**3GPP TSG RAN WG1 #102-e R1-200XXXX**

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

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v11.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.213** | **CR** | **DRAFT** | **rev** | **-** | **Current version:** | **16.2.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Draft CR on determination of the number of RS for RLM | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Samsung | | | | | | | | | |
| ***Source to TSG:*** | RAN1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Core | | | | |  | | ***Date:*** | | 2020-08-18 |
|  |  | | | |  | | |  | |  |
| ***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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The sentence for determining the number of RS for RLM is broken in current specification. The dependence for determining the number of RS for RLM is not specified. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add “L\_max” to make the sentence complete, and correct the reference correspondingly. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The dependence for determining the number of RS for RLM is not specified. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:** The CR simply clafies the dependence for determining the number of RS for RLM. No impact to gNB or UE behavior is expected from this CR.  Note that this CR was originated from Rel-15 maintenance discussion but not treated in the email discussion, and it is for Rel-16 maintenance consideration only. | | | | | | | | |

# 5 Radio link monitoring

The downlink radio link quality of the primary cell is monitored by a UE for the purpose of indicating out-of-sync/in-sync status to higher layers. The UE is not required to monitor the downlink radio link quality in DL BWPs other than the active DL BWP, as described in Clause 12, on the primary cell. If the active DL BWP is the initial DL BWP and for SS/PBCH block and CORESET multiplexing pattern 2 or 3, as described in Clause 13, the UE is expected to perform RLM using the associated SS/PBCH block when the associated SS/PBCH block index is provided by *RadioLinkMonitoringRS*.

If the UE is configured with a SCG, as described in [12, TS 38.331], and the parameter *rlf-TimersAndConstants* is provided by higher layers and is not set to release, the downlink radio link quality of the PSCell of the SCG is monitored by the UE for the purpose of indicating out-of-sync/in-sync status to higher layers. The UE is not required to monitor the downlink radio link quality in DL BWPs other than the active DL BWP on the PSCell.

A UE can be configured for each DL BWP of a SpCell [11, TS 38.321] with a set of resource indexes, through a corresponding set of *RadioLinkMonitoringRS*, for radio link monitoring by *failureDetectionResources*. The UE is provided either a CSI-RS resource configuration index, by *csi-RS-Index*, or a SS/PBCH block index, by *ssb-Index*. The UE can be configured with up to  *RadioLinkMonitoringRS* for link recovery procedures, as described in Clause 6, and for radio link monitoring. From the  *RadioLinkMonitoringRS*, up to  *RadioLinkMonitoringRS* can be used for radio link monitoring depending on as described in Table 5-1, wherein is as defined in Clause 4.1, and up to two *RadioLinkMonitoringRS* can be used for link recovery procedures.

For operation with shared spectrum channel access, when a UE is provided a SS/PBCH block index by *ssb-Index*, the UE is expected to perform radio link monitoring using SS/PBCH block(s) in the discovery burst transmission window as described in Clause 4.1, where the SS/PBCH block(s) have candidate SS/PBCH block index(es) corresponding to SS/PBCH block index provided by *ssb-Index*.

============================== Unchanged Text Omitted ===================================