**3GPP TSG-RAN WG4 Meeting #111 R4-2410439**

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

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** | **XXXX** | **rev** |  | **Current version:** | **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:***  | Big CR to TS 36.133 on core requirement maintenance for R18 NR and MR-DC measurement gaps and measurements without gaps |
|  |  |
| ***Source to WG:*** | MediaTek, Intel |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | NR\_MG\_enh2-Core |  | ***Date:*** | 26 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** |  |
|  | *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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | Provides some corrections for MGE2 in TS 36.133.  |
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| ***Summary of change:*** | This Big CR is based on draft CR [R4-2410407].Remove the brackets and modify the Editors notes to align with current discussion in the maintenance. |
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| ***Consequences if not approved:*** | RRM requirements for inter-RAT NR measurement without gap will be incomplete. |
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| ***Clauses affected:*** | 7.8.2.22 |
|  |  |
|  | **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:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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

7.8.2.22 Interruptions during inter-RAT NR measurements without measurement gap

For a UE indicating ‘no-gap-with-interruption’ with the capability *interRAT-NeedForInterruptionNR-r18* for inter-RAT NR measurement, the UE is allowed to cause interruptions on PCell or activated SCell(s) due to inter-RAT NR measurements with interruption ratio no more than the requirements specified below.

For the individual inter-RAT NR measurements performed on a frequency layer that corresponds to a configured measurement object i, Tcycle,i is the measurement cycle specified in Table 7.8.2.22-1, where Nfreq is defined in clause 8.1.2.4.29.1.1.

**Table 7.8.2.22-1: Tcycle,i length for inter-RAT NR MOi**

|  |  |
| --- | --- |
| **DRX cycle** | **TCycle,i** |
| No DRX | max (80ms, SMTC period) x Nfreq |
| DRX cycle ≤ 320ms | [1.5 \*] max (80ms, SMTC period, DRX cycle) x Nfreq |
| DRX cycle>320ms | DRX cycle x Nfreq |

*Editors’ note: Discussion is ongoing on* *cases where DRX is configured. Further update to this sub-clause subjects to the final conclusion.*

*Editor’s note: FFS on the scaling factor 1.5 for Tcycle.*

UE is allowed to cause interruption on a certain MOi up to the interruption ratio of $\frac{2L}{T\_{cycle,i}}$. The allowed maximum total interruption ratio (D) is

$$D=\sum\_{i=1}^{N}\frac{2L}{Tcycle,i}$$

Where,

* N is the total number of NR MOs that UE indicates ‘no-gap-with-interruption’ for the band which the NR MO belongs to, and none of the SMTCs of the NR MOs are overlapped by the measurement gap and
* L is the maximum interruption length for each interruption occasion, which shall not exceed 1 subframe.

The interruptions are allowed for all the serving cells in the same FR as all NR MOs being measured with interruption if UE supports per-FR measurement gaps, and all the serving cells if UE does not support per-FR measurement gaps.

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