**3GPP TSG RAN WG1 #114** **R1-230xxxx**

**Toulouse, France, August 21st – 25th, 2023**

**Agenda item:** 9.17

**Source:** Samsung

**Title:** Summary of email discussions [114-R18-38.213-NR\_FR1\_lessthan\_5MHz\_BW]

**Document for:** Discussion and decision

# Introduction

The purpose of this document is to collect inputs/comments on the draft CR for TS 38.213 [draftCR\_38213 Less than 5 MHz BW](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_114/Inbox/drafts/9.17(Other)/%5B38.213%20draft%20CRs%5D/NR_FR1_lessthan_5MHz_BW/R1-230xxxx%20draftCR_38213%20Less%20than%205%20MHz%20BW.docx) on the introduction of NR support for dedicated spectrum less than 5MHz for FR1. If a comment on a particular aspect has been made by another company, please do not repeat it until, if needed, after a response.

The first checkpoint is on September 5, UTC 13:00.

# First Round Discussion

Please provide your comments on the draft CR for TS 38.213 [draftCR\_38213 Less than 5 MHz BW](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_114/Inbox/drafts/9.17(Other)/%5B38.213%20draft%20CRs%5D/NR_FR1_lessthan_5MHz_BW/R1-230xxxx%20draftCR_38213%20Less%20than%205%20MHz%20BW.docx).

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| Company | Comments |
| Ericsson | Thanks for the draft CR, we have the following comments:   * Clause 13: The new text added as part of the first paragraph should also include the following statement “… in [8-1, TS 38.101 -1]. In Table 13-0, for configurations with indices 0, 1, 10 and 11, Table 5.4.3.1-3 in [8-1, TS 38.101-1] applies.”   [Aris]: Table 5.4.3.1-3 defines GSCN values 41637 and 41638, and Table 5.4.3.3-1 (NOTE 1) and Table 5.4.3.3-2 (NOTE 2) specify how to apply the two GSCN values. So, referring to Table 5.4.3.3-1 (NOTE 1) and Table 5.4.3.3-2 (NOTE 2) is sufficient.   * Clauses 12 and 13: The word “truncation” can be replaced by “puncturing” as to align the wording used in TS 38.213 and TS 38.211.   [Aris]: Yes. |
| FUTUREWEI | Thanks for the draft CR  1. For clause 13, the text “In Table 13-1, the associated SS/PBCH block is not located according to NOTE 12 of Table 5.4.3.3-1 in [8-1, TS 38.101-1].” seems unneeded.  [Aris]: The intention is to say that when an SS/PBCH block is located as in NOTE 12 of Table 5.4.3.3-1, a UE uses Table 13-0 instead of Table 13-1 (clarifies UE behavior - no UE blind detection on which Table to use).  2. For clauses 12/13, “if truncation, if any”. In this case, “puncturing” seems to be the appropriate work. The SS/PBCH and CORESET are punctured.  [Aris]: Yes. |
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# Second Round Discussion

Please provide your comments on the draft CR for TS 38.213 at [draftCR\_38213 Less than 5 MHz BW\_v1](https://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_114/Inbox/drafts/9.17(Other)/%5B38.213%20draft%20CRs%5D/NR_FR1_lessthan_5MHz_BW/R1-230xxxx%20draftCR_38213%20Less%20than%205%20MHz%20BW_v1.docx).

The second checkpoint is on September 6, UTC 15:00.

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| Company | Comments |
| Ericsson v05 | Editor thanks for the response. The tables and notes cited in your comment do not encompass CORESET 0, because the notes state “punctured PBCH,” and “DCH transmission”. Thus, stating that indices 0, 1, 10 and 11 in Table 13-0 apply for Table 5.4.3.1-3, creates a link between the usage of those CORESET 0 entries and the sync-raster points described in Table 5.4.3.3-1. Having said that, the following still holds:   * Clause 13: The new text added as part of the first paragraph should also include the following statement “… in [8-1, TS 38.101 -1]. In Table 13-0, for configurations with indices 0, 1, 10 and 11, Table 5.4.3.1-3 in [8-1, TS 38.101-1] applies.” |
| Qualcomm | We agree with Ericsson’s suggestion to associate the CORESET0 entries and sync raster points.   * The index 0,1 are applied to GSCN value 41637, i.e., either referring to Table 5.4.3.1-3 or Note2 of Table 5.4.3.3-2. * The index 10,11 are applied to GSCN value 41638, i.e., either referring to Table 5.4.3.1-3 or Note12 of Table 5.4.3.3-1. |
| Huawei, HiSilicon | Regarding Ericsson and Qualcomm’s proposal for index 0 and 1, there is no agreement to restrict 12-PRB CORESET#0 only to the single sync raster point (920.73 MHz). It seems unnecessary restriction for gNB configuration. Therefore, we are afraid that the proposal is not correct. |
| Ericsson v08 | To Huawei:  Please note that the usability of indices 0, 1, 10, and 11 in Table 13-0 are meant to be used for the sync-raster points described in Table 5.4.3.3-1. That was not debatable (see my technical comment below), the only thing under discussion with the Editor was whether that can be implicitly understood or if an explicit statement about it is needed (Based on the reasons explained in our previous comment, an explicit statement is needed).  Two technical comments on why indices 0, 1, 10, and 11 in Table 13-0 are meant to be used for the sync-raster points described in Table 5.4.3.3-1:   1. Using a 12-PRB CORESET0 when there are 15-PRBs available will bring a performance loss for no reason. The 12-PRB CORESET0 is used when all transmission are confined up to 12-PRBs (i.e., when the available transmission bandwidth is 12-PRBs). 2. Please note that the 12-PRB CORESET0 only has one “Offset (RB)” defined which is equal to 0. Having said that, how will the 12-PRB CORESET0 structure be used within a 15-PRBs available transmission bandwidth? In an over-restricted manner? The reason why the 12-PRB CORESET 0 has an “Offset (RB) = 0” is because it was designed for a specific sync-raster point. |
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