3GPP TSG RAN WG1 #105-e R1-2105864

e-Meeting, May 19 - 27, 2021

**Agenda item: 7.2.10**

**Source: Moderator (Nokia)**

**Title:** **Moderator summary of MR DC-CA pre-meeting preparation phase**

**WI: LTE\_NR\_DC\_CA\_enh-Core**

**Document for: Discussion and Decision**

# 1 Introduction

The following documents have been identified to be addressing topics related to multi-radio dual connectivity and carrier aggregation enhancements work item maintenance.

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| **TDoc** | **Title** | **Source** | **DC-PC** | **X-CC** | **1Tx** | **Unal. CA** | **SRS sw** |
| [R1-2104324](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2104324.zip) | Remaing issues for Rel-16 single uplink Tx | ZTE |  |  | 1Tx |  |  |
| [R1-2104475](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2104475.zip) | Correction for power control of NR-DC | CATT | PC1 |  |  |  |  |
| [R1-2105375](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2105375.zip) | Remaining issues on Rel-16 carrier aggregation | MediaTek Inc. |  |  |  | UA | SRS |
| [R1-2105789](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2105789.zip) | Maintenance for Rel-16 MR-DCCA | Ericsson | PC2 |  |  |  |  |
| [R1-2105863](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2105863.zip) | Removal of FR2-FR2 dual connectivity from Rel-16 | Nokia, Nokia Shanghai Bell | PC2 |  |  |  |  |
| [R1-2105918](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2105918.zip" \t "_parent) | Corrections on CCS with different subcarrier spacings for PDCCH and PDSCH in TS 38.214 | Huawei, HiSilicon |  | XCC |  |  |  |

# 2 Summary of issues addressed in the Tdocs

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| --- | --- | --- | --- |
| **Tag** | **TDocs** | **Issue** | **Proposal for RAN1#105-e handling** |
| 1Tx | [R1-2104324](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2104324.zip) | In the latest RAN2 CR R2-2006349, it has been agreed to use *tdm-PatternConfig2-r16* as the new RRC name for Rel-16 EN-DC single UL Tx. Meanwhile, *tdm-PatternConfig2-r16* refers to the same structure as *tdm-PatternConfig-r15*.  Currently, RRC parameter *subframeAssignment-r15* is used in LTE spec for Rel-15 EN-DC/NE-DC single UL Tx. RRC parameter *subframeAssignment-r16* is used in LTE spec for Rel-16 EN-DC single UL Tx. However, *subframeAssignment-r16* has already been deleted by RAN2 CR R2-2006349. Thus, *subframeAssignment-r16* should be updated to *tdm-PatternConfig2-r16*.  Furthermore, *subframeAssignment-r15*cannot be used to differentiate Rel-15 and Rel-16 single UL Tx anymore since both Rel-15 and Rel-16 will use *subframeAssignment-r15*. Thus, *subframeAssignment-r15*the in LTE spec should be updated to *tdm-PatternConfig-r15* and *tdm-PatternConfigNE-DC-r15*. Note that *tdm-PatternConfig-r15* and *tdm-PatternConfigNE-DC-r15* are for EN-DC and NE-DC, respectively. | Discuss the proposed changes to the LTE 36.212/213 specs |
| PC1 | [R1-2104475](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2104475.zip) | Correct the order of power determination for UL transmissions in MCG and SCG of NR-DC scenario. | Discuss the proposed changes and if agreed introduce them together with another change to 38.213 or include in the editor’s alignment CR |
| UA | [R1-2105375](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2105375.zip) | Formula correction for aperiodic CSI-RS transmission and CSI reference resource definition  Ambiguity of text “in the same slot” in 38.214  The timing relation between PDSCH/ACSI-RS and its scheduling/triggering DCI | Discuss the proposed changes to TS38.214 |
| SRS | [R1-2105375](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2105375.zip) | **Proposal 1:** RAN1 to clarify whether Type 3 PH report is required for an SRS-only SCell.  **Proposal 2:** RAN1 to clarify whether a “PCell with an SRS-only SCell” case is counted as UL CA and discuss the potential spec impact. | Not clear how the issue relates to Rel-16 MR-DC WI |
| PC2 | [R1-2105789](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2105789.zip)  [R1-2105863](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2105863.zip) | Related to the p-NR-FR2 support in RAN4 | Take up after RAN4 decision made |
| XCC | [R1-2105918](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_105-e/Docs/R1-2105918.zip) | The notation of subcarrier spacing for PDSCH in TS38.214 subclause 5.5 is written as µPDCCH that has been used as the subcarrier spacing for PDCCH scheduling the PDSCH, which is an obvious error. | Discuss the proposed change and if agreed take it together with another change to 38.214 or incluse in the editor’s alignment CR |

**Moderator proposals:**

* **1Tx:** Discuss the changes proposed in R1-2104324 to LTE 36.212/213
* **PC1:** Discuss the proposed changes in R1-2104475 and if agreed, introduce them together with another change to 38.213, or include in the editor’s alignment CR
* **PC2:** Postpone the discussion wrt. the proposals in R1-2105789 and R1-2105863 until after RAN4 has conclude their discussion on p-NR-FR2
* **UA:** Discuss the proposed changes in R1-2105375 to TS38.214
* **XCC**: Discuss the proposed change and if agreed take it together with another change to 38.214 or include in the editor’s alignment CR
* **SRS:** Defer to AI 7.1The proposals seem not related to the Rel-16 MR-DC WI, but originate from the Rel-15. There seems to be a MediaTek 5389 on the same submitted to AI7.1 already.

Please provide company comments to the table below

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| --- | --- |
| **Company** | **Comment** |
| MTK | For SRS part, if it is confirmed to be treated in AI 7.1, then we are fine to defer it (AI 7.1 seems to be in prep phase also). If not, we think it can be treated here. For other parts, we are fine with FL’s proposals. |
| Intel | We are supportive to moderator’s proposal |
| ZTE | We support the moderator’s proposal. |
| vivo | We are generally fine with Moderator’s proposal. Regarding PC1 and XCC, they seem to be editorial and can be directly handled by alignment CRs. |
| Huawei, HiSilicon | Y in general, except a minor for XCC related proposal: “if agreed take it together with another change” is fine although it seems to be conditioned that another change will be agreed. Perhaps at this stage we can simply decide to discuss or not for the proposed issues (not specific to XCC actually). |

# 3 Conclusion

The following conclusions are drawn based on the RAN1#105 preparation discussion for AI 7.2.10

* **1Tx:** Discuss the changes proposed in R1-2104324 to LTE 36.212/213
* **PC1:** Discuss the proposed changes in R1-2104475 and if agreed, introduce them together with another change to 38.213, or include in the editor’s alignment CR
* **PC2:** Postpone the discussion wrt. the proposals in R1-2105789 and R1-2105863 until after RAN4 has conclude their discussion on p-NR-FR2
* **UA:** Discuss the proposed changes in R1-2105375 to TS38.214
* **XCC**: Discuss the proposed change in R1-2105918 and if agreed, could also be taken ~~take it~~ together with another change to 38.214 or include in the editor’s alignment CR
* **SRS:** Defer to AI 7.1, discussed as Issue#9 in AI7.1.