**3GPP T****SG-RAN WG2 Meeting #121bis-e R2-2304452**

**Electronic, 17th – 26th April, 2023**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **38.306** | **CR** | **0900** | **rev** | **1** | **Current version:** | **17.4.0** |  |
|  |
| *For* ***[HELP](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)*** *on using this form: comprehensive instructions can be found at <http://www.3gpp.org/Change-Requests>.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network | **x** | Core Network |  |

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| ***Title:***  | Miscellaneous Correction on UE capability-R17 |
|  |  |
| ***Source to WG:*** | ZTE Corporation,Sanechips |
| ***Source to TSG:*** | R2 |
|  |  |
| Work item code: | NR\_FeMIMO, NR\_pos\_enh |  | ***Date:*** | 2023-4-23 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-17 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | 1. The prerequisite *maxNumberMIMO-LayersNonCB-PUSCH* (R1FG 2-15) for the *mTRP-PUSCH-RepetitionTypeB-r17 (R1 FG 23-3-1-3)* is missed.
2. The *supportedActivatedPRS-ProcessingWindow-r17* is a value based capability, which indicates the number of supported activated PRS processing windows across all active DL BWPs

supportedActivatedPRS-ProcessingWindow-r17 ENUMERATED {n2, n3, n4}  |
|  |  |
| ***Summary of change:*** | 1. Add the “*maxNumberMIMO-LayersNonCB-PUSCH*” to the prerequisite of *mTRP-PUSCH-RepetitionTypeB-r17*.
2. For the *supportedActivatedPRS-ProcessingWindow-r17* change the field description from “Indicates whether the UE supports more than one activated PRS processing windows across all active DL BWP” to “Indicates the number of supported activated PRS processing windows across all active DL BWPs”.

**Impact analysis**Impacted 5G architecture options:SA, MR-DC Impacted functionality:UE capability signaling for MIMO and PositioningInter-operability: For the bullet 1, if the Network is implemented according to the CR but the UE is not, the UE may misreport the *mTRP-PUSCH-RepetitionTypeB-r17* and may lead to unsuccessful PUSCH receptionn at network side. If the UE is implemented according to the CR but the network is not, there is no inter-operability issue.For the bullet 2, there is no inter-operability issue, just make the spec more clear |
|  |  |
| ***Consequences if not approved:*** | The UE may misreport the *mTRP-PUSCH-RepetitionTypeB-r17* and may lead to unsuccessful PUSCH reception at network side |
|  |  |
| ***Clauses affected:*** | 4.2.7.8,4.2.7.10 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  |  |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | R2-2303882 |

START OF CHANGES

4.2.7.8 *FeatureSetUplinkPerCC* parameters

| **Definitions for parameters** | **Per** | **M** | **FDD-TDD****DIFF** | **FR1-FR2****DIFF** |
| --- | --- | --- | --- | --- |
| ***channelBW-90mhz***Indicates whether the UE supports the channel bandwidth of 90 MHz.For FR1, the UE shall indicate support according to TS 38.101-1 [2], Table 5.3.5-1. | FSPC | CY | N/A | FR1 only |
| ***maxNumberMIMO-LayersCB-PUSCH***Defines supported maximum number of MIMO layers at the UE for PUSCH transmission with codebook precoding. UE indicating support of this feature shall also indicate support of PUSCH codebook coherency subset. | FSPC | No | N/A | N/A |
| ***maxNumberMIMO-LayersNonCB-PUSCH***Defines supported maximum number of MIMO layers at the UE for PUSCH transmission using non-codebook precoding.UE supporting non-codebook based PUSCH transmission shall indicate support of *maxNumberMIMO-LayersNonCB-PUSCH, maxNumberSRS-ResourcePerSet* and *maxNumberSimultaneousSRS-ResourceTx* together. | FSPC | No | N/A | N/A |
| ***maxNumberSimultaneousSRS-ResourceTx***Defines the maximum number of simultaneous transmitted SRS resources at one symbol for non-codebook based transmission to the UE. | FSPC | No | N/A | N/A |
| ***maxNumberSRS-ResourcePerSet***Defines the maximum number of SRS resources per SRS resource set configured for codebook or non-codebook based transmission to the UE. | FSPC | No | N/A | N/A |
| ***mTRP-PUSCH-RepetitionTypeB-r17***Indicates whether the UE supports multi-TRP PUSCH repetition for non-codebook based PUSCH repetition type B with sequential mapping for repetitions larger than 2 and cyclic mapping for 2 repetitions by indicating the supported number of SRS resources in one SRS resource set. The UE shall also support two SRS resource sets with usage set to 'nonCodebook'. The UE indicating support of this feature shall also indicate support of *maxNumberMIMO-LayersNonCB-PUSCH*, *mimo-NonCB-PUSCH* and *pusch-RepetitionTypeB-r16*. | FSPC | No | N/A | N/A |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Omit the unchanged part\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SECOND CHANGE

4.2.7.10 *Phy-Parameters*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Omit the unchanged part\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

| ***srs-PeriodicityAndOffsetExt-r16***Indicates whether the UE supports the periodicity of semi-persistent and periodic SRS with 128, 256, 512, and 20480 slots. | UE | No | No | No |
| --- | --- | --- | --- | --- |
| ***supportedActivatedPRS-ProcessingWindow-r17***Indicates the number of supported activated PRS processing windows across all active DL BWPs. The UE can include this field only if the UE supports one of *prs-ProcessingWindowType1A-r17*, *prs-ProcessingWindowType1B-r17* or *prs-ProcessingWindowType2-r17*. Otherwise, the UE does not include this field. | UE | No | No | No |
| ***supportedDMRS-TypeDL***Defines supported DM-RS configuration types at the UE for DL reception. Type 1 is mandatory with capability signalling. Type 2 is optional. If this field is not included, Type 1 is supported. | UE | FD | No | Yes |

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Omit the unchanged part\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

END OF CHANGES