**3GPP TSG RAN WG1 #118 R1-240xxxx**

**Maastricht, NL, August 19th – 23rd, 2024**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.214** | **CR** | **xxxx** | **rev** | **-** | **Current version:** | **18.3.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

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| ***Title:*** | CR on CapabilityIndex Report in TS38.214 (mirror on Rel-18) | | | | | | | | | |
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| ***Source to WG:*** | NEC, Huawei, HiSilicon, Samsung, Ericsson, … | | | | | | | | | |
| ***Source to TSG:*** | R1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_FeMIMO-Core | | | | |  | ***Date:*** | | | 2024-08-19 |
|  |  | | | |  | |  | | |  |
| ***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:*** | | 1. 'cri-RSRP-Index' and 'ssb-Index-RSRP-Index' is missing from the conditions for the report for UE configured with DRX in 5.1.6.1 2. 'cri-RSRP-Index', or 'cri-SINR-Index', is missing from the conditions of CSI-RS resource configuration for L1-RSRP and L1-SINR computation in 5.1.6.1.2. 3. 'cri-RSRP-Index' is missing from *reportQuantity* configuration in 5.2.1.4.2. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 1. Adding 'cri-RSRP-Index' and 'ssb-Index-RSRP-Index' in 5.1.6.1. 2. Adding 'cri-RSRP-Index', or 'cri-SINR-Index' in 5.1.6.1.2. 3. Adding 'cri-RSRP-Index' in 5.2.1.4.2. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | 1. UE cannot report 'cri-RSRP-Index' and 'ssb-Index-RSRP-Index' for UE configured with DRX. 2. No restriction of same number (1 or 2) of ports for all CSI-RS resources within the set for L1-RSRP and L1-SINR computation if 'cri-RSRP-Index', or 'cri-SINR-Index' is configured. 3. UE cannot not derive the CSI parameters other than CRI conditioned on the reported CRI if 'cri-RSRP-Index' is configured for Report Quantity. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.1.6.1, 5.1.6.1.2, 5.2.1.4.2. | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

### 5.1.6 UE procedure for receiving reference signals

#### 5.1.6.1 CSI-RS reception procedure

<Unchanged part omitted>

If the UE is configured with DRX,

- if the UE is configured to monitor DCI format 2\_6 and configured by higher layer parameter *ps-TransmitOtherPeriodicCSI* to report CSI with the higher layer parameter *reportConfigType* set to 'periodic' and *reportQuantity* set to quantities other than 'cri-RSRP', 'cri-RSRP-Index', 'ssb-Index-RSRP' and 'ssb-Index-RSRP-Index' when *drx-onDurationTimer* in *DRX-Config* is not started, the most recent CSI measurement occasion occurs in DRX active time or during the time duration indicated by *drx-onDurationTimer* in *DRX-Config* also outside DRX active time for CSI to be reported;

- if the UE is configured to monitor DCI format 2\_6 and configured by higher layer parameter *ps-TransmitPeriodicL1-RSRP* to report L1-RSRP with the higher layer parameter *reportConfigType* set to 'periodic' and *reportQuantity* set to 'cri-RSRP' or 'cri-RSRP-Index' when *drx-onDurationTimer* in *DRX-Config* is not started, the most recent CSI measurement occasion occurs in DRX active time or during the time duration indicated by *drx-onDurationTimer* in *DRX-Config* also outside DRX active time for CSI to be reported;

- otherwise, the most recent CSI measurement occasion occurs in DRX active time for CSI to be reported.

<Unchanged part omitted>

##### 5.1.6.1.2 CSI-RS for L1-RSRP and L1-SINR computation

<Unchanged part omitted>

If the UE is configured with a *CSI-ReportConfig* with *reportQuantity* set to 'cri-RSRP', 'cri-SINR', 'none', 'cri-RSRP-Index', or 'cri-SINR-Index', and if the *CSI-ResourceConfig* for channel measurement (higher layer parameter *resourcesForChannelMeasurement*) contains a *NZP-CSI-RS-ResourceSet* that is configured with the higher layer parameter *repetition* and without the higher layer parameter *trs-Info*, the UE can only be configured with the same number (1 or 2) of ports with the higher layer parameter *nrofPorts* for all CSI-RS resources within the set. If the UE is configured with the CSI-RS resource in the same OFDM symbol(s) as an SS/PBCH block, the UE may assume that the CSI-RS and the SS/PBCH block are quasi co-located with 'typeD' if 'typeD' is applicable. Furthermore, the UE shall not expect to be configured with the CSI-RS in PRBs that overlap with those of the SS/PBCH block, and the UE shall expect that the same subcarrier spacing is used for both the CSI-RS and the SS/PBCH block.

<Unchanged part omitted>

##### 5.2.1.4.2 Report Quantity Configurations

<Unchanged part omitted>

Except for a *CSI-ReportConfig* configured with *reportQuantity* set to 'cri-RI-PMI-CQI' and *codebookType* set to 'typeII-CJT-r18', 'typeII-CJT-PortSelection-r18', 'typeII-Doppler-r18', or 'typeII-Doppler-PortSelection-r18', if the UE is configured with a *CSI-ReportConfig* with the higher layer parameter *reportQuantity* set to 'cri-RSRP', 'cri-RSRP-Index', 'cri-RI-PMI-CQI ', 'cri-RI-i1', 'cri-RI-i1-CQI', 'cri-RI-CQI', 'cri-RI-LI-PMI-CQI', 'cri-SINR', or 'cri-SINR- Index ', and resources are configured in the corresponding resource set for channel measurement, then the UE shall derive the CSI parameters other than CRI conditioned on the reported CRI, where CRI *k* (*k* ≥ 0) corresponds to the configured (*k*+1)-th entry of associated *nzp-CSI-RS-Resources* in the corresponding *NZP-CSI-RS-ResourceSet* for channel measurement, and (*k*+1)-th entry of associated *csi-IM-Resource* in the corresponding *csi-IM-ResourceSet* (if configured) or (*k*+1)-th entry of associated *nzp-CSI-RS-Resources* in the corresponding *NZP-CSI-RS-ResourceSet* (if configured for *CSI-ReportConfig* with *reportQuantity* set to 'cri-SINR' or 'cri-SINR- Index ') for interference measurement. If CSI-RS resources are configured, each resource shall contain at most 16 CSI-RS ports. If CSI-RS resources are configured, each resource shall contain at most 8 CSI-RS ports.

<Unchanged part omitted>