3GPP TSG-RAN WG2 #114-e electronic R2-210xxxx

Electronic Meeting, 19th – 27th May, 2021

Agenda Item: 6.1.4.0

Source: Intel Corporation

Title: [AT114-e][020][NR16] Summary of Control Plane IPA CRs and UE caps Misc Corrections (Intel)

Document for: Discussion, Decision

# 1 Introduction

This contribution summarizes the following discussion:

* [AT114-e][020][NR16] Control Plane IPA CRs and UE caps Misc Corrections (Intel)

 Scope: Treat R2-2104887, R2-2104890, R2-2104788, R2-2104839, R2-2104904, R2-2105104, R2-2105105, R2-2105144, R2-2105184, R2-2105372, R2-2105393, R2-2105417, R2-2105422, R2-2105527, R2-2105602, R2-2105605, R2-2105624, R2-2105732, R2-2106207, R2-2106208, R2-2106284, R2-2106448,

 Phase 1, For IPA CRs Confirm CRs or identify needed change. Other CRs determine agreeable parts, Phase 2, for IPA CR modifications, and new agreeable parts Work on CRs.

 Intended outcome: Report and Agreed CRs.

 Deadline:

  Initial deadline for companies’ comments (Phase 1): **Friday May 21 1000 UTC**

  Deadline for CR finalization (Phase 2): **Wednesday May 26 1200 UTC**

The following documents are treated in this discussion:

[R2-2104887](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2104887.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2104887.zip) Miscellaneous corrections to Rel-16 UE capabilities Intel Corporation CR Rel-16 38.306 16.4.0 0541 2 F LTE\_NR\_DC\_CA\_enh-Core, NR\_unlic-Core, NR\_L1enh\_URLLC-Core, NR\_pos-Core, TEI16 R2-2104553

[R2-2104890](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2104890.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2104890.zip) UE Feature list for NR Rel-16 Intel Corporation CR Rel-16 38.822 15.0.1 0004 2 B TEI16 R2-2104554

[R2-2104788](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2104788.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2104788.zip) Corrections to UE action upon SIB1 reception Samsung Electronics Co., Ltd CR Rel-16 38.331 16.4.1 2475 2 F NR\_pos-Core, 5G\_V2X\_NRSL-Core R2-2104568

Moved Here

[R2-2104839](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2104839.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2104839.zip) Correction on Capability of two PUCCH transmission OPPO CR Rel-16 38.306 16.4.0 0542 2 F NR\_L1enh\_URLLC-Core R2-2104569

[R2-2104904](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2104904.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2104904.zip) Correction on repetition for L1-SINR vivo CR Rel-16 38.331 16.4.1 2586 - F NR\_eMIMO-Core

[R2-2105104](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105104.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105104.zip) SSB-ToMeasure for NR-U Apple, Fujitsu, xiaomi, LG Electronics CR Rel-16 38.331 16.4.1 2600 - F NR\_unlic-Core

[R2-2105105](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105105.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105105.zip) Inter-RAT RRM measurement on NR-U Apple, Fujitsu, xiaomi, LG Electronics CR Rel-16 36.331 16.4.0 4654 - F NR\_unlic-Core

[R2-2105144](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105144.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105144.zip) Correction on T321 for autonomous gap based E-UTRAN CGI reporting ZTE Corporation, Sanechips CR Rel-16 38.331 16.4.1 2494 1 F NR\_RRM\_enh-Core R2-2103030

[R2-2105184](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105184.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105184.zip) Correction on failureType in FailureReportSCG-EUTRA and scgFailureInfoEUTRA Huawei, HiSilicon, Ericsson CR Rel-16 38.331 16.4.1 2540 2 F NR\_newRAT-Core, NR\_unlic-Core R2-2104543

[R2-2105372](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105372.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105372.zip) Correction on freqMonitorLocations ASUSTeK CR Rel-16 38.331 16.4.1 2508 1 F NR\_unlic-Core R2-2103449

[R2-2105393](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105393.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105393.zip) Correction on description of ssb-PositionsInBurst in ServingCellConfigCommonSIB Fujitsu CR Rel-16 38.331 16.4.1 2505 2 F NR\_unlic-Core R2-2104605

[R2-2105417](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105417.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105417.zip) Correction on description of subCarrierSpacing in BWP Fujitsu,Samsung CR Rel-16 38.331 16.4.1 2561 2 F NR\_unlic-Core R2-2104604

[R2-2105422](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105422.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105422.zip) Correction on RNA configuration for UE in SNPN access mode Samsung Electronics Co., Ltd CR Rel-16 38.331 16.4.1 2626 - F NG\_RAN\_PRN-Core

[R2-2105527](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105527.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105527.zip) CR on the missing definition of Available SNPN in TS 38.304 Huawei, HiSilicon CR Rel-16 38.304 16.4.0 0206 1 F NG\_RAN\_PRN-Core R2-2103168

[R2-2105602](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105602.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105602.zip) IAB LTE changes Samsung Electronics GmbH CR Rel-16 36.331 16.4.0 4649 1 F NR\_IAB-Core R2-2104597

[R2-2105605](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105605.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105605.zip) Clarification on the initiation of RNA update Huawei, HiSilicon CR Rel-16 38.331 16.4.1 2581 1 F NR\_newRAT-Core, TEI16 R2-2104621

[R2-2105624](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105624.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105624.zip) Clarification on the initiation of RNA update Huawei, HiSilicon CR Rel-16 36.331 16.4.0 4651 1 F LTE\_5GCN\_connect-Core R2-2104620

[R2-2105732](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105732.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105732.zip) Clarifications on the TRP definition for positioning Xiaomi Communications CR Rel-17 38.331 16.4.1 2644 - F NR\_pos-Core

[R2-2106207](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2106207.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2106207.zip) Miscellaenous corrections on BH RLC channel management for IAB-MT Huawei, HiSilicon CR Rel-16 38.331 16.4.1 2557 2 F NR\_IAB-Core R2-2104562

[R2-2106208](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2106208.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2106208.zip) Miscellaneous corrections on F1 over LTE for IAB Huawei, HiSilicon, Samsung CR Rel-16 36.331 16.4.0 4633 2 F NR\_IAB-Core R2-2104561

[R2-2106284](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2106284.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2106284.zip) Correction on releasing referenceTimePreferenceReporting and sl-AssistanceConfigNR Google Inc. CR Rel-16 38.331 16.4.1 2562 1 F 5G\_V2X\_NRSL-Core, NR\_IIOT-Core R2-2104247

[R2-2106448](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2106448.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2106448.zip) CR on the configuration restriction on DCI format 0\_2/1\_2 for unlicensed band (Option 1) OPPO, Samsung, Xiaomi, ZTE, Apple, Intel CR Rel-16 38.331 16.4.1 2502 1 F NR\_IIOT-Core, NR\_unlic-Core R2-2103209 Late

Contact person(s) for each participating company:

|  |  |
| --- | --- |
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# 2 Discussion

## 2.1 Phase 1: Intended to determine agreeable parts

In this section, it is for the co-sourcing companies to comment on any change they have made to their IPA CRs in Section 1 and also for other companies to comment on any changes needed on the IPA CRs. For IPA CRs that are not mentioned by any companies, they will be assumed to be agreeable.

**Q1 Cosourcing companies comment on any changes have been made on the IPA CRs?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Which CRs** | **What changes have been made?** |
| Intel | [R2-2104890](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2104890.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2104890.zip) | The CR contains new changes based on the latest updated R1 and R4 feature list. This CR will be included in email disc [023] for further review. |
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**Q2 Do other companies have any comments on the IPA CRs in Section 1 and propose any changes?**

|  |  |  |
| --- | --- | --- |
| **Company** | **Which CRs** | **What changes are required?** |
| Intel | [R2-2105732](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105732.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105732.zip) | The CR number seems to have changed from 2560 revision 1 to 2644. I think the original CR number should be used and the revision no. should be 2. |
| Intel | [R2-2105104](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105104.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105104.zip) | The previous CR number is 2575. Should keep to this CR no.and update revision no. to 1. |
| Intel | [R2-2105105](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105105.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105105.zip) | The previous CR number is 4648. Should keep to this CR no.and update revision no. to 1. |
| Intel | [R2-2105422](file:///D%3A%5C%5CDocuments%5C%5C3GPP%5C%5Ctsg_ran%5C%5CWG2%5C%5CTSGR2_114-e%5C%5CDocs%5C%5CR2-2105422.zip%22%20%5Co%20%22D%3ADocuments3GPPtsg_ranWG2TSGR2_114-eDocsR2-2105422.zip) | The previous CR number is 2570. Should keep to this CR no.and update revision no. to 1. |
| Lenovo | R2-2104890 | 1. In the filename the TR# should be corrected to 38.822.
2. In 20-12, 20-13, 20-14: typos need to be fixed. Instead of saying „It is optimal for UE to support“ it should say “It is optional …”.
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| Lenovo | R2-2104788 | 1. Cover page: why has been WI code “5G\_V2X\_NRSL-Core” added? Does the CR affect V2XSL?
2. Different broadcast status indication „posSI-BroadcastStatus“ is used for positioning SIBs. This needs to be reflected in the CR as shown below:

“… and, si-BroadcastStatus for the required SIB(s) or *posSI-BroadcastStatus* for the required posSIB(s) is set to notbroadcasting in acquired SIB 1 …” |
| Lenovo | R2-2105105 | Further updates are needed:1. Firstly, we understood that the field description of mediumBitmap should mirror the corresponding description from the NR CR R2-2105104. So, the condition "if the k-th bit is set to 1" seems missing and should be added.
2. Secondly, in the field description of mediumBitmap the field names "ssb-PositionQCL-Common" and “ssb-PositionQCL” need be changed to "ssb-PositionQCL-CommonNR" and "ssb-PositionQCL-NR".
3. Thirdly, in ASN.1 the field name ssb-PositionQCL-r16 in SSB-PositionQCL-CellsToAddNR-r16 (defined in MeasObjectNR IE) needs to be corrected to ssb-PositionQCL-NR-r16 to be aligned with its field description.

Proposed changes are highlighted in color:„Bitmap when maximum number of SS/PBCH blocks per half frame equals to 8 as defined in TS 38.213 [88], clause 4.1. For operation with shared spectrum channel access, if the k-th bit is set to 1, the UE assumes that one or more SS/PBCH blocks within the SMTC measurement durationwith candidate SS/PBCH block indexes corresponding to SS/PBCH block index equal to k – 1 may be transmitted; if the k-th bit is set to 0, the UE assumes that the corresponding SS/PBCH block(s) are not transmitted. The k-th bit is set to 0, where k > ssb-PositionQCL-CommonNR and the number of actually transmitted SS/PBCH blocks is not larger than the number of 1's in the bitmap. If ssb-PositionQCL-NR is configured with a value smaller than ssb-PositionQCL-CommonNR, only the left most K bits (K = ssb-PositionQCL-NR) are applicable for the corresponding cell.“SSB-PositionQCL-CellsToAddNR-r16 ::= SEQUENCE { physCellId-r16 PhysCellIdNR-r15, ssb-PositionQCL-NR-r16 SSB-PositionQCL-RelationNR-r16} |
| Lenovo | R2-2105144 | Cover page issues need to be fixed:1. Wrong Tdoc# R2-2103030.
2. In “Proposed change affects” the RAN box should be unticked as the change affects UE only.
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| Lenovo | R2-2105417 | Cover page issues need to be fixed:1. The interoperability statement looks odd. It is stated that if the UE implements the CR but the network does not, there is inter-operability issue. But this should be further clarified.
2. Furthermore, the “Consequences if not approved” should be updated to reflect the above interoperability issue. Simply saying “The description of subcarrierSpacing in BWP is not correct.” is not sufficient.
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| Nokia | R2-2104788 | We are OK but a editorial change is needed. We see an underscore character in the next TP in the last sentence. |
| MediaTek | R2-2104788 | One more editorial suggestion„SIB 1\_in“ should change to „*SIB1* in“ 1> if the UE is in RRC\_CONNECTED with an active BWP with common search space configured by *searchSpaceSIB1*, and, the UE has not stored a valid version of a SIB or posSIB, in accordance with sub-clause 5.2.2.2.1, of one or several required SIB(s) or posSIB(s) in accordance with sub-clause 5.2.2.1, and, *si-BroadcastStatus* for the required SIB(s) or posSIB(s) is set to notbroadcasting in acquired SIB 1 in current modification period; or |
| Huawei, HiSilicon | R2-2104890 | In several places (e.g. 9. 16-1g),‘ and ’should be changed to ' (see 21.801 H.6: use "straight" quotation marks)4. 11-3d is missing the addition of "in consecutive symbols in the same subslot" from R1-21041205.1.8 16-1g and 16-1g1: a bullet mark is missing in the last added paragraph in the Note column5.3.7, 10-4/5, style of "component" column should not be "justified" |
| Huawei, HiSilicon | R2-2105417 | On Lenovo's comments: there will be not interoperability when UE implement but network doesn’t implement, the UE will still have to follow network implementation on initial DL BWP, so from this perspective, there happens to be no interoperability issue.Then, we are not sure “If the network implements the CR but the UE does not, there is no inter-operability issue.” If there is interoperability issue “If the network implements the CR but the UE does not”, “Consequences if not approved”. should be revised. |
| Huawei, HiSilicon | R2-2105105 | Support Lenovo's comments, the missing parts are due to bad merging |
| Huawei, HiSilicon | R2-2106284 | The interoperability considers that there are issues if the UE implements the CR and not the network, but RAN box is not ticked.Should the RAN box be ticked or should the interopeability be corrected? |
| ZTE | R2-2105602 | The sixth change is technically correct. However, we noticed that the same issue was resolved in the IPA CR R2-2105474 using a different wording for TS 37.340. We think it’s better to keep stage 2 and stage 3 description aligned. Change from R2-2105602:The IE *DedicatedInfoF1c* is used to transfer IAB-DU specific F1-C related information between the network and the IAB-node. The carried information consists of F1AP message encapsulated in SCTP/IP or F1-C related IP packet with or without SCTP encapsulation, see TS 38.472 [105] and TS 36.423 [x]. The RRC layer is transparent for this information.Change from R2-2105474:In EN-DC, the F1-AP message encapsulated in SCTP/IP or F1-C related (SCTP/)IP packet can be transferred between IAB-donor and IAB-node via E-UTRA, if configured by IAB-donor, as specified in TS 38.331 [4]. When both E-UTRA and NR are configured to transfer the F1-AP message encapsulated in SCTP/IP or F1-C related (SCTP/)IP packet, it is up to the IAB implementation when to select the E-UTRA. SRB2 is used for transporting the F1-AP message encapsulated in SCTP/IP or F1-C related (SCTP/)IP packet between IAB-MT and MN [10], and the F1-AP message encapsulated in SCTP/IP or F1-C related (SCTP/)IP packet is transferred as a container via X2-AP between MN and SN, see TS 36.423 [9]. |
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## 2.2 Phase 2: Intended to progress discussion on agreeable parts

- To be updated after discussion on Phase 1 -

# 3 Conclusion

- To be updated after discussion on Phase 1 -