3GPP TSG-RAN WG2 Meeting #109bis electronic R2-2003802

20 Apr – 30 Apr 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 [AT109bis-e][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. No Stage 2 CRs will be discussed
3. All organization emails and notes will be shared over the following email discussion throughout the two meeting weeks:

* [AT109bis-e][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:

This WI will only be handled via an offline email discussion kicked off at the e-meeting start (108).

SRVCC:

No documents were submitted for this WI. No discussion is expected.

CLI:

This WI will be handled by an initial web conference call and will then continue via offline email discussion(s) (109, …) kicked off after the web conference call.

Tuesday April 21st, 12:00 - 13:30 UTC (likely the last 20-30 mintes)

* Check incoming LSs and decide on follow-up offline email discussion(s)

eMIMO:

This WI will be handled via offline email discussions kicked off at the e-meeting start (101, 102, 103, 104) or later during the e-meeting and by web conference calls.

Friday April 24th, 4:00 - 5:30 UTC

* Check the status of email discussion 101 on MAC corrections
* Check the status of email discussion 102 on RRC aspects
* Check the status of email discussion 103 on BFR on SpCell
* (if time allows) check the status of email discussion 104 on Timer based BFR MAC CE Transmission

Wednesday April 29th, 13:00 - 14:30 UTC

* TBD

PRN:

This WI will be handled via offline email discussions kicked off at the e-meeting start (105) or later during the e-meeting and by web conference calls (106, 107)

Tuesday April 21st, 12:00 - 13:30 UTC

* Check the status of email discussion 106 on PRN open issues
* Decide on follow-up offline email discussion(s)

Monday April 27th, 14:30 - 16:00 UTC

* TBD

List and status of offline email discussions

NOTE: No offline email discussions will be kicked off before Monday April 20th, 07:00 UTC

* [AT109bis-e][101][EMIMO] MAC corrections (Samsung)

Scope: Continue the discussion on MAC corrections, based on [R2-2003795](file:///C:\Data\3GPP\RAN2\Docs\R2-2003795.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 with almost full consensus to discuss in the follow up conference call
    - Set of open issues and proposals to postpone to next meeting

Initial deadline (for companies' feedback): Wednesday 2020-04-22 16:00 UTC

Initial deadline (for rapporteur's summary in R2-2003891): Thursday 2020-04-23 10:00 UTC

Proposed agreements in R2-2003891 indicated for email agreement and not challenged until Thursday 2020-04-23 22:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

Status: Ongoing

* [AT109bis-e][102][EMIMO] RRC aspects (Ericsson)

Scope: Continue the discussion on RRC aspects, based on [R2-2003181](file:///C:\Data\3GPP\Extracts\R2-2003181_eMIMORRCOpenIssues_submitted.docx)

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 with almost full consensus to discuss in the follow up conference call
    - Set of open issues and proposals to postpone to next meeting

Initial deadline (for companies' feedback): Wednesday 2020-04-22 16:00 UTC

Initial deadline (for rapporteur's summary in R2-2003892): Thursday 2020-04-23 10:00 UTC

Proposed agreements in R2-2003892 indicated for email agreement and not challenged until Thursday 2020-04-23 22:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

Status: Ongoing

* [AT109bis-e][103][EMIMO] BFR on SpCell (Apple)

Scope: Continue the discussion on BFR MAC CE for BFR on SpCell, based on [R2-2002795](file:///C:\Data\3GPP\Extracts\._R2-2002795_Report%20of%20109e%2317%20BFR%20MAC%20CE%20for%20BFR%20on%20SpCell_Summary_v2.docx)

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 with to discuss in the follow up conference call

Initial deadline (for companies' feedback): Wednesday 2020-04-22 16:00 UTC

Initial deadline (for rapporteur's summary in R2-2003893): Thursday 2020-04-23 10:00 UTC

Proposed agreements in R2-2003893 indicated for email agreement and not challenged until Thursday 2020-04-23 22:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

Status: Ongoing

* [AT109bis-e][104][EMIMO] Timer based BFR MAC CE Transmission (Nokia)

Scope: Discuss the proposals for timer based BFR MAC CE Transmission based on [R2-2002796](file:///C:\Data\3GPP\RAN2\Docs\R2-2002796.zip), [R2-2003589](file:///C:\Data\3GPP\Extracts\R2-2003589-%20Discussion%20on%20Beam%20Failure%20Recovery%20on%20SCell.doc) and [R2-2003712](file:///C:\Data\3GPP\Extracts\R2-2003712.docx)

Initial intended outcome: summary of the offline discussion with list of proposals

Initial deadline (for companies' feedback): Thursday 2020-04-23 07:00 UTC

Initial deadline (for rapporteur's summary in R2-2003894): Thursday 2020-04-23 16:00 UTC

Status: Ongoing

* [AT109bis-e][105][PRN] Open issues (Nokia)

Scope: Continue the discussion on PRN open issues, based on [R2-2002659](file:///C:\Data\3GPP\Extracts\R2-2002659-Post109e-18-PRN-OpenIssues.docx)

Initial intended outcome: Set of proposals with full consensus agreeable via email, based on

the list in Section 4.1 of [R2-2002659](file:///C:\Data\3GPP\Extracts\R2-2002659-Post109e-18-PRN-OpenIssues.docx) (final list to be reflected in R2-2003895)

Initial intermediate deadline (for companies' feedback): Tuesday 2020-04-21 09:00 UTC

Proposals in Section 4.1 of [R2-2002659](file:///C:\Data\3GPP\Extracts\R2-2002659-Post109e-18-PRN-OpenIssues.docx) not challenged until Tuesday 2020-04-21 09:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

Status: Ongoing

* [AT109bis-e][106][PRN] RRC CR (Nokia)

Scope: Update the 38.331 CR, based on the progress on the remaining open issues

Intended outcome: In-principle agreed 38.331 CR

Deadline for companies' feedback: Wednesday 2020-04-29 10:00 UTC

Deadline for rapporteur's version for agreement: Thursday 2020-04-30 10:00 UTC

Status: Not yet started

* [AT109bis-e][107][PRN] 38.304 CR (Qualcomm)

Scope: Update the 38.304 CR, based on the progress on the remaining open issues

Intended outcome: In-principle agreed 38.304 CR

Deadline for companies' feedback: Wednesday 2020-04-29 10:00 UTC

Deadline for rapporteur's version for agreement: Thursday 2020-04-30 10:00 UTC

Status: Not yet started

* [AT109bis-e][108][RACS] Stage 3 CRs (ZTE)

Scope: discuss the 36.331 and 38.331 CRs in [R2-2003290](file:///C:\Data\3GPP\Extracts\R2-2003290_38.331_(REL_16)_CR1553_Correction%20to%20transfer%20of%20UE%20capabilities%20at%20HO%20forRACS%20(38.331).docx) and [R2-2003305](file:///C:\Data\3GPP\Extracts\R2-2003305.docx) and the additional proposals in [R2-2002881](file:///C:\Data\3GPP\Extracts\R2-2002881.doc) and [R2-2003471](file:///C:\Data\3GPP\Extracts\R2-2003471%20UE%20capability%20indication%20for%20segmentation.doc)

Intended outcome: In-principle agreed 36.331 and 38.331 CRs

Deadline for companies' feedback: Thursday 2020-04-23 10:00 UTC

Deadline for rapporteur's version for agreement: Friday 2020-04-24 10:00 UTC

Status: Ongoing

* [AT109bis-e][109][CLI] RRC CR (LG)

Scope: discuss the 38.331 CRs based on [R2-2002911](file:///C:\Data\3GPP\Extracts\R2-2002911%20CR%20on%20additional%20configuration%20for%20CLI%20resources.docx)

Intended outcome: In-principle agreed 38.331 CR

Deadline for companies' feedback: Thursday 2020-04-23 10:00 UTC

Deadline for rapporteur's version for agreement: Friday 2020-04-24 10:00 UTC

Status: Not yet 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.

[R2-2002725](file:///C:\Data\3GPP\Extracts\R2-2002725.docx) Work plan for RACS-RAN work item MediaTek Inc., CATT discussion Rel-16

* Noted

R2-2002726 Work plan for RACS-RAN work item MediaTek Inc., CATT discussion Rel-16 Withdrawn

[R2-2003290](file:///C:\Data\3GPP\Extracts\R2-2003290_38.331_(REL_16)_CR1553_Correction%20to%20transfer%20of%20UE%20capabilities%20at%20HO%20forRACS%20(38.331).docx) Correction to transfer of UE capabilities at HO for RACS (38.331) ZTE Corporation, Ericsson,MediaTek Inc.,Sanechips CR Rel-16 38.331 16.0.0 1553 - F RACS-RAN-Core

* to be discussed in offline [108]

[R2-2003305](file:///C:\Data\3GPP\Extracts\R2-2003305.docx) Correction to transfer of UE capabilities at HO for RACS (36.331) MediaTek Inc., Ericsson, ZTE Corporation, Sanechips CR Rel-16 36.331 16.0.0 4256 - F RACS-RAN-Core

* to be discussed in offline [108]
* [AT109bis-e][108][RACS] Stage 3 CRs (ZTE)

Scope: discuss the 36.331 and 38.331 CRs in [R2-2003290](file:///C:\Data\3GPP\Extracts\R2-2003290_38.331_(REL_16)_CR1553_Correction%20to%20transfer%20of%20UE%20capabilities%20at%20HO%20forRACS%20(38.331).docx) and [R2-2003305](file:///C:\Data\3GPP\Extracts\R2-2003305.docx) and the additional proposals in [R2-2002881](file:///C:\Data\3GPP\Extracts\R2-2002881.doc) and [R2-2003471](file:///C:\Data\3GPP\Extracts\R2-2003471%20UE%20capability%20indication%20for%20segmentation.doc)

Intended outcome: In-principle agreed 36.331 and 38.331 CRs

Deadline for companies' feedback: Thursday 2020-04-23 10:00 UTC

Deadline for rapporteur's version for agreement: Friday 2020-04-24 10:00 UTC

### 6.5.2 Corrections

Including contributions/TPs/DraftCRs 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](mailto:Nathan.Tenny@mediatek.com) for 36.331 and [Gao.Yuan66@zte.com.cn](mailto:Gao.Yuan66@zte.com.cn) for 38.331).

[R2-2002881](file:///C:\Data\3GPP\Extracts\R2-2002881.doc) Transfer of segmented UECapabilityInformation by SRB2 Samsung discussion Rel-16 RACS-RAN-Core [R2-2000765](file:///C:\Data\3GPP\archive\RAN2\RAN2%23109\Tdocs\R2-2000765.zip)

* to be discussed in offline [108]
* Noted

[R2-2003471](file:///C:\Data\3GPP\Extracts\R2-2003471%20UE%20capability%20indication%20for%20segmentation.doc) UE capability indication for segmentation Huawei, HiSilicon discussion Rel-16 RACS-RAN-Core [R2-2001329](file:///C:\Data\3GPP\archive\RAN2\RAN2%23109\Tdocs\R2-2001329.zip)

* to be discussed in offline [108]
* Noted

## 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/DraftCRs 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](mailto:tangxun@huawei.com)).

## 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

Apart from corrections, it's possible to contribute to sub agenda item 6.15.2 for the remaining open issues requiring feedback from other groups.

### 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

[R2-2002510](file:///C:\Data\3GPP\Extracts\R2-2002510_R1-2001319.doc) Reply LS on clarification of CLI resource configuration (R1-2001319; contact: LGE) RAN1 LS in Rel-16 NR\_CLI\_RIM-Core To:RAN2 Cc:RAN4

* …

[R2-2002511](file:///C:\Data\3GPP\Extracts\R2-2002511_R1-2001320.doc) LS on CLI measurement and reporting (R1-2001320; contact: LGE) RAN1 LS in Rel-16 NR\_CLI\_RIM-Core To:RAN4 Cc:RAN2

* Noted

[R2-2002528](file:///C:\Data\3GPP\Extracts\R2-2002528_R4-2002221.doc) Reply LS on CLI measurement capability (R4-2002221; contact: Huawei) RAN4 LS in Rel-16 NR\_CLI\_RIM-Core To:RAN2 Cc:RAN1

* …

Stage 2 CRs - not handled at this meeting

[R2-2003365](file:///C:\Data\3GPP\Extracts\R2-2003365.docx) CLI Featurre overview - Additional changes Nokia Solutions & Networks (I) CR Rel-16 38.300 16.1.0 0217 - D NR\_CLI\_RIM-Core

* Noted

### 6.15.2 Remaining open issues

Including the open issues for which feedback has been requested to other groups.

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

[R2-2002911](file:///C:\Data\3GPP\Extracts\R2-2002911%20CR%20on%20additional%20configuration%20for%20CLI%20resources.docx) CR on additional configuration for CLI resources LG Electronics Inc. CR Rel-16 38.331 16.0.0 1533 - F NR\_CLI\_RIM

* to be discussed in offline [109]
* [AT109bis-e][109][CLI] RRC CR (LG)

Scope: discuss the 38.331 CRs based on [R2-2002911](file:///C:\Data\3GPP\Extracts\R2-2002911%20CR%20on%20additional%20configuration%20for%20CLI%20resources.docx)

Intended outcome: In-principle agreed 38.331 CR

Deadline for companies' feedback: Thursday 2020-04-23 10:00 UTC

Deadline for rapporteur's version for agreement: Friday 2020-04-24 10:00 UTC

[R2-2002885](file:///C:\Data\3GPP\Extracts\R2-2002885.docx) Additional frequency information for CLI measurements Samsung CR Rel-16 38.331 16.0.0 1531 - F NR\_CLI\_RIM

* WI rapporteur CR to be used as a baseline. Further comments can be made in offline [109]
* Noted

[R2-2002909](file:///C:\Data\3GPP\Extracts\R2-2002909%20Additional%20configuration%20for%20CLI%20resources.doc) Additional configuration for CLI resources LG Electronics Inc. discussion Rel-16

* Noted

[R2-2003380](file:///C:\Data\3GPP\Extracts\R2-2003380%20-%20Remaining%20issues%20for%20CLI.docx) Remaining issues for RIM/CLI Ericsson discussion Rel-16 NR\_CLI\_RIM

* 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

It's possible to contribute to all sub agenda items, to address the remaining open issues.

### 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.

[R2-2002883](file:///C:\Data\3GPP\Extracts\R2-2002883.docx) Miscellaneous corrections on eMIMO Samsung CR Rel-16 38.321 16.0.0 0711 - F NR\_eMIMO-Core

* …

### 6.16.2 RRC open issues

Including output of email discussion [Post109e#34][eMIMO] RRC Open issues (Ericsson). Contributions related to issues addressed by this email discussions should be avoided and are discouraged for this AI.

Including contributions/TPs/DraftCRs on eMIMO-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 (helka-liina.maattanen@ericsson.com).

[R2-2003181](file:///C:\Data\3GPP\Extracts\R2-2003181_eMIMORRCOpenIssues_submitted.docx) [Post109e#34][EMIMO] RRC Open Issues (Ericsson) Ericsson discussion Rel-16 NR\_eMIMO-Core

* Moved to offline email discussion [102] with the intention to go back online during the web conference call(s)
* [AT109bis-e][102][EMIMO] RRC aspects (Ericsson)

Scope: Continue the discussion on RRC aspects, based on [R2-2003181](file:///C:\Data\3GPP\Extracts\R2-2003181_eMIMORRCOpenIssues_submitted.docx)

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 with almost full consensus to discuss in the follow up conference call
    - Set of open issues and proposals to postpone to next meeting

Initial deadline (for companies' feedback): Wednesday 2020-04-22 16:00 UTC

Initial deadline (for rapporteur's summary in R2-2003892): Thursday 2020-04-23 10:00 UTC

Proposed agreements in R2-2003892 indicated for email agreement and not challenged until Thursday 2020-04-23 22:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2003892 Offline discussion 102: eMIMO RRC aspects - first round Ericsson (Rapporteur) discussion Rel-16 NR\_eMIMO-Core

[R2-2002870](file:///C:\Data\3GPP\Extracts\R2-2002870_Correction%20on%20the%20number%20of%20CORESETs%20per%20BWP%20(RIL%20v101).docx) Correction on the number of CORESETs per BWP (RIL v101) vivo CR Rel-16 38.331 16.0.0 1529 - F NR\_eMIMO-Core

* to be discussed in offline [102]
* Noted

[R2-2002871](file:///C:\Data\3GPP\Extracts\R2-2002871_Correction%20on%20RLM%20RS%20configuration%20(RIL%20v102).docx) Correction on RLM RS configuration (RIL v102) vivo CR Rel-16 38.331 16.0.0 1530 - F NR\_eMIMO-Core

* to be discussed in offline [102]
* Noted

R2-2003710 Correction on Multi-DCI based multi-TRP transmission for eMBB Huawei, HiSilicon draftCR Rel-16 38.331 16.0.0 F NR\_eMIMO-Core Late

R2-2003711 Corrections on multi-TRP transmission for URLLC Huawei, HiSilicon draftCR Rel-16 38.331 16.0.0 F NR\_eMIMO-Core Late

### 6.16.3 Other open issues

Including output of email discussion [Post109e#17][eMIMO] BFR MAC CE for BFR on SpCell (Apple). Contributions related to issues addressed by this email discussions should be avoided and are discouraged for this AI.

MAC Corrections. The proposals in the following papers are summarized in [R2-2003795](file:///C:\Data\3GPP\RAN2\Docs\R2-2003795.zip)

[R2-2002557](file:///C:\Data\3GPP\Extracts\R2-2002557_Issues%20for%20SCell%20BFR.doc) Issues - SCell BFR Samsung Electronics Co., Ltd discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2002605](file:///C:\Data\3GPP\Extracts\R2-2002605.doc) Discussion on pending BFR SR upon SCell deactivation Sharp, Samsung discussion NR\_eMIMO-Core

* Noted

[R2-2002796](file:///C:\Data\3GPP\RAN2\Docs\R2-2002796.zip) Timer based BFR MAC CE Transmission Apple, Nokia, Nokia Shanghai Bell discussion NR\_eMIMO-Core

* Noted

[R2-2002872](file:///C:\Data\3GPP\Extracts\R2-2002872%20Discussion%20on%20the%20SCell%20BFD%20on%20the%20deactivated%20SCell.docx) Discussion on the SCell BFD on the deactivated SCell vivo discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2002873](file:///C:\Data\3GPP\Extracts\R2-2002873%20Correction%20on%20the%20SP%20SRS%20ActivationDeactivation%20MAC%20CE.docx) Correction on the SP SRS ActivationDeactivation MAC CE vivo discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2002882](file:///C:\Data\3GPP\Extracts\R2-2002882.doc) Considerations on the number of pathloss RSs indicated by MAC CE Samsung discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2002926](file:///C:\Data\3GPP\Extracts\R2-2002926.doc) SR configuration for SCell beam failure recovery Lenovo, Motorola Mobility discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2002954](file:///C:\Data\3GPP\Extracts\R2-2002954%20-%20CC%20list-based%20SRS%20Activation%20%20MAC%20CE.doc) CC list-based SRS Activation/Deactivation MAC CE design OPPO discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2002957](file:///C:\Data\3GPP\RAN2\Docs\R2-2002957.zip) [Post109e#17] Identified other open issues Fujitsu discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2003051](file:///C:\Data\3GPP\Extracts\R2-2003051%20Draft%20CR%20on%20bitmap%20length%20determination%20for%20BFR%20MAC%20CE.docx) Draft CR on bitmap length determination for BFR MAC CE Nokia, Nokia Shanghai Bell, Apple draftCR Rel-16 38.321 16.0.0 NR\_eMIMO-Core

* Noted

[R2-2003052](file:///C:\Data\3GPP\Extracts\R2-2003052%20Draft%20CR%20on%20Corrections%20for%20SCell%20BFR%20procedure.docx) Draft CR on Corrections for SCell BFR procedure Nokia, Nokia Shanghai Bell, Apple draftCR Rel-16 38.321 16.0.0 NR\_eMIMO-Core

* Noted

[R2-2003252](file:///C:\Data\3GPP\Extracts\R2-2003252_Correction%20on%20new%20DL%20MIMO%20MAC%20CE_v2.docx) Correction on new DL MIMO MAC CE Qualcomm Incorporated discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2003253](file:///C:\Data\3GPP\Extracts\R2-2003253_Corrections%20on%20cancellation%20the%20pending%20BFR%20SR_v1.docx) Cancellation the pending BFR SR Qualcomm Incorporated discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2003358](file:///C:\Data\3GPP\Extracts\R2-2003358%20-%20Change%20LCID%20to%20eLCID%20for%20MIMO%20MAC%20CEs.docx) Change LCID to eLCID for MIMO MAC CEs Ericsson CR Rel-16 38.321 16.0.0 0723 - F NR\_eMIMO-Core

* Noted

[R2-2003588](file:///C:\Data\3GPP\Extracts\R2-2003588-%20Considerations%20on%20aborting%20of%20ongoing%20RACH%20triggered%20by%20SR.doc) Remaining issue on aborting of ongoing RACH triggred by SR ZTE, Sanechips discussion Rel-16 NR\_eMIMO-Core

* Noted

[R2-2003618](file:///C:\Data\3GPP\Extracts\R2-2003618.doc) Discussion on open issues on BFR MAC CE Google Inc. discussion Rel-16

* Noted

[R2-2003650](file:///C:\Data\3GPP\Extracts\R2-2003650%20Remaining%20issues%20regarding%20cancellation%20of%20triggered%20BFRs%20for%20SCell.docx) Remaining issues regarding cancellation of triggered BFRs for SCell ASUSTeK discussion Rel-16 38.321 NR\_eMIMO-Core

* Noted

[R2-2003651](file:///C:\Data\3GPP\Extracts\R2-2003651%20Discussion%20on%20completion%20of%20RA%20procedure%20for%20SCell%20beam%20failure%20recovery.docx) Discussion on completion of RA procedure for SCell beam failure recovery ASUSTeK discussion Rel-16 38.321 NR\_eMIMO-Core

* Noted

[R2-2003663](file:///C:\Data\3GPP\Extracts\R2-2003663.docx) Clarification on scheduling request for SCell beam failure recovery Google Inc. draftCR Rel-16 38.321 16.0.0 F NR\_eMIMO-Core

* Noted

[R2-2003795](file:///C:\Data\3GPP\RAN2\Docs\R2-2003795.zip) Summary of proposed corrections (AI 6.16.3) Samsung discussion Rel-16 NR\_eMIMO-Core

* Moved to offline email discussion [101] with the intention to go back online during the web conference call(s)
* [AT109bis-e][101][EMIMO] MAC corrections (Samsung)

Scope: Continue the discussion on MAC corrections, based on [R2-2003795](file:///C:\Data\3GPP\RAN2\Docs\R2-2003795.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 with almost full consensus to discuss in the follow up conference call
    - Set of open issues and proposals to postpone to next meeting

Initial deadline (for companies' feedback): Wednesday 2020-04-22 16:00 UTC

Initial deadline (for rapporteur's summary in R2-2003891): Thursday 2020-04-23 10:00 UTC

Proposed agreements in R2-2003891 indicated for email agreement and not challenged until Thursday 2020-04-23 22:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2003891 Offline discussion 101: eMIMO MAC corrections - first round Samsung discussion Rel-16 NR\_eMIMO-Core

BFR on SpCell

[R2-2002795](file:///C:\Data\3GPP\RAN2\Docs\R2-2002795.zip) Report of [Post109e#17][EMIMO] BFR MAC CE for BFR on SpCell Apple discussion NR\_eMIMO-Core

* Moved to offline email discussion [103] with the intention to go back online during the web conference call(s)
* [AT109bis-e][103][EMIMO] BFR on SpCell (Apple)

Scope: Continue the discussion on BFR MAC CE for BFR on SpCell, based on [R2-2002795](file:///C:\Data\3GPP\Extracts\._R2-2002795_Report%20of%20109e%2317%20BFR%20MAC%20CE%20for%20BFR%20on%20SpCell_Summary_v2.docx)

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 with to discuss in the follow up conference call

Initial deadline (for companies' feedback): Wednesday 2020-04-22 16:00 UTC

Initial deadline (for rapporteur's summary in R2-2003893): Thursday 2020-04-23 10:00 UTC

Proposed agreements in R2-2003893 indicated for email agreement and not challenged until Thursday 2020-04-23 22:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

R2-2003893 Offline discussion 103: BFR on SpCell - first round Apple discussion NR\_eMIMO-Core

[R2-2003034](file:///C:\Data\3GPP\Extracts\R2-2003034_Consideration%20on%20SpCell%20BFR%20MAC%20CE.DOCX) Consideration on SpCell BFR MAC CE LG Electronics Inc. discussion NR\_eMIMO-Core

* Noted

[R2-2003713](file:///C:\Data\3GPP\Extracts\R2-2003713.docx) BFR MAC CE for SpCell Huawei, HiSilicon discussion Rel-16 NR\_eMIMO-Core

* Noted

Timer based BFR MAC CE Transmission

[R2-2002796](file:///C:\Data\3GPP\RAN2\Docs\R2-2002796.zip) Timer based BFR MAC CE Transmission Apple, Nokia, Nokia Shanghai Bell discussion NR\_eMIMO-Core

* to be discussed in offline [104]
* Noted

[R2-2003589](file:///C:\Data\3GPP\Extracts\R2-2003589-%20Discussion%20on%20Beam%20Failure%20Recovery%20on%20SCell.doc) Remaining issues on BFR on SCell ZTE, Sanechips discussion Rel-16 NR\_eMIMO-Core

* to be discussed in offline [104]
* Noted

[R2-2003712](file:///C:\Data\3GPP\Extracts\R2-2003712.docx) Remaining issues on SCell BFR Huawei, HiSilicon discussion Rel-16 NR\_eMIMO-Core

* to be discussed in offline [104]
* Noted
* [AT109bis-e][104][EMIMO] Timer based BFR MAC CE Transmission (Nokia)

Scope: Discuss the proposals for timer based BFR MAC CE Transmission based on [R2-2002796](file:///C:\Data\3GPP\RAN2\Docs\R2-2002796.zip), [R2-2003589](file:///C:\Data\3GPP\Extracts\R2-2003589-%20Discussion%20on%20Beam%20Failure%20Recovery%20on%20SCell.doc) and [R2-2003712](file:///C:\Data\3GPP\Extracts\R2-2003712.docx)

Initial intended outcome: summary of the offline discussion with list of proposals

Initial deadline (for companies' feedback): Thursday 2020-04-23 07:00 UTC

Initial deadline (for rapporteur's summary in R2-2003894): Thursday 2020-04-23 16:00 UTC

R2-2003894 Offline discussion 104: Timer based BFR MAC CE Transmission Nokia discussion NR\_eMIMO-Core

DCI format 1\_2 applicability

[R2-2003345](file:///C:\Data\3GPP\Extracts\R2-2003345%20on%20TCI%20state%20MAC%20CE%20and%20DCI%20format1_2.docx) On DCI format 1\_2 applicability with NR eMIMO Ericsson discussion Rel-16 NR\_eMIMO-Core

## 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-](file:///C:\Data\3GPP\archive\RAN\RAN%2384\Tdocs\RP-191563.zip)200122 SR; RP-200441) Documents in this agenda item will be handled in a break out session.

Tdoc Limitation: 2 tdocs

It's possible to contribute to all sub agenda items, to address the remaining open issues.

### 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.

[R2-2002502](file:///C:\Data\3GPP\Extracts\R2-2002502_C1-201027.doc) Reply LS on sending CAG ID (C1-201027; contact: Ericsson) CT1 LS in Rel-16 Vertical\_LAN To:SA, SA2 Cc:RAN2, RAN3, SA3

* Noted

### 6.18.2 RRC open issues

Including output of email discussion [Post109e#18][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/DraftCRs on PRN-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 (gyorgy.wolfner@nokia.com).

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

* …
* [AT109bis-e][106][PRN] RRC CR (Nokia)

Scope: Update the 38.331 CR, based on the progress on the remaining open issues

Intended outcome: In-principle agreed 38.331 CR

Deadline for companies' feedback: Wednesday 2020-04-29 10:00 UTC

Deadline for rapporteur's version for agreement: Thursday 2020-04-30 10:00 UTC

[R2-2002659](file:///C:\Data\3GPP\Extracts\R2-2002659-Post109e-18-PRN-OpenIssues.docx) Report from email discussion [Post109e#18][PRN] Remaining open issues Nokia (Rapporteur) discussion Rel-16 NG\_RAN\_PRN-Core

* Discussion on Section 4.1 moved to offline email discussion [105] with the intention to go back online during the web conference call(s)

Issues from R2-2002659 to be discussed:

Open issue 1: Emergency sessions from CAG-only cell with non-NPN-capable Rel-16 UEs. Whether a Non-NPN-capable Rel-16 UE treats a cell with cellReservedForOtherUse=true as acceptable cell or as barred cell.

Rapporteur suggestion: Before making the decision that non-CAG-capable Rel-16 UEs cannot ignore the “cellReservedForOtherUse=true” to perform emergency session from a NPN-only cell based on the majority’s view, it should be discussed whether the concerns and comments in section 3.1 are not so strong that would require to select another approach.

Open issue 6: The UE behaviour in SNPN AM in licensed bands is FFS when the highest ranked cell or best cell according to absolute priority reselection rules is a cell which is not suitable due to not broadcasting the registered or selected SNPN ID

Proposal attempted in the email discussion: "For a UE in SNPN AM, if the highest ranked cell or best cell according to absolute priority reselection rules is a cell which is not suitable due to not broadcasting the registered or selected SNPN ID, the UE shall not consider this cell as candidate for cell reselection but should continue to consider other cells on the same frequency for cell reselection."

Rapporteur suggestion: Before making the decision to follow the PLMN approach for NPNs based on the majority’s view in licensed bands (“If this cell belongs to a PLMN which is not indicated as being equivalent to the registered PLMN, the UE shall not consider this cell and, for operation in licensed spectrum, other cells on the same frequency as candidates for reselection for a maximum of 300 seconds.”), it should be discussed whether the concerns and comments in section 3.6 are not so strong that would require to select another approach.

Open issue 8: The UE behaviour in unlicensed band is FFS when the cell belongs to the correct operator but it’s not a CAG member cell.

Proposal attempted in the email discussion (but challenged in [105]): "In unlicensed band the case when the highest ranked cell or best cell is not suitable due to belonging to the correct operator, but it is not a CAG member cell is handled in the same way as the cell does not belong to the correct operator (i.e. the UE may search for the next strongest cell if the highest ranked cell is not suitable). The relevant changes are to be captured in 38.304."

Alternative proposal: "CAG UE does not consider other cells on an unlicensed frequency if the strongest cell belongs to the correct network (i.e. the broadcasted PLMN ID matches the selected/registered PLMN ID or an equivalent PLMN ID)".

Open issue 9: FFS whether PCI values for CAGs are signalled per PLMN per frequency or no new ASN.1 IEs are introduced in Rel-16 for signalling of PCI values for CAGs.

Possible options:

1. Signal PCI range(s) for all CAGs. Number of ranges FFS.

2. Signal PCI range(s) per PLMN per frequency. Number of ranges FFS.

3. Signal PCI range(s) per CAG ID per frequency. Number of ranges FFS.

4. CAG PCI range is introduced as a list of blacklisted/whitelisted cells (no changes required to ASN.1 and NR-U CRs are the baseline).

Rapporteur suggestion: Focus the discussion about PCI value signalling for CAG IDs on the selection between Option 2 (Signal PCI range(s) per PLMN per frequency) and Option 4 (using the existing white- and blacklists without ASN.1 change).

(If we conclude how to indicate PCI ranges, we may attempt to discuss other related aspects, eg. the PCI validity time)

Open issue 11: It is FFS if all Rel-16 are required to be able to report the npn-IdentityInfoList

Possible options:

Option A: Reporting about the npn-IdentityInfoList is mandatory for all Rel-16 UEs

Option B: Reporting about the npn-IdentityInfoList is mandatory for all NPN-capable UEs, but optional for non-NPN capable UEs (separate capability indication)

Option C: Reporting about the npn-IdentityInfoList is mandatory for all NPN-capable UEs, and not supported by non-NPN capable UEs

Rapporteur suggestion: Before selecting Option C (Reporting about the npn-IdentityInfoList is mandatory for all NPN-capable UEs, and not supported by non-NPN capable UEs), it should be discussed whether the concerns and comments in section 3.11 are not so strong that some of the options should be excluded.

Open issue 16: Views on UE NPN feature support and necessary capabilities: is AS level capability indication needed for NPN support

Rapporteur suggestion: Discuss the need for NPN capability indication after the decision on issue 11.

* [AT109bis-e][105][PRN] Open issues (Nokia)

Scope: Continue the discussion on PRN open issues, based on [R2-2002659](file:///C:\Data\3GPP\Extracts\R2-2002659-Post109e-18-PRN-OpenIssues.docx)

Initial intended outcome: Set of proposals with full consensus agreeable via email, based on the list in Section 4.1 of [R2-2002659](file:///C:\Data\3GPP\Extracts\R2-2002659-Post109e-18-PRN-OpenIssues.docx) (final list to be reflected in [R2-2003895](file:///C:\Data\3GPP\RAN2\Inbox\R2-2003895.zip))

Initial intermediate deadline (for companies' feedback): Tuesday 2020-04-21 09:00 UTC

Proposals in Section 4.1 of [R2-2002659](file:///C:\Data\3GPP\Extracts\R2-2002659-Post109e-18-PRN-OpenIssues.docx) not challenged until Tuesday 2020-04-21 09:00 UTC will be declared as agreed by the session chair. For the other ones, the discussion will continue online.

[R2-2003895](file:///C:\Data\3GPP\RAN2\Inbox\R2-2003895.zip) Offline discussion 105: PRN open issues - first round Nokia (Rapporteur) discussion Rel-16 NG\_RAN\_PRN-Core

* All proposals apart from Proposal 8 from R2-2002659 are agreed via email

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

1. (Proposal 4 from R2-2002659): Remove the Editor’s Note: “It is FFS whether the above needs to capture the condition that the cell is “not reserved for operator use for UEs not belonging to AC 11 or 15” from Table 4.2-1 of 38.304.

2. (Proposal 7 from R2-2002659): The PRN rapporteur of 38.304 will create a documentation proposal for the following agreement: “For unlicensed spectrum and for a UE with non-empty allowed CAG list, if the highest ranked cell or best cell according to absolute priority reselection rules is a cell which is not suitable due to not broadcasting the selected/registered/equivalent PLMN, the UE with no empty allowed CAG list shall behave according to NR-U agreement.” as a part of the running CR.

3. (Proposal 13 from R2-2002659): Follow the CT4 agreement on NID size in RRC specification. To be captured into ASN.1 review file as RIL comment (by the rapporteur).

4. (Proposal 14 from R2-2002659): TAC is “mandatory” within NPN-IdentityInfoList. To be captured into ASN.1 review file as RIL comment (by the rapporteur).

5. (Proposal 15 from R2-2002659): Use 48 octets (Option C) as the maximum size of HRNNs. To be captured into ASN.1 review file as RIL comment (by the rapporteur).

6. (Proposal 18 from R2-2002659): Follow the NR-U agreement in unlicensed on the use of the IFRI flag (agreement is to be captured in TS 38.304):

- For the SNPN case, UE only follows the IFRI in MIB of a barred cell if the cell belongs to a SNPN which matches the registered SNPN of the UE. Otherwise the UE may select other cell in the same frequency

- For the CAG (PNI-NPN) case, there is no change to the existing NR-U behaviour: UE only follows the IFRI in MIB of a barred cell if the cell belongs to a registered/selected (e)PLMN. Otherwise the UE may select other cell in the same frequency.

The proposals in the following papers are basically covered by the discussion in [Post109e#18] and if needed can be further discussed as part of the followup offline discussion(s).

[R2-2002666](file:///C:\Data\3GPP\Extracts\R2-2002666_PCI%20range_v2.docx) Blacklist/whitelist for PCI range signaling and stage-3 details Sony discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2002745](file:///C:\Data\3GPP\Extracts\R2-2002745.docx) Further consideration on the PCI range ZTE Corporation, Sanechips discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2002746](file:///C:\Data\3GPP\Extracts\R2-2002746.docx) Further consideration on the cell reselection for the licensed spectrum ZTE Corporation, Sanechips discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2003319](file:///C:\Data\3GPP\Extracts\R2-2003319-MobilityIssue_v00.docx) Cell reselection restriction for SNPN and CAG Intel Corporation discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2003501](file:///C:\Data\3GPP\Extracts\R2-2003501%20Remaining%20Issues%20the%20PCI%20Range.docx) Remaining Issues the PCI Range CMCC discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2003604](file:///C:\Data\3GPP\Extracts\R2-2003604%20Emergency%20sessions%20on%20CAG-only%20cell%20for%20non-CAG%20capable%20%20R16%20UEs.docx) Emergency sessions on CAG-only cell for non-CAG capable R16 UEs LG Electronics France discussion NG\_RAN\_PRN-Core

* Noted

[R2-2003606](file:///C:\Data\3GPP\Extracts\R2-2003606_On%20SNPN%20Cell%20Reselection%20in%20Licensed%20Bands.docx) On SNPN Cell Reselection in Licensed Bands NEC Telecom MODUS Ltd. discussion

* Noted

The proposals in the following papers are covered by [Post109e#18] and/or feedback from other groups is needed first.

[R2-2003507](file:///C:\Data\3GPP\Extracts\R2-2003507%20Remaining%20issues%20on%20access%20and%20mobility%20control%20for%20NPN.docx) Remaining issues on access and mobility control for NPN CMCC discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

Other (only addressed if time allows)

[R2-2003529](file:///C:\Data\3GPP\Extracts\R2-2003529%20Discussion%20on%20ANR%20for%20NPN.docx) Discussion on the ANR for NPN vivo discussion

### 6.18.3 Other open issues

Including non-RRC issues not addressed in [Post109e#18].

38.304 CR

[R2-2003421](file:///C:\Data\3GPP\Extracts\R2-2003421.docx) Running CR to TS 38.304 for PRN Qualcomm Incorporated CR Rel-16 38.304 16.0.0 0156 - F NG\_RAN\_PRN

* ...
* [AT109bis-e][107][PRN] 38.304 CR (Qualcomm)

Scope: Update the 38.304 CR, based on the progress on the remaining open issues

Intended outcome: In-principle agreed 38.304 CR

Deadline for companies' feedback: Wednesday 2020-04-29 10:00 UTC

Deadline for rapporteur's version for agreement: Thursday 2020-04-30 10:00 UTC

The proposals in the following papers are basically covered by the discussion in [Post109e#18] and if needed can be further discussed as part of the followup offline discussion(s).

[R2-2002593](file:///C:\Data\3GPP\Extracts\R2-2002593%20-%20Cell%20selection%20and%20reselection%20for%20NPN.docx) Cell selection and reselection for NPN Ericsson discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2002734](file:///C:\Data\3GPP\Extracts\R2-2002734%20Discussion%20on%20HRNNs%20Reporting%20Issue.docx) Discussion on HRNNs Reporting Issue CATT discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2002736](file:///C:\Data\3GPP\Extracts\R2-2002736%20Discussion%20on%20UE%20Behavior%20in%20Licensed%20Band%20with%20Non-CAG%20Member%20Cell.docx) Discussion on UE Behavior in Licensed Band with Non-CAG Member Cell CATT discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2003261](file:///C:\Data\3GPP\Extracts\R2-2003261%20Remaining%20issues%20discussion%20on%20NPN.doc) Remaining issues discussion on NPN China Telecom discussion Rel-16

* Noted

[R2-2003394](file:///C:\Data\3GPP\Extracts\R2-2003394%20Emergency%20Call%20Support%20in%20CAG-only%20cells.doc) Emergency call support on CAG-only cells Qualcomm Incorporated discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2003475](file:///C:\Data\3GPP\Extracts\R2-2003475%20Discussion%20on%20mechanisms%20for%20the%20network%20to%20control%20manual%20NPN%20selection.doc) Discussion on mechanisms for the network to control manual NPN selection Huawei, HiSilicon, China Telecom discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2003558](file:///C:\Data\3GPP\Extracts\R2-2003558_PRN_38304_Issues.docx) Some Issues related to 38.304 Samsung R&D Institute India discussion

* Noted

[R2-2003605](file:///C:\Data\3GPP\Extracts\R2-2003605%20Intra-frequency%20reselection%20upon%20selecting%20non-suitable%20SNPN%20cell.docx) Intra-frequency reselection upon selecting non-suitable SNPN cell LG Electronics France discussion NG\_RAN\_PRN-Core

* Noted

The proposals in the following papers are covered by [Post109e#18] and/or feedback from other groups is needed first.

[R2-2002594](file:///C:\Data\3GPP\Extracts\R2-2002594%20-%20Manual%20selection%20of%20PNI%20NPN.docx) Manual selection of PNI NPNs when CAG is broadcast Ericsson discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2003259](file:///C:\Data\3GPP\Extracts\R2-2003259%20Consideration%20of%20HRNN%20and%20UAC%20in%20PRN.doc) Consideration of HRNN and UAC in PRN China Telecom discussion Rel-16

* Noted

[R2-2003474](file:///C:\Data\3GPP\Extracts\R2-2003474%20Discussion%20on%20manual%20CAG%20selection.doc) Discussion on manual CAG selection Huawei, HiSilicon, China Telecom discussion Rel-16 NG\_RAN\_PRN-Core

* Noted

[R2-2003608](file:///C:\Data\3GPP\Extracts\R2-2003608_PRN_Manual_CAG_Selection.docx) Remaining issues related to Manual CAG Selection Samsung R&D Institute India discussion

* Noted

## Summary

TBD