**3GPP TSG-RAN WG1 Meeting 102-eR1-200xxxx**

**e-Meeting, August 17th – 28th, 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.215** | **CR** | **DRAFT** | **rev** | **-** | **Current version:** | **16.2.0** |  |
|  | | | | | | | | |
| *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:*** | Corrections to CSI-SINR definition | | | | | | | | | |
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| ***Source to WG:*** | Intel Corporation | | | | | | | | | |
| ***Source to TSG:*** | R1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_eMIMO-Core | | | | |  | ***Date:*** | | | 2020-08-31 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
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| ***Reason for change:*** | | In TS 38.215, in the sentence “CSI reference signals transmitted on all configured antenna ports can be used for CSI-SINR determination”, it is unclear whether it means that all of the antenna ports configured for the UE can be used for CSI-SINR determination, or all of the antenna ports of the CSI-RS resource are used for CSI-SINR determination. | | | | | | | | |
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| ***Summary of change:*** | | Clarify that only antenna ports 3000 and 3001 can be used for L1-SINR. | | | | | | | | |
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| ***Consequences if not approved:*** | | TS 38.214 and TS 38.215 are not aligned. | | | | | | | | |
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| ***Clauses affected:*** | | 5.1.6 | | | | | | | | |
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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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
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| ***This CR's revision history:*** | |  | | | | | | | | |

### 5.1.6 CSI signal-to-noise and interference ratio (CSI-SINR)

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| **Definition** | CSI signal-to-noise and interference ratio (CSI-SINR), is defined as the linear average over the power contribution (in [W]) of the resource elements carrying CSI reference signals divided by the linear average of the noise and interference power contribution (in [W]). If CSI-SINR is used for L1-SINR reporting with dedicated interference measurement resources, the interference and noise is measured over resource(s) indicated by higher layers as described in TS 38.214 [6]. Otherwise, the interference and noise are measured over the resource elements carrying CSI reference signals reference signals within the same frequency bandwidth.  For CSI-SINR determination CSI reference signals transmitted on antenna port 3000 according to TS 38.211 [4] shall be used. If CSI-SINR is used for L1-SINR, CSI reference signals transmitted on antenna ports 3000, 3001 can be used for CSI-SINR determination.  For intra-frequency CSI-SINR measurements not used for L1-SINR reporting, if the measurement gap is not configured, UE is not expected to measure the CSI-RS resource(s) outside of the active downlink bandwidth part.  For frequency range 1, the reference point for the CSI-SINR shall be the antenna connector of the UE. For frequency range 2, CSI-SINR shall be measured based on the combined signal from antenna elements corresponding to a given receiver branch. For frequency range 1 and 2, if receiver diversity is in use by the UE, the reported CSI-SINR value shall not be lower than the corresponding CSI-SINR of any of the individual receiver branches. |
| **Applicable for** | If CSI-SINR is used for L1-SINR,  RRC\_CONNECTED intra-frequency.  Otherwise,  RRC\_CONNECTED intra-frequency,  RRC\_CONNECTED inter-frequency |