**3GPP TSG-RAN4 Meeting #94-e *R4-200xxxx***

**Online, 24th February – 6th March 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.133** | **CR** | **0517** | **rev** | **1** | **Current version:** | **15..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 |  | Radio Access Network |  | Core Network |  |

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| ***Title:*** | Correction to inter-RAT measurement on LTE serving carrier | | | | | | | | | |
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| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_newRAT-Core | | | | |  | ***Date:*** | | | 2020-02-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-15 |
|  | *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 e?planations 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)* | |
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| ***Reason for change:*** | | According to 38.133 and 36.133 it can be derived that inter-RAT LTE measurement configured by NR PCell in NE-DC scenario can be further divided into two catagories:   * **inter-RAT LTE measurement on non-serving carriers**: UE obeys the delay requirements in clause 9.4.2 and 9.4.3 and strictly speaking no accuracy requirements. MG is needed. * **inter-RAT LTE measurement on serving carriers**: UE obeys the delay requirements defined in 36.133 clause 8.19.2 (further refers to 8.1.2.2) and the accuracy requirements in 36.133 clause 9.1. MG is not needed.  |  | | --- | | 38.133 clause 9.4.1:  The requirements in this clause are specified for NR−E-UTRAN FDD and NR−E-UTRAN TDD measurements and are applicable without an explicit E-UTRAN neighbour cell list containing physical layer cell identities, for a UE:  - in RRC\_CONNECTED state, and  - configured with SA or NR-DC operation mode or configured in NE-DC operation mode by PCell with NR−E-UTRAN FDD or TDD measurement (RSRP, RSRQ, RS-SINR, RSTD, or E-CID) on E-UTRA non-serving frequency carrier, and  - configured with an appropriate measurement gap pattern according to Table 9.1.2-3.  When the UE is in NE-DC operation mode and an NR−E-UTRAN FDD or TDD measurement (RSRP, RSRQ, RS-SINR, RSTD, or E-CID) configured by NR PCell is on a E-UTRA serving frequency carrier, then the corresponding E-UTRA intra-frequency measurements requirements specified in clause 8.19 of TS 36.133 [15] shall apply.  38.133 clause 10.2.1:  Accuracy requirements for measurements on E-UTRAN carrier frequencies are specified in clause 10.2 and apply for UE in SA or NR-DC operation mode.  The requirements in clause 10.2 are applicable for a UE:  - in RRC\_CONNECTED state  - performing measurements with appropriate measurement gaps according to clause 9.1.2.  - that is synchronised to the cell that is measured.  36.133 clause 8.19.2:  PSCC intra-frequency measurements shall meet all applicable requirements in clause 8.1.2.2. If SCG DRX is in use, then the PCell intra-frequency requirements for when DRX is in use in clause 8.1.2.2 shall apply and shall depend on the SCG DRX cycle. Otherwise, the requirements for when DRX is not in use shall apply. The applicable measurement accuracy requirements are in clause 9.1.  SCC intra-frequency measurements shall meet all applicable requirements in clause 8.3.3. If SCG DRX is in use, then the PCell intra-frequency requirements for when DRX is in use in clause 8.1.2.2 shall apply and shall depend on the SCG DRX cycle. Otherwise, the requirements for when DRX is not in use shall apply. The applicable measurement accuracy requirements are in clause 9.1. |   However, it is needed to add inter-RAT LTE measurement configured by NR PCell on non-serving carriers to the applicability of clause 10.2.1. | | | | | | | | |
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| ***Summary of change:*** | | 1. Requirements defined in 38.133 clause 9.4.2/9.4.3 and clause 10.2 apply for Inter-RAT LTE measurement configured by NR PCell on serving carrier in NE-DC. | | | | | | | | |
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| ***Consequences if not approved:*** | | There is no accuracy requirements for Inter-RAT LTE measurement under NE-DC. | | | | | | | | |
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| ***Clauses affected:*** | | 10.2.1 | | | | | | | | |
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|  | | **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 modified section 1>**

### 10.2.1 Introduction

Accuracy requirements for measurements on E-UTRAN carrier frequencies are specified in clause 10.2 and apply for UE in SA or NR-DC or NE-DC operation mode.

The requirements in clause 10.2 are applicable for a UE:

- in RRC\_CONNECTED state

- performing measurements with appropriate measurement gaps according to clause 9.1.2.

- that is synchronised to the cell that is measured.

The reported measurement result after layer 1 filtering shall be an estimate of the average value of the measured quantity over the measurement period. The reference point for the measurement result after layer 1 filtering is referred to as point B in the measurement model described in TS 36.300 [24].

The accuracy requirements of E-UTRA measurements in this clause are valid for the reported measurement result after layer 1 filtering. The accuracy requirements are verified from the measurement report at point D in the measurement model having the layer 3 filtering disabled.

If the UE needs measurement gaps to perform the inter-RAT NR ─ E-UTRAN FDD and NR ─ E-UTRAN TDD measurements, the relevant measurement procedure and measurement gap patterns stated in clause 9.1.2 shall apply.

**<End of modified section 1>**