 2 and option 3 of proposal 1 during the second round of offline [104] (other proposals are superseded by meeting agreements).

[R2-2005804](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005804.zip) Offline discussion 104: PRN - RRC open issues - second round Nokia (Rapporteur) discussion Rel-16 NG\_RAN\_PRN-Core

Proposals agreeable via email:

Proposal 2b: Add a reference to TS38.304 for CAG cell definition as proposed in RIL Z112.

* Agreed

Proposal 3.1: Do not pursue the discussion on proposal 1 of R2-2004572.

* Agreed

Proposal 3.2: Do not pursue the discussion on proposal 2 and 3 of R2-2005148.

* Agreed

Proposal 3.3: UE may use knowledge of the CAG PCIs to improve implementation dependent search procedures for CAGs. There is no need to document this in any specifications.

* Agreed

Proposal 3.5: Do not pursue the discussion on proposal 1 of R2-2005593.

* Agreed

Agreements via email (from second round of [104][PRN]):

1. Add a reference to TS38.304 for CAG cell definition as proposed in RIL Z112.
2. Do not pursue the discussion on proposal 1 of R2-2004572.
3. Do not pursue the discussion on proposal 2 and 3 of R2-2005148.
4. UE may use knowledge of the CAG PCIs to improve implementation dependent search procedures for CAGs. There is no need to document this in any specifications.
5. Do not pursue the discussion on proposal 1 of R2-2005593.

Other proposals:

Proposal 1: The shared PLMN index value of PNI-NPNs belonging to the same PLMN ID is not shared with the index value for the PLMN with the same PLMN ID in the legacy PLMN list (i.e. there is a separate index value for PNI-NPNs belonging to the same PLMN).

* Ericsson understands this is aligned to SA2 view. Nokia confirms
* Intel can accept this if this is the majority view. A consequence is that for the same PLMN ID we would have two UAC configurations. Nokia confirms this would be the case (if PLMN-specific UAC is used). Huawei agrees with the consequence mentioned by Intel. Ericsson thinks that we don't necessarily need to duplicate the UAC configuration
* VDF is ok with the proposal
* Agreed

Proposal 2a: The PCI ranges listed in CAG PCI lists shall include PCI values of all neighbouring cells supporting CAG(s) (for the given PLMN and frequency band).

* Nokia indicates that nobody was really against but a few companies wanted to check, also about operators' views.
* VDF could be fine with the proposal
* QC/LG think the benefit to the UE is not really clear, while the restriction on the operator could be significant
* Lenovo wonders how this would be enforced in the specification
* There is no requirement for the PCI ranges listed in CAG PCI lists to include all PCI values of all neighbouring cells supporting CAG(s) (for the given PLMN and frequency band).

Proposal 3.4: Continue the discussion on proposal 1 of R2-2004743 (Proposal 1: For NPN-only cell, the plmn-IdentityInfoList is not reported)

* Nokia thinks this is an unnecessary optimization. Ericsson/ZTE/Huawei have the same view and the gain is limited
* Not agreed

Agreements online:

1. The shared PLMN index value of PNI-NPNs belonging to the same PLMN ID is not shared with the index value for the PLMN with the same PLMN ID in the legacy PLMN list (i.e. there is a separate index value for PNI-NPNs belonging to the same PLMN).
2. There is no requirement for the PCI ranges listed in CAG PCI lists to include all PCI values of all neighbouring cells supporting CAG(s) (for the given PLMN and frequency band).

[R2-2004484](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2004484.zip) 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

* Nokia reports that a number of good comments were made, but nothing controversial that necessarily needs online discussion
* Revised in [R2-2005809](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005809.zip)

[R2-2005809](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005809.zip) Finalization of the support of Non-Public Networks Nokia (Rapporteur) CR Rel-16 38.331 16.0.0 1513 2 F NG\_RAN\_PRN-Core R2-2002658 Late

* Agreed
* **The Work Item is concluded from RAN2 perspective (including the UE capability part)**

Definition of selected PNI-NPN

[R2-2004482](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004482.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004483.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005592.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004521.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004572.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004690.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005148.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005689.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005593.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005451.zip) Early Implementation of CAG Features CMCC, China Telecom, CATT, ZTE, Huawei, Sony discussion Rel-16 NG\_RAN\_PRN-Core

Proposal 1: it is proposed to allow the early implementation of CAG feature in Rel-15 UEs.

Proposal 2: it is proposed to allow the early implementation of CAG feature in Rel-15 UEs via adding the CAG feature into the List of CRs Containing Early Implementable Features and Corrections in TS 38.331.

* QC thinks that the feature and signalling are CT1 controlled so even if they have nothing against in principle this should be raised in CT1 first. CMCC thinks that in SA2 it was invited to have this discussion in RAN2 first.
* Also Lenovo thinks this is mainly a CT1 discussion. Also wonders about the possible impact on the UE capability signalling.
* Intel thinks this is also related to the general discussion on how to enable early implementation of features in NR
* Nokia thinks that in case there is no need to separate CAGs from SNPN. However this spans among several groups and then we also need test cases. So in practice the problem is not in which release this is specified but to speed up the implementations to meet operators' requirements
* No conclusion for now. This can be discussed as part of the general discussion on how to enable early implementation of features in NR

[R2-2005452](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005452.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

* Noted

UE capability

[R2-2004571](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004571.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004571.zip) and draft a corresponding 38.331 CR.

Intended outcome: Endorsed 38.306 in [R2-2005799](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005799.zip) and 38.331 CR in [R2-2005807](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005807.zip)

Deadline for companies' feedback: Monday 2020-06-08 10:00 UTC

Deadline for final version of the CRs: Monday 2020-06-08 12:00 UTC

[R2-2005799](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005799.zip) Introduction of UE capability for non-public network ZTE Corporation, Sanechips CR Rel-16 38.306 16.0.0 0351 - B NG\_RAN\_PRN-Core

* Change "-16" into "-r16" in the field name
* Revised in [R2-2005806](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005806.zip)

[R2-2005806](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005806.zip) Introduction of UE capability for non-public network ZTE Corporation, Sanechips CR Rel-16 38.306 16.0.0 0351 1 B NG\_RAN\_PRN-Core

* Add "CGI-" with change marks to the description of the existing capabilities nr-CGI-Reporting, nr-CGI-Reporting-ENDC. Same change to be made to the capability eutra-CGI-Reporting.
* Revised in [R2-2005808](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005808.zip)

[R2-2005808](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005808.zip) Introduction of UE capability for non-public network ZTE Corporation, Sanechips CR Rel-16 38.306 16.0.0 0351 2 B NG\_RAN\_PRN-Core

* Endorsed

[R2-2005807](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005807.zip) UE capability for PRN Nokia CR Rel-16 38.331 16.0.0 1701 - F NG\_RAN\_PRN-Core

* Endorsed

Other

[R2-2004743](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004743.zip) Discussion on ANR for NPN vivo discussion

* can be discussed in offline [104]
* Noted

[R2-2005658](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005658.zip) Need code of hrnn-List in SIB10 LG Electronics France discussion

* can be discussed in offline [104]
* Noted

[R2-2005659](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005659.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005674.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005674.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%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005795.zip)): Tuesday 2020-06-02 22:00 UTC

Final scope: update the 38.304 CR with all meeting agreements and taking into account the LS from SA1 in [R2-2005739](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005739.zip).

Final intended outcome: offline report and agreed 38.304 CR

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

Deadline for final version of the 38.304 CR in [R2-2005798](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005798.zip): Friday 2020-06-12 10:00 UTC

[R2-2005795](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005795.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.

* Agreed

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.
* Agreed

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

* Agreed

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
* Agreed

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

[R2-2005813](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005813.zip) Offline discussion 105: PRN - 38304 open issues - second round Qualcomm (Rapporteur) discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2005676](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005676.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](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005798.zip) 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

* Agreed

[R2-2004522](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004522.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004603.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004689.zip) Purpose and consequences of manual CAG selection Ericsson discussion Rel-16 NG\_RAN\_PRN-Core

* Covered by [R2-2004481](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004481.zip)
* Noted

[R2-2004728](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004728.zip) Remaining issues for Manual CAG selection Intel Corporation discussion Rel-16 NG\_RAN\_PRN-Core

* Generally covered by [R2-2004481](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004481.zip) and offline [104]. Wording can be discussed in offline [105]
* Noted

[R2-2004744](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004744.zip) Discussion on manual CAG selection vivo discussion

* can be discussed in offline [105]
* Noted

[R2-2005364](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005364.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%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005365.zip) Further consideration of UAC in PRN China Telecom discussion Rel-16

* Covered by [R2-2004481](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004481.zip) and offline [104]
* Noted

[R2-2005680](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005680.zip) Emergency Calls in CAG Cells for UE supporting NPN-ANR QUALCOMM Europe Inc. - Italy discussion

* can be discussed in offline [105]
* Noted

## Summary

No comebacks

Agreed CRs

RACS

[R2-2004710](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2004710.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%3A%5CData%5C3GPP%5Carchive%5CRAN2%5CRAN2%23109bis%5CTdocs%5CR2-2003906.zip)

[R2-2005802](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005802.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 3 F RACS-RAN-Core [R2-2003905](file:///C%3A%5CData%5C3GPP%5Carchive%5CRAN2%5CRAN2%23109bis%5CTdocs%5CR2-2003905.zip)

* **The Work Item is concluded from RAN2 perspective (with no new UE capability)**

SRVCC

[R2-2005066](file:///C%3A%5CData%5C3GPP%5CRAN2%5CDocs%5CR2-2005066.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

* **The Work Item is concluded (including the UE capability part)**

CLI

[R2-2005801](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005801.zip) CLI Corrections Nokia (Rapporteur) CR Rel-16 38.300 16.1.0 0217 3 F NR\_CLI\_RIM-Core

[R2-2005805](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005805.zip) Corrections for CLI LG Electronics Inc. CR Rel-16 38.331 16.0.0 1700 - F NR\_CLI\_RIM-Core

* **The Work Item is concluded from RAN2 perspective (including the UE capability part)**

eMIMO

[R2-2005797](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005797.zip) Miscellaneous corrections on eMIMO Samsung, Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.0.0 0711 4 F NR\_eMIMO-Core

* **The Work Item is concluded from RAN2 perspective (UE capability part not fully completed)**

PRN

[R2-2005814](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005814.zip) Miscellaneous corrections to NPN Nokia (Rapporteur) CR Rel-16 38.300 16.1.0 0225 2 F NG\_RAN\_PRN-Core

[R2-2005809](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005809.zip) Finalization of the support of Non-Public Networks Nokia (Rapporteur) CR Rel-16 38.331 16.0.0 1513 2 F NG\_RAN\_PRN-Core R2-2002658 Late

[R2-2005798](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005798.zip) 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

* **The Work Item is concluded from RAN2 perspective (including the UE capability part)**

Agreed LSs out

[R2-2005811](file:///C%3A%5CData%5C3GPP%5CRAN2%5CInbox%5CR2-2005811.zip) LS on Remaining eMIMO issues Samsung LS out Rel-16 NR\_eMIMO-Core To:RAN1

Email discussions

* [POST110e][102][EMIMO] RRC CR (Ericsson)

Scope: update the RRC CR, also taking into account the outcome from [065][066][075] on eMIMO specific aspects and latest RAN1 input

Final intended outcome: Agreed RRC CR

Deadline for companies' feedback on the revised CR: Thursday 2020-06-18 10:00 UTC

Deadline for final version of the RRC CR in R2-2005812: Friday 2020-06-19 10:00 UTC