**3GPP TSG-RAN WG4 Meeting #112 R4-2411615**

**Maastricht, Netherlands, 19th - 23rd August, 2024**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **36.133** | **CR** | **DraftCR** | **rev** |  | **Current version:** | **18.6.0** |  |
|  |
| *For* ***[HE](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)******[LP](http://www.3gpp.org/3G_Specs/CRs.htm%22%20%5Cl%20%22_blank)*** *on using this form: comprehensive instructions can be found at <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:***  | draftCR on interruprion requirements for inter-RAT NR measurement without gap (case a-1) |
|  |  |
| ***Source to WG:*** | Xiaomi |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_MG\_enh2-Core |  | ***Date:*** | 2024-08-08 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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:*** | There are brackets and editor’s note in the interruprion requirements. |
|  |  |
| ***Summary of change:*** | Remove the brackets and editor’s note |
|  |  |
| ***Consequences if not approved:*** | RRM requirements for inter-RAT NR measurement without gap will be incomplete. |
|  |  |
| ***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**

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| --- | --- |
| **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 |

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.

[For a UE supports additional UE capability], the interruption is not allowed during DRX ON duration excluding the time extended due to drx-inactivityTimer, if the following conditions is met:

* there is no SMTC occasion within a time period starting [4ms] before the starting point of the DRX ON duration and ending [4ms] after the ending point of the DRX ON duration.

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====================================