**3GPP TSG-RAN WG2 Meeting #127bis R2-2409285**

**Hefei, China, Oct 14th – 18th, 2024**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
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|  | **38.331** | **CR** | **4893** | **rev** | **2** | **Current version:** | **15.27.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](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:***  | Correction on IE SRS-CarrierSwitching |
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| ***Source to WG:*** | CATT, Vivo, China Telecom, China Unicom, Nokia, ZTE Corporation, CMCC, Ericsson |
| ***Source to TSG:*** | RAN2 |
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| ***Work item code:*** | NR\_newRAT-Core  |  | ***Date:*** | 2024-10-15 |
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| ***Category:*** | F |  | ***Release:*** | Rel-15 |
|  | *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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)Rel-20 (Release 20)* |
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| ***Reason for change:*** | As a part of necessary high layer parameters in case of independent SRS power control from that of PUSCH, a DCI format 2\_3 field configuration type should be configured with either *typeA* or *typeB.*According to TS 38.212 7.3.1.3.4, this high layer parameter is needed in both cases, i.e., “for an UL without PUCCH and PUSCH or an UL on which the SRS power control is not tied with PUSCH power control”. But in current TS 38.331, the field description of “*typeA*/*typeB*” only refers to “SRS transmission on a PUSCH-less SCell” case, and the other case “SRS power control is not tied with PUSCH power control” is missing.  |
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| ***Summary of change:*** | 1. Add the missing case “for SRS transmission on a serving cell with independent SRS power control from that of PUSCH” into the field description of “*typeA*/*typeB*” configuration.
2. One editoral change is made to improve the readability of the general description of IE SRS-CarrierSwitching.
3. In the field description of “*monitoringCells*”, the referred section of TS 38.213 is changed to 11.4.
4. Clarify the UE ignores *srs-SwitchFromCarrier* in case of independent SRS power control from that of PUSCH.

**Impact Analysis**Impacted 5G architecture options:NR-SA, NR-DC, (NG)EN-DC, NE-DCImpacted functionality:Independent SRS power control from that of PUSCHInter-operability:* If the network is implemented according to the CR and the UE is not, there is no inter-operability issue, as UE expets this high layer parameter from network.
* If the UE is implemented according to the CR and the network is not, there is no inter-operability issue, as network is supposed to be implemented according to RAN1 spec.
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| ***Consequences if not approved:*** | It may lead to confusion for network implementation whether the high layer parameter “*typeA*/*typeB*” should be configured in case of SRS transmission on a serving cell with independent SRS power control from that of PUSCH, and UE may not decode DCI format 2\_3 correctly without this configuration. |
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| ***Clauses affected:*** | 6.3.2 |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  |  |
| ***affected:*** |  | **X** |  Test specifications |  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications |  |
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| ***Other comments:*** |  |
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| ***This CR's revision history:*** |  |

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| CHANGE START |

### 6.3.2 Radio resource control information elements

<Irrelevant Texts Omitted>

#### – *SRS-CarrierSwitching*

The IE *SRS-CarrierSwitching* is used to configure SRS carrier switching when PUSCH is not configured or to configure independent SRS power control from that of PUSCH.

*SRS-CarrierSwitching* information element

-- ASN1START

-- TAG-SRS-CARRIERSWITCHING-START

SRS-CarrierSwitching ::= SEQUENCE {

 srs-SwitchFromServCellIndex INTEGER (0..31) OPTIONAL, -- Need M

 srs-SwitchFromCarrier ENUMERATED {sUL, nUL},

 srs-TPC-PDCCH-Group CHOICE {

 typeA SEQUENCE (SIZE (1..32)) OF SRS-TPC-PDCCH-Config,

 typeB SRS-TPC-PDCCH-Config

 } OPTIONAL, -- Need M

 monitoringCells SEQUENCE (SIZE (1..maxNrofServingCells)) OF ServCellIndex OPTIONAL, -- Need M

 ...

}

SRS-TPC-PDCCH-Config ::= SEQUENCE {

 srs-CC-SetIndexlist SEQUENCE (SIZE(1..4)) OF SRS-CC-SetIndex OPTIONAL -- Need M

}

SRS-CC-SetIndex ::= SEQUENCE {

 cc-SetIndex INTEGER (0..3) OPTIONAL, -- Need M

 cc-IndexInOneCC-Set INTEGER (0..7) OPTIONAL -- Need M

}

-- TAG-SRS-CARRIERSWITCHING-STOP

-- ASN1STOP

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| *SRS-CC-SetIndex* field descriptions |
| ***cc-IndexInOneCC-Set***Indicates the CC index in one CC set for Type A (see TS 38.212 [17], TS 38.213 [13], clause 7.3.1, 11.4). The network always includes this field when the *srs-TPC-PDCCH-Group* is set to *typeA.* |
| ***cc-SetIndex***Indicates the CC set index for Type A associated (see TS 38.212 [17], TS 38.213 [13], clause 7.3.1, 11.4). The network always includes this field when the *srs-TPC-PDCCH-Group* is set to *typeA.* The network does not configure this field to 3 in this release of specification. |

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| *SRS-CarrierSwitching* field descriptions |
| ***monitoringCells***A set of serving cells for monitoring PDCCH conveying SRS DCI format with CRC scrambled by TPC-SRS-RNTI (see TS 38.212 [17], TS 38.213 [13], clause 7.3.1, 11.4). |
| ***srs-SwitchFromCarrier***The UE ignores this field in case of independent SRS power control from that of PUSCH. |
| ***srs-SwitchFromServCellIndex***Indicates the serving cell whose UL transmission may be interrupted during SRS transmission on a PUSCH-less SCell. During SRS transmission on a PUSCH-less SCell, the UE may temporarily suspend the UL transmission on a serving cell with PUSCH in the same CG to allow the PUSCH-less SCell to transmit SRS. (see TS 38.214 [19], clause 6.2.1.3). |
| ***srs-TPC-PDCCH-Group***Network configures the UE with either typeA-SRS-TPC-PDCCH-Group or typeB-SRS-TPC-PDCCH-Group, if any. |
| ***typeA***Type A trigger configuration for SRS transmission on a PUSCH-less SCell, or for SRS transmission on a serving cell with independent SRS power control from that of PUSCH (see TS 38.213 [13], clause 11.4). In this release, the network configures at most one entry (the first entry) of *typeA*, and the first entry corresponds to the serving cell in which the *SRS-CarrierSwitching* field is configured. SRS carrier switching to SUL carrier is not supported in this version of the specification. |
| ***typeB***Type B trigger configuration for SRS transmission on a PUSCH-less SCell, or for SRS transmission on a serving cell with independent SRS power control from that of PUSCH (see TS 38.213 [13], clause 11.4). |

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| *SRS-TPC-PDCCH-Config* field descriptions |
| ***srs-CC-SetIndexlist***A list of pairs of [cc-SetIndex; cc-IndexInOneCC-Set] (see TS 38.212 [17], TS 38.213 [13], clause 7.3.1, 11.4). The network does not configure this field for *typeB*. |

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| CHANGE END |