**3GPP TSG-RAN4 Meeting #95-e *R4-2008562***

**Electronic Meeting, May 25-June 05, 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.133** | **CR** | **0885** | **rev** | **-** | **Current version:** | **16.3.0** |  |
|  | | | | | | | | |
| *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 |  | Core Network |  |

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| ***Title:*** | RRC release with redirection requirements in NR-U in 38.133 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_unlic-Core | | | | |  | ***Date:*** | | | 2020-06-02 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***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:*** | | To specify RRC release with redirection requirements to NR carrier which is subject to CCA | | | | | | | | |
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| ***Summary of change:*** | | The requirements for RRC release with redirection to NR carrier which is subject to CCA are defined. In the requirements the values of parameter L1,max is based on the agreements in the WF in R4-1912851 (RAN4#92bis). | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The RRC release with redirection requirements NR carrier which is subject to CCA will be missing. The performance cannot be guaranteed. | | | | | | | | |
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| ***Clauses affected:*** | | 6.2.3.2.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  |  | Other core specifications | | | |  | | |
| ***affected:*** | | **X** |  | Test specifications | | | | TS 38.533 | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**----------------------START OF CHANGES----------------------------**

##### 6.2.3.2.3 RRC connection release with redirection to NR carrier subject to CCA

The UE shall be capable of performing the RRC connection release with redirection to the target NR cell subject to CCA within Tconnection\_release\_redirect\_NR\_CCA.

The time delay (Tconnection\_release\_redirect\_NR\_CCA) is the time between the end of the last slot containing the RRC command, “*RRCRelease*” (TS 38.331 [2]) on the NR PDSCH and the time the UE starts to send random access to the target NR cell. The time delay (Tconnection\_release\_redirect\_NR\_CCA) shall be less than:

Tconnection\_release\_redirect\_NR\_CCA = TRRC\_procedure\_delay + Tidentify-NR\_CCA + TSI-NR\_CCA + TRACH\_CCA

The target NR cell shall be considered detetable when for each relevant SSB, the side conditions should be met that,

* the conditions of SSB\_RP and SSB Ês/Iot according to Annex B.2.5 for a corresponding NR Band are fulfilled.

TRRC\_procedure\_delay: It is the RRC procedure delay for processing the received message “*RRCRelease*” as defined in clause 6.2.2 of TS 38.331 [2].

Tidentify-NR\_CCA: It is the time to identify the target NR cell and is defined as:

* Tidentify-NR\_CCA = TPSS/SSS-sync + Tmeas; TPSS/SSS-sync is the cell search time and Tmeas is the measurement time due to cell selection criteria evaluation.
* Tidentify-NR\_CCA = MAX (680 ms, (L1+11) × Trs); where L1 is the number of SMTC occasions unavailable at the UE due to DL CCA failures. If L1 > L1,max then the UE shall initiate cell selection procedures for the selected PLMN as defined in TS 38.304 [1]; where L1,max is defined in Table 6.2.3.2.3-1.

TSI-NR\_CCA: It is the time required for acquiring all the relevant system information of the target NR cell. This time depends upon whether the UE is provided with the relevant system information of the target NR cell or not by the old NR cell before the RRC connection is released.

TRACH\_CCA: It is the delay uncertainty in acquiring the first available PRACH occasion in the target NR cell:

* TRACH\_CCA = (1+L2)× TPRACH; where:
* L2 is the number of PRACH occasions unavailable for PRACH transmission due to UL CCA failures.
* TPRACH can be up to the summation of SSB to PRACH occasion association period (Tconfig) and 10 ms; where Tconfig is defined in the table 8.1-1 of TS 38.213 [3].
* The value of L2 is limited by *PREAMBLE\_TRANSMISSION\_COUNTER*, which is increased when PRACH occasion is unavailable for PRACH transmission due to UL CCA failure as specified in TS 38.321 [7]. The UE behaviour when *PREAMBLE\_TRANSMISSION\_COUNTER* reaches the *preambleTransMax* is specified in TS 38.321 [7].

Trs is the SMTC periodicity of the target NR cell if the UE has been provided with an SMTC configuration for the target cell in the redirection command, otherwise Trs is the SMTC periodicity configured in the *measObjectNR* having the same SSB frequency and subcarrier spacing configured for the RRC connection release with redirection. If the UE is not provided with SMTC configuration or measurement object for the frequency which is also configured for the RRC connection release with redirection then:

* the requirement in this clause is applied with Trs = 20 ms if the SSB transmission periodicity is not larger than 20 ms; otherwise,
* there is no requirement if the SSB transmission periodicity is larger than 20ms.

Table 6.2.3.2.3-1: Maximum allowed number of missed SMTC occasions during cell identification

|  |  |
| --- | --- |
| SMTC periodicity (Trs) [ms] | Maximum allowed number of missed SMTC occasions (L1,max) |
| Trs ≤ 40 | 8 |
| Trs > 40 | 4 |

**----------------------END OF CHANGES----------------------------**