3GPP TSG RAN WG1 #108-e R1-22abcde

e-Meeting, February 21 – March 3, 2022

**Agenda item: 7.2.10**

**Source: Moderator (Nokia)**

**Title: [108-e-Prep-AI7.2.10] Preparation phase summary for Rel-16 NR MR-DC & CA maintenance**

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

**Document for: Discussion and Decision**

# 1 Introduction

This document is a summary for the AI 7.2.10 pre-meeting discussion for RAN1#108

* [108-e-Prep-AI7.2.10] Prep phase for Rel-16 MR-DC/CA enhancements

Only one Tdoc was submitted to AI 7.2.10:

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| **TDocs** | **Issue** | **Source** |
| [**R1-2202427**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_108-e/Docs/R1-2202427.zip) | Correction on Rel-16 UE Power Saving | Huawei, HiSilicon |

# 2 Summary of issues addressed in the Tdocs

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| [**R1-2202427**](https://www.3gpp.org/ftp/TSG_RAN/WG1_RL1/TSGR1_108-e/Docs/R1-2202427.zip)Correction on Rel-16 UE Power Saving  **Issues raised related to TS38.212:**   1. RAN2 changed the configuration structure regarding dormancy cell groups from *DormancySCellGroups,* which explicitly includes a list of dormancy groups*,* in v16.0.0 to *dormancyGroupWithinActiveTime* in v16.7.0. TS 38.331 v16.7.0 specifies *dormancyGroupWithinActiveTime* as dormancy group ID for each configured SCell. Under this new configuration structure of *dormancyGroupWithinActiveTime*, it is not clear how to determine the number of bits for PDCCH dormancy indication field by the description of “according to higher layer parameter *dormancyGroupWithinActiveTime*”. 2. Similar issues exists for the determination of the number of bits for PDCCH dormancy indication field by the description of “according to higher layer parameter *dormancyGroupOutsideActiveTime*”. 3. The description of “with MSB to LSB of the bitmap corresponding to the first to last configured SCell group” is also not clear considering *dormancyGroupWithinActiveTime* is configured per configured SCell in TS 38.331 v16.7.0.   **Proposals to resolve the issues in TS 38.212**   1. Update the description for dormancy indication field to capture that the field size is according to “the highest group index provided by higher layer parameter *dormancyGroupWithinActiveTime*”. 2. Update the description of “with MSB to LSB of the bitmap corresponding to the first to last configured SCell group” to “with MSB to LSB of the bitmap corresponding to the configured SCell group with lowest to highest group index”. 3. Similar changes are applied for the case when *dormancyGroupOutsideActiveTime is configured.* |

**Moderator proposals:**

* Discuss the proposals in the draft CR in R1-2202427 in RAN1#108.

**Please provide company comments to the table below**

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| **Company** | **Comment** |
| ZTE | This issue was brought up by us and discussed in RAN1#103-e with the following conclusion. It can be found in section *2.5 Dormancy Topic 5* of FL summary R1-2009810.  With this conclusion, it seems clear that the number of bits for PDCCH dormancy indication field is based on the number of groups.  Previously, companies argued that no spec change was needed. We would prefer not to repeat the discussion. However, we won’t object to further clarify it in the spec if companies’ positions have changed.  Conclusion:  In description of SCell dormancy indication in 38.212, “…*MSB to LSB of the bitmap corresponding to the first to last configured SCell group*...” implies that the MSB to LSB of the bitmap correspond to the first to last configured SCell group in ascending order of *DormancyGroupID*. |
| vivo | The 1st and 3rd TPs seem to change the current behaviours (originally the size is depending on the number of groups). Noted that the term “group index” in the TPs is not clear– does it mean the Dormancy Group ID?  The 2nd TP seems not necessary as pointed out by ZTE. |
| CATT | We also believe that this issue is not an essential error correction and discussed in RAN1 with conclusion before as indicated by ZTE. We don’t see any error in the current specification and does not need further discussion in RAN1#108-e |
| Qualcomm | Although this issue has been discussed before, it seems companies still have different understanding of the spec text.  Our understanding (same as ZTE) is that   * the number of bits for PDCCH dormancy indication field is based on the number of configured dormant SCell groups to the UE * MSB to LSB of the bitmap corresponding to the lowest to the highest *DormancyGroupID*   We slightly prefer to clarify the understanding of the spec text. |
| MTK | We support the FL proposal to further discuss the draft CR, and align companies’ understandings. |
| Samsung | ZTE summarized well the past discussions. In general, unless it is a major issue where “things are broken”, it is not OK to be re-discussing concluded issues (particularly in e-meetings). The MSB to LSB mapping for a bitmap to indexes of elements is same/unique throughout the 3GPP specifications.  We do not think it is possible to misinterpret the text in 38.212, either “as is” or if read together with relevant text in 38.213 as anyone who would implement the feature would do. |
| Intel | We support to discuss the CR to align understandings. |
| Huawei, HiSilicon | We think the issue should be clarified in the specification. Not only what ZTE mentioned is not clear, the issue on how to determine the number of bits for dormancy adaptation field is not clear either. |
| Nokia, NSB | Even though there was a recorded conclusion in RAN1#103 as noted by ZTE, it would be better that the specification is written so that the correct interpretation can be read from it the same way by all parties without needing to know a particular RAN1 meeting’s conclusion. We support discussing the three issues in RAN1#108 |

**Moderator summary 17.2.2022: 18:00 UTC:** After 9 companies provided comments, there is clear support in discussing the draft CR in in R1-2202427 in RAN1#108.

Moderator suggestion as an outcome of this pre-RAN1#108 email discussion remains as:

* Discuss the proposals in the draft CR in R1-2202427 in RAN1#108.