**3GPP TSG-RAN WG2 Meeting #124 R2-2313731**

**Chicago, USA, November 13-17, 2023**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **36.306** | **CR** | **1873** | **rev** | **1** | **Current version:** | **17.4.0** |  |
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| *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 | **X** | Core Network |  |

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| ***Title:***  | Introduction of UE capability for inter-RAT NR FR2 measurements without measurement gap |
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| ***Source to WG:*** | Qualcomm Incorporated |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NR\_MG\_enh-Core |  | ***Date:*** | 2023-11-16 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-17 |
|  | *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:*** | RAN2 in their #123bis meeting agreed to introduce a new UE capability parameter for inter-RAT NR FR2 measurements without gap.This is an addition to the existing UE capability, *independentGapConfig-maxCC-r17*, defined in TS38.306. The corresponding requirement is defined in the context of per-FR measurement gap in TS38.133. |
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| ***Summary of change:*** | UE capability parameter gaplessMeas-FR2-maxCC-r17, where the UE indicates the maximum number of configured E-UTRA serving cells with which the UE supports inter-RAT NR FR2 measurements without measurement gap, is added.* This UE capability parameter is applicable when only E-UTRA serving cells are configured, i.e. LTE standalone.
* The UE reporting this capability and supporting (NG)EN-DC shall not indicate support of *independentGapConfig* in *MeasAndMobParametersMRDC* (defined in TS 38.306 [87]).

**Impact analysis**Impacted 5G architecture options:LTE SAImpacted functionality:Inter-RAT NR FR2 measurements without measurement gapInter-operability:* If the network is implemented according to the CR and the UE is not; No inter-operability issue arises. The network is aware that the UE does not support the inter-RAT NR FR2 measurements without measurement gap ((unless other UE capability parameter the network is aware of indicates the UE supports gapless measurement, e.g. *independentGapConfig* defined in TS38.306)
* If the UE is implemented according to the CR and the network is not; No inter-operability issue arises. The network will configure measurement gap for inter-RAT NR FR2 measurements (unless other UE capability parameter the network is aware of indicates the UE supports gapless measurement, e.g. *independentGapConfig* defined in TS38.306)
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| ***Consequences if not approved:*** | The UE has no way to convery its capability of inter-RAT NR FR2 measurements without measurement gap depending on the number of configured E-UTRA serving cells. |
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| ***Clauses affected:*** | 4.3.6.5x (new) |
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|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS36.331 CR4968TS38.306 CR0989 |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

### 4.3.6 Measurement parameters

[…]

4.3.6.5x *gaplessMeas-FR2-maxCC-r17*

This field defines whether the UE supports inter-RAT NR FR2 measurement without measurement gap as specified in clause 9.1.2 of TS 38.133 [84] while the number of configured serving cells is less than or equal to the indicated number. This field is applicable when only E-UTRA serving cells are configured. The UE reporting this field and supporting (NG)EN-DC shall not indicate support of *independentGapConfig* in *MeasAndMobParametersMRDC* (defined in TS 38.306 [32]).