**3GPP TSG-RAN WG1 Meeting #105-e *R1-210abcd***

**e-Meeting, May 10th- 27th , 2021**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.214** | **CR** | **-** | **rev** | **-** | **Current version:** | **16.5.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Correction on enabling configuration of time restriction over L1-RSRP and CSI measurement | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | R1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_ newRAT-Core | | | | |  | ***Date:*** | | | 2021-05-12 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **A** |  | | | | | ***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:*** | | The current specification has defined the UE behaviour for measurement restrictions for L1-RSRP and CSI in 5.2 of TS 38.214. For higher layer parameters *timeRestrictionForChannelMeasurements* and *timeRestrictionForInterferenceMeasurements*, there is a conflict between the configurations of two parameters in TS 38.214 and in TS 38.331. Specifically,   * In 38.214, the higher layer parameters *timeRestrictionForChannelMeasurements* and *timeRestrictionForInterferenceMeasurements* are interpreted optionally, i.e. “if a UE is not configured”. The measurement restriction for L1-RSRP is defined according to whether the parameter *timeRestrictionForChannelMeasurements* exist or not. The measurement restriction for CSI is defined according to whether the parameters *timeRestrictionForChannelMeasurements* and *timeRestrictionForInterferenceMeasurements* exist or not. * On the other hand, in 38.331, the higher layer parameters *timeRestrictionForChannelMeasurements* and *timeRestrictionForInterferenceMeasurements* are mandatory as following. The candidate values of two parameters are ‘configured’ and ‘notConfigured’.   timeRestrictionForChannelMeasurements ENUMERATED {configured, notConfigured},  timeRestrictionForInterferenceMeasurements ENUMERATED {configured, notConfigured},  codebookConfig CodebookConfig OPTIONAL, -- Need R  If the measurement restrictions according to the description in 38.214 and *timeRestrictionForChannelMeasurements* or *timeRestrictionForInterferenceMeasurements* is configured as “notConfigured” by gNB, it can be still interpreted by UE that related time restriction on channel or interference measurement is enabled (based on specification of 38.214), although the gNB true intention is to disable channel filtering over L1-RSRP or CSI. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The description in 38.214 on UE behaviors for measurement restrictions for L1-RSRP and CQI shall correspond to configured value of related higher layer parameters *timeRestrictionForChannelMeasurements* and *timeRestrictionForInterferenceMeasurements*, rather than the condition that the parameter is configured or not configured. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Inconsistency between 38.214 and 38.331 may lead to different UE interpretations for enabling/diabling measurement restrictions. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.2.1.4.3 and 5.2.2.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Isolated impact analysis:  This CR impacts the UE behavior for measurement restrictions for L1-RSRP and CSI. It is expected that UEs have been implemented in accordance to this CR, when configurating higher layer parameters *timeRestrictionForChannelMeasurements* and *timeRestrictionForInterferenceMeasurements*.  This CR has no impact on gNB. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

5.2.1.4.3 L1-RSRP Reporting

< Unchanged parts are omitted >

If higher layer parameter *timeRestrictionForChannelMeasurements* in *CSI-ReportConfig* is set to “*notConfigured*”, the UE shall derive the channel measurements for computing L1-RSRP value reported in uplink slot n based on only the SS/PBCH or NZP CSI-RS, no later than the CSI reference resource, (defined in TS 38.211[4]) associated with the CSI resource setting.

If higher layer parameter *timeRestrictionForChannelMeasurements* in *CSI-ReportConfig* is set to “*Configured*”, the UE shall derive the channel measurements for computing L1-RSRP reported in uplink slot n based on only the most recent, no later than the CSI reference resource, occasion of SS/PBCH or NZP CSI-RS (defined in [4, TS 38.211]) associated with the CSI resource setting.

< Unchanged parts are omitted >

5.2.2.1 Channel quality indicator (CQI)

< Unchanged parts are omitted >

If higher layer parameter *timeRestrictionForChannelMeasurements* is set to “*notConfigured*”, the UE shall derive the channel measurements for computing CSI value reported in uplink slot n based on only the NZP CSI-RS, no later than the CSI reference resource, (defined in TS 38.211[4]) associated with the CSI resource setting.

If higher layer parameter *timeRestrictionForChannelMeasurements* in*CSI-ReportConfig* is set to “*Configured*”, the UE shall derive the channel measurements for computing CSI reported in uplink slot n based on only the most recent, no later than the CSI reference resource, occasion of NZP CSI-RS (defined in [4, TS 38.211]) associated with the CSI resource setting.

If higher layer parameter *timeRestrictionForInterferenceMeasurements* is set to “*notConfigured*”, the UE shall derive the interference measurements for computing CSI value reported in uplink slot n based on only the CSI-IM and/or NZP CSI-RS for interference measurement no later than the CSI reference resource associated with the CSI resource setting.

If higher layer parameter *timeRestrictionForInterferenceMeasurements* in *CSI-ReportConfig* is set to “*Configured*”, the UE shall derive the interference measurements for computing the CSI value reported in uplink slot n based on the most recent, no later than the CSI reference resource, occasion of CSI-IM and/or NZP CSI-RS for interference measurement (defined in [4, TS 38.211]) associated with the CSI resource setting.

< Unchanged parts are omitted >