**3GPP TSG-RAN WG2 #117-e meeting R2-220xxxx**

**Electronic meeting, 21st February – 3rd March 2022**

**Agenda item: 8.24.0**

**Source: Xiaomi (Rapporteur)**

**Title: Report of [AT117-e][052][NR17] IPA CRs (Xiaomi)**

**Document for: Discussion and Decision**

# 1 Introduction

This document summarizes the following email discussion:

* [AT117-e][052][NR17] IPA CRs (Xiaomi)

 Scope: Treat R2-2202765, R2-2202766, R2-2203714, R2-2203715, R2-2203123, R2-2203124, R2-2202151, R2-2203138, R2-2203139, R2-2203322, R2-2203323. Check the CRs (incl cover sheet) determine revisions if needed. Agree CRs (submitted or revisions).

 Intended outcome: Report, Agreed CRs, Endorsed UE cap CRs (or draft CRs) (38306, 38331) for Merge.

 Deadline: Schedule 1

Discussions with Deadline **Schedule 1**:

A **first round** with **Deadline for comments W1 Thur Feb 24th 1200 UTC** to settle scope what is agreeable etc.

A Final round with **Final deadline W2 Wed March 2nd 1200 UTC** to settle details / agree CRs etc.

# 2 Contact Points

Respondents to the email discussion are kindly asked to fill in the following table.

|  |  |  |
| --- | --- | --- |
| Company | Name | Email Address |
| Xiaomi (Rapporteur) | Yumin Wu | wuyumin@xiaomi.com |
| Lenovo | Hyung-Nam Choi | hchoi5@lenovo.com |
| ZTE | Wenting Li | li.wenting@zte.com.cn |
| Huawei, HiSilicon | Tong Sha | shatong3@hisilicon.com |
| Ericsson | Antonino Orsino | antonino.orsino@ericsson.com |
| Apple | Naveen Palle | naveen.palle@apple.com |
| SoftBank | Katsunari Uemura | katsunari.uemura@g.softbank.co.jp |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# 3 Discussion of the first round

## 3.1 In-Principle Agreed CRs

The CRs already agreed in-principle at the last meeting are:

NR FR2 FWA Bn257 Bn258

R2-2202765 Introducing UE capability for power class 5 for FR2 FWA SoftBank, Huawei, HiSilicon, Nokia CR Rel-17 38.306 16.7.0 0687 - C NR\_FR2\_FWA\_Bn257\_Bn258-Core

R2-2202766 Introducing UE capability for power class 5 for FR2 FWA SoftBank, Huawei, HiSilicon, Nokia CR Rel-17 38.331 16.7.0 2905 - C NR\_FR2\_FWA\_Bn257\_Bn258-Core

NR RF FR1 enh - Max MIMO layers for SUL

R2-2203714 Draft CR: Remove the maximum number of MIMO layers configuration restrictions for SUL CMCC, Huawei, HiSilicon, CATT CR Rel-17 38.306 16.7.0 0532 1 C NR\_RF\_FR1\_enh

Chair comment: the title should not use the wording Draft CR.

R2-2203715 Remove the maximum number of MIMO layers configuration restrictions for SUL CMCC, Huawei, HiSilicon, CATT CR Rel-17 38.331 16.7.0 2465 1 C NR\_RF\_FR1\_enh

BCS4 BCS5

R2-2203123 Introduction of BCS4 and BCS5 Xiaomi Communications CR Rel-17 38.331 16.7.0 2871 2 B NR\_BCS4-Core R2-2201834

R2-2203124 Introduction of BCS4 and BCS5 Xiaomi Communications CR Rel-17 38.306 16.7.0 0669 2 B NR\_BCS4-Core R2-2201835

R2-2202151 Reply LS on NR CA capability for BCS5 (R4-2201295; contact: Xiaomi) RAN4 LS in Rel-17 To:RAN2

Chair Comment: I assume that this LS doesn’t imply any change to the CRs. Suggest Noted.

NR SAR PC2 Inter-band CA and SUL

R2-2203138 CR to TS 38.306 on UE capability for UE power class 2 NR inter-band CA and SUL configurations China Telecom, Huawei, HiSilicon CR Rel-17 38.306 16.7.0 0651 2 B NR\_SAR\_PC2\_interB\_SUL\_2BUL R2-2111499

R2-2203139 CR to TS 38.331 on UE capability for UE power class 2 NR inter-band CA and SUL configurations China Telecom, Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2829 1 B NR\_SAR\_PC2\_interB\_SUL\_2BUL R2-2110426

DL 1024QAM

Chair Comment: the 38331 CR was previously endorsed/agreed-in-principle, the 38300 CR is new, they should be treated together

R2-2203322 Introduction of DL 1024QAM for NR Ericsson, Nokia, Nokia Shanghai Bell CR Rel-17 38.331 16.7.0 2940 - B NR\_DL1024QAM\_FR1-Core

R2-2203323 Introduction of DL 1024QAM for NR Ericsson, Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0420 - B NR\_DL1024QAM\_FR1-Core

**Question 1: Does any of these CRs require some updates?**

|  |
| --- |
| Answers to Question 1 |
| Company | Yes/No | Which CR and what changes |
| Lenovo | Yes | **NR FR2 FWA Bn257 Bn258, 38.331 CR in R2-2202766:*** In Table C-1 CR# and rev# need to be added.

**NR RF FR1 enh - Max MIMO layers for SUL:*** 38.306 CR in R2-2203714:
	+ Cover page: remove “Draft CR:” from the title; add “R2” in “Source to TSG”; in “Other specs affected” add “TS 38.331 CR2465”.
* 38.331 CR in R2-2203715:
	+ Cover page: remove “Draft CR:” from the title; add “R2” in “Source to TSG”; in “Other specs affected” add “TS 38.306 CR0532”.

**BCS4 BCS5:*** 38.331 CR in R2-2203123:
	+ Cover page: wrong spec version "16.6.0"; in “Other specs affected” the CR# for the 38.306 CR is missing.
	+ In Table C-1: CR# needs to be added and rev# needs to be corrected.
* 38.306 CR in R2-2203124:
	+ Cover page: wrong spec version "16.6.0"; in “Other specs affected” the CR# for the 38.331 CR is missing.

**NR SAR PC2 Inter-band CA and SUL, for both R2-2203138 and R2-2203139:*** Cover page: "Source to TSG" should say "R2"; Impact analysis is not needed.

**DL 1024QAM, 38.331 CR in R2-2203322:*** Cover page: the statement in “Other comments” saying: “Please note that capabilities aspects have been left out from this CR and will be addressed only once the capabilites are discussed in RAN1 and RAN4.” Can be removed. Reason: The capability pdsch-1024QAM-FR1-r17 has been already added in the mega capability CRs.
* cqi-Table: the suffix of new value “table4-r17” should be “-v17xy”.
* Description of mcs-Table: word “fields” should be in singular “field”.
 |
| ZTE | Yes | We agree with Lenovo’s comments, we also notice that some CRs are submitted with new CR numbers and the others are submitted with the old one as an revised version. We just want to confirm which way is more recommended.[Xiaomi] After some offline discussion with the Juha, it seems that once a new CR number has been allocated, it is better to use a new CR number. However it is highly recommended to use the same/old CR number for revision. We can add such conventions as some observations for future CRs. |
| Huawei, HiSilicon | Yes | We suggest the minor change in 38.300 can be merged into Rapp CR.[Xiaomi] It seems we do not have misc CR for 38.300 in this meeting. It is probably ok to have a separate 38.300 CR for this meeting. |
| Ericsson | See comments for DL1024QAM. | **DL 1024QAM, 38.331 CR in R2-2203322:*** We are generally fine with most of the comments from Lenovo and these will be reflected in the next version of the CR
* Regarding the suffix of the new cqi-Table, we don’t think that “-v17xy” is the right way to go as the original field cqi-Table is not critically extended and thus the new field is not going to replace any existing value of the original field. Please, check section A.4.3.3 of TS 38.331.

**DL 1024QAM, 38.331 CR in R2-2203323:*** Regarding the comment on including the changes in a Rapp CR, we want to highlight that this CR is to introduce a new functionality (cat. B) and for traceability of such functionality it would be good to keep this as a standalone CR. Also, we are not sure what is meant with Rapp CR, as Rel-17 specs are not created yet and there is no misc CR as such maintained by the 38.300 rapporteur.
 |
| Apple | Yes | Echo similar views as Lenovo. |
| SoftBank | Yes | Agree with Lenovo’s comments.For BCS4 BCS5 and DL1024QAM, the latest version of cover sheet should be used. |
| Xiaomi | Yes | We agree with Lenovo’s comments.Regarding the comments from SoftBank, we think that we can use the latest version of cover sheet for the CRS of BCS4 BCS5 and DL1024QAM. |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

|  |
| --- |
| **Summary**: After the first round discussion, companies are all fine with the changed proposed by Lenovo, except for the suffix of the new cqi-Table as the original field cqi-Table is not critically extended. Regarding the new CR number issue raised by ZTE, we received some guidance from Juha that once a new CR number has been allocated, it is better to use a new CR number. However it is highly recommended to use the same/old CR number for revision. Regarding Huawei’s comment on merging the minor change of 38.300 to a Rapp CR, it seems that we would have to use a separate 38.300 CR as there is no stage-2 Rapp CR in this meeting. For BCS4 BCS5 and DL1024QAM CRs, the latest version of cover sheet should be used. |

**Proposal 1: For NR FR2 FWA Bn257 Bn258 CRs, the following updates are required:**

* **For 38.331 CR in R2-2202766:**
	+ **In Table C-1 CR# and rev# need to be added.**

**Proposal 2: For NR RF FR1 enh - Max MIMO layers for SUL CRs, the following updates are required:**

* **For 38.306 CR in R2-2203714:**
	+ **Cover page: remove “Draft CR:” from the title; add “R2” in “Source to TSG”; in “Other specs affected” add “TS 38.331 CR2465”.**
* **For 38.331 CR in R2-2203715:**
	+ **Cover page: remove “Draft CR:” from the title; add “R2” in “Source to TSG”; in “Other specs affected” add “TS 38.306 CR0532”.**

**Proposal 3: For BCS4 BCS5 CRs, the following updates are required:**

* **For 38.331 CR in R2-2203123:**
	+ **Cover page: wrong spec version "16.6.0"; in “Other specs affected” the CR# for the 38.306 CR is missing.**
	+ **In Table C-1: CR# needs to be added and rev# needs to be corrected.**
	+ **Use the latest version of cover sheet**
* **For 38.306 CR in R2-2203124:**
	+ **Cover page: wrong spec version "16.6.0"; in “Other specs affected” the CR# for the 38.331 CR is missing.**
	+ **Use the latest version of cover sheet**

**Proposal 4: For NR SAR PC2 Inter-band CA and SUL CRs, the following updates are required:**

* **For 38.306 CR in R2-2203138:**
	+ **Cover page: "Source to TSG" should say "R2"; Impact analysis is not needed.**
* **For 38.331 CR in R2-2203139:**
	+ **Cover page: "Source to TSG" should say "R2"; Impact analysis is not needed.**

**Proposal 5: For DL 1024QAM CRs, the following updates are required:**

* **For 38.331 CR in R2-2203322:**
	+ **Cover page: the statement in “Other comments” saying: “Please note that capabilities aspects have been left out from this CR and will be addressed only once the capabilites are discussed in RAN1 and RAN4.” Can be removed. Reason: The capability pdsch-1024QAM-FR1-r17 has been already added in the mega capability CRs.**
	+ **Description of mcs-Table: word “fields” should be in singular “field”.**
	+ **Use the latest version of cover sheet**
* **For 38.300 CR in R2-2203323:**
	+ **Use the latest version of cover sheet**

**Proposal 6: The 38.306 CR in R2-2202765 for NR FR2 FWA Bn257 Bn258 is agreed.**

# 4 Discussion of the final round

TBD.

# 5 Conclusion

TBD.