**3GPP TSG-RAN WG2 Meeting #115 electronic R2-210xxxx**

**Online, August 16 – August 27, 2021**

**Title:** [Draft] LS on PDCCH Blind Detection in CA

**Response to:**

**Release:** Rel-16

**Work Item:** NR\_L1enh\_URLLC-Core

**Source:** Huawei, HiSilicon [to be RAN2]

**To:** RAN1

**Cc:**

**Contact Person:**

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**Attachments**: N/A

**1. Overall Description:**

For the following RAN1 FGs11-2c and 11-2g, RAN2 found that more than one combination of *pdcch-BlindDetectionCA1-r15* and *pdcch-BlindDetectionCA2-r16* should be allowed to report as UE capability based on RAN1 agreements.

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| --- | --- | --- |
| 11-2c | Number of carriers for CCE/BD scaling with DL CA with mix of Rel. 16 and Rel. 15 PDCCH monitoring capabilities on different carriers | 1. Supported combination(s) of (pdcch-BlindDetectionCA-R15, pdcch-BlindDetectionCA-R16)  - Candidate values for pdcch-BlindDetectionCA-R15 is 1 to 15  - Candidate values for pdcch-BlindDetectionCA-R16 is 1 to 15  2. Supported span arrangement for CA  - Candidate value for the component: {aligned spans only, aligned spans and non-aligned spans} |
| 11-2g | Number of carriers for CCE/BD scaling with DL CA with mix of Rel. 16 and Rel. 15 PDCCH monitoring capabilities on different carriers with restriction for non-aligned span case | 1. Supported combination(s) of (pdcch-BlindDetectionCA-R15, pdcch-BlindDetectionCA-R16)  - Candidate values for pdcch-BlindDetectionCA-R15 is 1 to 15  - Candidate values for pdcch-BlindDetectionCA-R16 is 1 to 15  2. UE supports aligned span and non-aligned span  In case of non-aligned span when the configured number of cells with Rel-16 PDCCH monitoring is larger than the UE reported value, PDCCH monitoring occasion(s) should be configured only on same symbol(s) every slot |

To support more than one combination in RAN2 signalling for FG 11-2c and FG 11-2g, RAN2 respectfully asks RAN1 to provide the feedback for the following questions:

1. How many combinations for FG 11-2c and FG 11-2g can be reported at most from RAN1 perspective?

2. Whether the “supported span arrangement for CA” should be reported for each of the combinations or reported only once for FG 11-2c?

Besides, RAN2 wonders whether more than one combination should be supported for FG 11-2e as well? If the answer is yes, how many combinations for FG 11-2e can be reported at most from RAN1 perspective?

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| --- | --- | --- |
| 11-2e | Number of carriers for CCE/BD scaling for MCG and for SCG when configured for NR-DC operation with mix of Rel. 16 and Rel. 15 PDCCH monitoring capabilities on different carriers | Supported combination(s) of (*pdcch-BlindDetectionMCG-UE-r15*, *pdcch-BlindDetectionSCG-UE-r15, pdcch-BlindDetectionMCG-UE-r16*, *pdcch-BlindDetectionSCG-UE-r16*) |

**2. Actions:**

**To RAN1:**

**ACTION:** RAN2 respectfully asks RAN1 to provide the feedback for the questions above.

**3. Date of Next TSG WG RAN2 Meetings:**

TSG-RAN2 Meeting #116-e 1-12 November 2021 Electronic Meeting

TSG-RAN2 Meeting #117-e 17-26 January 2022 Electronic Meeting