**3GPP TSG-RAN WG2 Meeting #117-e *R2-2204200***

**Electronic, 21st Feb – 3rd Mar 2022**

|  |
| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **rev** | **-** | **Current version:** |  |  |
|  |
| *For* [***HELP***](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 |  | Radio Access Network |  | Core Network |  |

|  |
| --- |
|  |
| ***Title:***  | Miscellaneous non-controversial corrections Set XIII |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NR\_newRAT-Core |  | ***Date:*** | 2022-03-03 |
|  |  |  |  |  |
| ***Category:*** |  |  | ***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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
|  |  |
| ***Reason for change:*** | Correction of miscellaneous non-controversial errors (typos etc) |
|  |  |
| ***Summary of change:*** | Miscellaneous non-controversial errors are corrrected.Draft CR agreed to be merged at RAN2#117e:1. [R2-2203498](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2/TSGR2_117-e/Docs/R2-2203498.zip) Clarification on servingCellMO (R15)

Corrected the editorial mistake in CSI-RS-Resource-Mobility.**Impact Analysis**Impacted 5G architecture options: NR SA, (NG)EN-DC, NE-DC, NR-DC Impacted functionality: MiscellaneousInter-operability:1. If the network is implemented according to the CR and the UE is not, no inter-operability issues are expected.2. If the UE is implemented according to the CR and the network is not, no inter-operability issues are expected. |
|  |  |
| ***Consequences if not approved:*** | Miscellaneous non-controversial errors will remain in the specification. |
|  |  |
| ***Clauses affected:*** | 6.3.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  |  |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  |  |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  |  |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

### 6.3.2 Radio resource control information elements

<CUT>

#### – *CSI-RS-ResourceConfigMobility*

The IE *CSI-RS-ResourceConfigMobility* is used to configure CSI-RS based RRM measurements.

*CSI-RS-ResourceConfigMobility* information element

-- ASN1START

-- TAG-CSI-RS-RESOURCECONFIGMOBILITY-START

CSI-RS-ResourceConfigMobility ::= SEQUENCE {

 subcarrierSpacing SubcarrierSpacing,

 csi-RS-CellList-Mobility SEQUENCE (SIZE (1..maxNrofCSI-RS-CellsRRM)) OF CSI-RS-CellMobility,

 ...,

 [[

 refServCellIndex ServCellIndex OPTIONAL -- Need S

 ]]

}

CSI-RS-CellMobility ::= SEQUENCE {

 cellId PhysCellId,

 csi-rs-MeasurementBW SEQUENCE {

 nrofPRBs ENUMERATED { size24, size48, size96, size192, size264},

 startPRB INTEGER(0..2169)

 },

 density ENUMERATED {d1,d3} OPTIONAL, -- Need R

 csi-rs-ResourceList-Mobility SEQUENCE (SIZE (1..maxNrofCSI-RS-ResourcesRRM)) OF CSI-RS-Resource-Mobility

}

CSI-RS-Resource-Mobility ::= SEQUENCE {

 csi-RS-Index CSI-RS-Index,

 slotConfig CHOICE {

 ms4 INTEGER (0..31),

 ms5 INTEGER (0..39),

 ms10 INTEGER (0..79),

 ms20 INTEGER (0..159),

 ms40 INTEGER (0..319)

 },

 associatedSSB SEQUENCE {

 ssb-Index SSB-Index,

 isQuasiColocated BOOLEAN

 } OPTIONAL, -- Need R

 frequencyDomainAllocation CHOICE {

 row1 BIT STRING (SIZE (4)),

 row2 BIT STRING (SIZE (12))

 },

 firstOFDMSymbolInTimeDomain INTEGER (0..13),

 sequenceGenerationConfig INTEGER (0..1023),

 ...

}

CSI-RS-Index ::= INTEGER (0..maxNrofCSI-RS-ResourcesRRM-1)

-- TAG-CSI-RS-RESOURCECONFIGMOBILITY-STOP

-- ASN1STOP

|  |
| --- |
| *CSI-RS-CellMobility* field descriptions |
| ***csi-rs-ResourceList-Mobility***List of CSI-RS resources for mobility. The maximum number of CSI-RS resources that can be configured per *measObjectNR* depends on the configuration of *associatedSSB* (see TS 38.214 [19], clause 5.1.6.1.3). |
| ***density***Frequency domain density for the 1-port CSI-RS for L3 mobility. See TS 38.211 [16], clause 7.4.1. |
| ***nrofPRBs***Allowed size of the measurement BW in PRBs. See TS 38.211 [16], clause 7.4.1. |
| ***startPRB***Starting PRB index of the measurement bandwidth. See TS 38.211 [16], clause 7.4.1. |

|  |
| --- |
| *CSI-RS-ResourceConfigMobility* field descriptions |
| ***csi-RS-CellList-Mobility***List of cells for CSI-RS based RRM measurements. |
| ***refServCellIndex***Indicates the serving cell providing the timing reference for CSI-RS resources without *associatedSSB*. The field may be present only if there is at least one CSI-RS resource configured without *associatedSSB*. If this field is absent, the UE shall use the timing of the PCell for measurements on the CSI-RS resources without *associatedSSB*. The CSI-RS resources and the serving cell indicated by *refServCellIndex* for timing reference should be located in the same band. |
| ***subcarrierSpacing***Subcarrier spacing of CSI-RS. Only the values 15, 30 kHz or 60 kHz (FR1), and 60 or 120 kHz (FR2) are applicable. |

|  |
| --- |
| *CSI-RS-Resource-Mobility* field descriptions |
| ***associatedSSB***If this field is present, the UE may base the timing of the CSI-RS resource indicated in *CSI-RS-Resource-Mobility* on the timing of the cell indicated by the *cellId* in the *CSI-RS-CellMobility*. In this case, the UE is not required to monitor that CSI-RS resource if the UE cannot detect the SS/PBCH block indicated by this *associatedSSB* and *cellId*. If this field is absent, the UE shall base the timing of the CSI-RS resource indicated in *CSI-RS-Resource-Mobility* on the timing of the serving cell indicated by *refServCellIndex*. In this case, the UE is required to measure the CSI-RS resource even if SS/PBCH block(s) with *cellId* in the *CSI-RS-CellMobility* are not detected.CSI-RS resources with and without *associatedSSB* may be configured in accordance with the rules in TS 38.214 [19], clause 5.1.6.1.3. |
| ***csi-RS-Index***CSI-RS resource index associated to the CSI-RS resource to be measured (and used for reporting). |
| ***firstOFDMSymbolInTimeDomain***Time domain allocation within a physical resource block. The field indicates the first OFDM symbol in the PRB used for CSI-RS, see TS 38.211 [16], clause 7.4.1.5.3. Value 2 is supported only when *dmrs-TypeA-Position* equals *pos3*. |
| ***frequencyDomainAllocation***Frequency domain allocation within a physical resource block in accordance with TS 38.211 [16], clause 7.4.1.5.3 including table 7.4.1.5.2-1. The number of bits that may be set to one depend on the chosen row in that table. |
| ***isQuasiColocated***Indicates that the CSI-RS resource is quasi co-located with the associated SS/PBCH block, see TS 38.214 [19], clause 5.1.6.1.3. |
| ***sequenceGenerationConfig***Scrambling ID for CSI-RS (see TS 38.211 [16], clause 7.4.1.5.2). |
| ***slotConfig***Indicates the CSI-RS periodicity (in milliseconds) and for each periodicity the offset (in number of slots). When *subcarrierSpacing* is set to *kHz15*, the maximum offset values for periodicities *ms4/ms5/ms10/ms20/ms40* are 3/4/9/19/39 slots. When *subcarrierSpacing* is set to *kHz30*, the maximum offset values for periodicities *ms4/ms5/ms10/ms20/ms40* are 7/9/19/39/79 slots. When *subcarrierSpacing* is set to *kHz60*, the maximum offset values for periodicities *ms4/ms5/ms10/ms20/ms40* are 15/19/39/79/159 slots. When *subcarrierSpacing* is set *kHz120*, the maximum offset values for periodicities *ms4/ms5/ms10/ms20/ms40* are 31/39/79/159/319 slots. |