**3GPP TSG-RAN2 Meeting #113-e*****R2-210xxxx***

**eMeeting, 25th January - 5th February, 2021**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.331** | **CR** | **2147** | **rev** | **1** | **Current version:** | **16.3.1** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network | **x** | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Clarification for aperiodic CSI and secondary DRX group | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16 | | | | |  | ***Date:*** | | | 2021-02-03 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | REL-16 |
|  | *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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Cross carrier scheduling and secondary DRX cannot be configured simultaneously in REL-16. This is clarified for the *schedulingCellId* configured with *CrossCarrierSchedulingConfig*:  *…* If *drx-ConfigSecondaryGroup* is configured in the *MAC-CellGroupConfig* associated with this serving cell, the scheduling cell and the scheduled cell belong to the same Frequency Range.  However when secondary DRX is configured and the aperiodic CSI trigger and PUSCH resource used for reporting are configured on the same carrier/serving cell, then it should be clarified that the cell for which CSI is reported may belong to the same or different Frequency Range. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | It is clarified that when secondary DRX is configured and the aperiodic CSI trigger and PUSCH resource used for reporting are configured on the same carrier/serving cell, then the cell for which CSI is reported may belong to the same or different Frequency Range. Furthermore it is clarified that the network should not trigger a CSI request for the cell on the other Frequency Range when that cell is outside Active Time.  **Impact Analysis**  Impacted functionality:  Secondary DRX  Inter-operability:  1. If the NW is implemented according to the CR but the UE is not then the UE may not reply to an aperiodic CSI trigger across different numerologies when secondary DRX is configured.    2. If the UE is implemented according to the CR but the NW is not then there is no inter-operability issue. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Aperiodic CSI and secondary DRX may not work together. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

**<Start of modified section>**

<TEXT OMITTED>

– *CrossCarrierSchedulingConfig*

The IE *CrossCarrierSchedulingConfig* is used to specify the configuration when the cross-carrier scheduling is used in a cell.

***CrossCarrierSchedulingConfig* information element**

-- ASN1START

-- TAG-CROSSCARRIERSCHEDULINGCONFIG-START

CrossCarrierSchedulingConfig ::= SEQUENCE {

schedulingCellInfo CHOICE {

own SEQUENCE { -- Cross carrier scheduling: scheduling cell

cif-Presence BOOLEAN

},

other SEQUENCE { -- Cross carrier scheduling: scheduled cell

schedulingCellId ServCellIndex,

cif-InSchedulingCell INTEGER (1..7)

}

},

...,

[[

carrierIndicatorSize-r16 SEQUENCE {

carrierIndicatorSizeDCI-1-2-r16 INTEGER (0..3),

carrierIndicatorSizeDCI-0-2-r16 INTEGER (0..3)

} OPTIONAL, -- Cond CIF-PRESENCE

enableDefaultBeamForCCS-r16 ENUMERATED {enabled} OPTIONAL -- Need S

]]

}

-- TAG-CROSSCARRIERSCHEDULINGCONFIG-STOP

-- ASN1STOP

| ***CrossCarrierSchedulingConfig* field descriptions** |
| --- |
| ***carrierIndicatorSizeDCI-0-2, carrierIndicatorSizeDCI-1-2***  Configures the number of bits for the field of carrier indicator in PDCCH DCI format 0\_2/1\_2. The field *carrierIndicatorSizeDCI-0-2* refers to DCI format 0\_2 and the field *carrierIndicatorSizeDCI-1-2* refers to DCI format 1\_2, respectively (see TS 38.212 [17], clause 7.3.1 and TS 38.213 [13], clause 10.1). |
| ***cif-Presence***  The field is used to indicate whether carrier indicator field is present (value *true*) or not (value *false*) in PDCCH DCI formats, see TS 38.213 [13]. If *cif-Presence* is set to *true*, the CIF value indicating a grant or assignment for this cell is 0. |
| ***cif-InSchedulingCell***  The field indicates the CIF value used in the scheduling cell to indicate a grant or assignment applicable for this cell, see TS 38.213 [13]. |
| ***enableDefaultBeamForCCS***  This field indicates whether default beam selection for cross-carrier scheduled PDSCH is enabled, see TS 38.214 [19]. If not present, the default beam selection behaviour is not applied, i.e. Rel-15 behaviour is applied. |
| ***other***  Parameters for cross-carrier scheduling, i.e., a serving cell is scheduled by a PDCCH on another (scheduling) cell. The network configures this field only for SCells. |
| ***own***  Parameters for self-scheduling, i.e., a serving cell is scheduled by its own PDCCH. |
| ***schedulingCellId***  Indicates which cell signals the downlink allocations and uplink grants, if applicable, for the concerned SCell. In case the UE is configured with DC, the scheduling cell is part of the same cell group (i.e. MCG or SCG) as the scheduled cell. If *drx-ConfigSecondaryGroup* is configured in the *MAC-CellGroupConfig* associated with this serving cell, the scheduling cell and the scheduled cell belong to the same Frequency Range. In addition, the serving cell with an aperiodic CSI trigger and the PUSCH resource scheduled for the report are on the same carrier and serving cell, but the cell for which CSI is reported may belong to the same or a different Frequency Range. The network should not trigger a CSI request for a serving cell in the other Frequency Range when that serving cell is outside Active Time. |

|  |  |
| --- | --- |
| **Conditional Presence** | **Explanation** |
| *CIF-PRESENCE* | The field is mandatory present if the *cif-Presence* is set to *true*. The field is absent otherwise. |

<TEXT OMITTED>

**<End of modified section>**