**3GPP TSG-RAN4 Meeting # 111 *R4-2409896***

 **Fukuoka City, Fukuoka, , May 20th – 24th 2024**

|  |
| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.104** | **CR** | **Draft** | **rev** | **-**  | **Current version:** | **18.5.0** |  |
|  |
| *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 |  | Radio Access Network | **x** | Core Network |  |

|  |
| --- |
|  |
| ***Title:***  | Draft CR for 38.104 on multiple PRACH transmission demodulation FR2-1 requirements |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | RAN4 |
|  |  |
| ***Work item code:*** | NR\_cov\_enh2-Perf |  | ***Date:*** | 2024-05-13 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-18 |
|  | *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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | RAN4 have discussed and agreed to introduce demodulation requirement for multiple PRACH transmission for FR2-1 and FR1. As most of open issues are settled, it is time to prepare draft CR for this feature.The draft CR R4-2046122 was endorsed in the last meeting. |
|  |  |
| ***Summary of change:*** | R4-2046122:Add multiple PRACH transimission minimume FR2-1 demodulation requirements. Remove brackets on repetition number according to the agreement in the last meeting. |
|  |  |
| ***Consequences if not approved:*** | There is no FR2-1 demodulation requirement for mulitple PRACH transmission.  |
|  |  |
| ***Clauses affected:*** | 11.4.2.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **x** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** | **x** |  |  Test specifications | TS38.141-2  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | Revised from R4-2408347. |

################## Start of Change #1 ######################

##### 11.4.2.2.5 Minimum requirements for mulitple PRACH transmission

The probability of detection shall be equal to or exceed 99% for the SNR levels listed in Tables 11.4.2.2.5-1.

Table 11.4.2.2.5-1: Missed detection requirements for multiple PRACH transmission, 120 kHz SCS in FR2-1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Number of  | Number of | Propagation | Frequency | Number of repetitions | SNR (dB) |
| TX antennas | demodulation branches | conditions and correlation matrix (Annex G) | offset | Burst format A2 | Burst format B4 | Burst format C2 |
| 1 | 2 | TDLA30-300 Low | 4000 Hz | 2 | TBD | [-12.0] | TBD |
| Note: This requirement has no limitation for PRACH configuration index selection for BS comformance testing. |

################## End of Change #1 ######################