**3GPP TSG RAN WG1 #118 R1-2407418**

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

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.214** | **CR** | **0609** | **rev** | **-** | **Current version:** | **17.10.0** |  |
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| *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 |
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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:*** | F |  | ***Release:*** | Rel-17 |
|  | *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)* |
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| ***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.
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| ***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.
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| ***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.
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| ***Clauses affected:*** | 5.1.6.1, 5.1.6.1.2, 5.2.1.4.2. |
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|  | **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 ...  |
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| ***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>

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 $K\_{s}>1 $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 $K\_{s}=2 $CSI-RS resources are configured, each resource shall contain at most 16 CSI-RS ports. If $2<K\_{s}\leq 8 $CSI-RS resources are configured, each resource shall contain at most 8 CSI-RS ports.

<Unchanged part omitted>