**3GPP TSG RAN WG1 #117** **R1-240xxxx**

**Fukuoka City, Fukuoka, Japan, May 20th – 24th, 2024**

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| *CR-Form-v12.2* | | | | | | | | |
| **DRAFT CHANGE REQUEST** | | | | | | | | |
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|  | **38.213** | **CR** |  | **rev** |  | **Current version:** | **18.2.0** |  |
|  | | | | | | | | |
| *For* ***[HELP](http://www.3gpp.org/3G_Specs/CRs.htm" \l "_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:*** | Draft shadow Rel-18 RedCap Correction on initial DL BWP | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE, Sanechips | | | | | | | | | |
| ***Source to TSG:*** | R1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_redcap-Core | | | | |  | ***Date:*** | | | 2024-05-20 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **A** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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 can be 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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Based on the current spec for RedCap UE, if the active DL BWP is not the initial DL BWP, the UE determines PDCCH monitoring occasions for the search space set #0 only if the CORESET bandwidth is within the active DL BWP and the active DL BWP has same SCS configuration and same cyclic prefix as the initial DL BWP, i.e., separate initial DL BWP.  However, the SCS and CP for separate initial DL BWP could be configured with a different value than NR’s CORESET#0 or NR’s UE’s *initialDownlinkBWP*. In this case, if the non-initial DL BWP contains CORESET#0 and the RedCap UE needs to decode SS0(with SCS1) and other transmissions (with SCS2), there is a decoding problem since there are two different SCSs in one BWP. | | | | | | | | |
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| ***Summary of change:*** | | For RedCap UE, clarify that the non-initial DL BWP has the same SCS and CP as *initialDownlinkBWP* or CORESET#0, and separate initial DL BWP if configured. | | | | | | | | |
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| ***Consequences if not approved:*** | | RedCap UEs do not have the capability to decode transmissions with different SCSs in one non-initial active DL BWP. | | | | | | | | |
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| ***Clauses affected:*** | | 17.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **x** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\*\*\* Unchanged parts are omitted \*\*\*

## 17.1 First procedures for RedCap UE

In this clause, the term 'UE' refers to a RedCap UE that indicates *supportOfRedCap* or *supportOfERedCap*.

A UE expects the initial DL BWP and the active DL BWP after the UE (re)establishes dedicated RRC connection to be smaller than or equal to the maximum DL bandwidth that the UE supports. A UE can be provided a DL BWP by *initialDownlinkBWP-RedCap* in *DownlinkConfigCommonSIB*, and an UL BWP by *initialUplinkBWP-RedCap* in *UplinkConfigCommonSIB*. If *initialUplinkBWP* in *UplinkConfigCommonSIB* indicates an UL BWP that is larger than a maximum UL BWP that a UE supports, the UE expects to be provided an UL BWP by *initialUplinkBWP-RedCap* in *UplinkConfigCommonSIB* that is smaller than or equal to the maximum UL bandwidth that the UE supports.

If a UE is provided *controlResourceSetZero* and *searchSpaceZero* in *PDCCH-ConfigSIB1* or *PDCCH-ConfigCommon*, the UE determines a CORESET for a search space set from *controlResourcesetZero* as described in clause 13 and for Tables 13-1 through 13-10, and determines corresponding PDCCH monitoring occasions as described in clause 13 and for Tables 13-11 through 13-15. If the active DL BWP is not the initial DL BWP, the UE determines PDCCH monitoring occasions for the search space set only if the CORESET bandwidth is within the active DL BWP and the active DL BWP has same SCS configuration and same cyclic prefix as the DL BWP provided by *initialDownlinkBWP* or for the PDCCH reception in the CORESET for Type0-PDCCH CSS set.

\*\*\* Unchanged parts are omitted \*\*\*