**3GPP TSG-RAN WG2 Meeting #128 *R2-2411024***

 **Orlando, USA, November 18th – 22nd, 2024**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.331** | **CR** | **5155** | **rev** | **1** | **Current version:** | **15.27.0** |  |
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| *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 | **X** | Core Network |  |

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| ***Title:***  | Corrections to smtc configuration |
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| ***Source to WG:*** | ZTE Corporation, Sanechips |
| ***Source to TSG:*** | RAN2 |
|  |  |
| ***Work item code:*** | NR\_newRAT-Core |  | ***Date:*** | 2024-10 |
|  |  |  |  |  |
| ***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 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)* |
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| ***Reason for change:*** | It is specified in first section of subclause 5.5.2.10 that UE sets up first SMTC based on *periodicityAndOffset* parameter included in ***smtc1*** in MO. However, SMTC configuration can also be provided in ***smtc*** in SIBs, or ***smtc*** or ***targetCellSMTC-SCG*** inRRCReconfiguration for HO/PSCell addition or in RRCRelease for redirection. For those cases, UE shall set up SMTC based on configuration in ***smtc*** or ***targetCellSMTC-SCG***, instead of ***smtc1***. Since both *smtc,* *smtc1* and *targetCellSMTC-SCG*refer to the same IE *SSB-MTC*, a simple fix would be to change the ‘*smtc1*’ in procedure text to ‘*SSB-MTC*’ to harmonize the text for different cases. This is also aligned with the text style used in subclause 5.5.2.13 of 36.331 LTE RRC specs for UE to determine NR SMTC configuration. |
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| ***Summary of change:*** | change ‘*smtc1*’ to ‘*SSB-MTC*’ in the first section of subclause 5.5.2.10.**Impact analysis****Impacted 5G Architecture options:**NR standalone, NR-DC, (NG)EN-DC, NE-DC**Impacted functionality:**SMTC configuration **Inter-operability analysis:** There is no inter-operability issue foreseen.  |
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| ***Consequences if not approved:*** | How UE set up smtc configuration is incomplete. |
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| ***Clauses affected:*** | 5.5.2.10 |
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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:*** |  |

*1st CHANGE STARTS*

#### 5.5.2.10 Reference signal measurement timing configuration

The UE shall setup the first SS/PBCH block measurement timing configuration (SMTC) in accordance with the received *periodicityAndOffset* parameter (providing *Periodicity* and *Offset* value for the following condition) in the *SSB-MTC* configuration. The first subframe of each SMTC occasion occurs at an SFN and subframe of the NR SpCell meeting the following condition:

SFN mod *T* = (FLOOR (*Offset*/10));

if the *Periodicity* is larger than *sf5*:

subframe = *Offset* mod 10;

else:

subframe = *Offset* or (*Offset* +5);

with *T* = CEIL(*Periodicity*/10).

If *smtc2* is present, for cells indicated in the *pci-List* parameter in *smtc2* in the same *MeasObjectNR*, the UE shall setup an additional SS/PBCH block measurement timing configuration (SMTC) in accordance with the received *periodicity* parameter in the *smtc2* configuration and use the *Offset* (derived from parameter *periodicityAndOffset*) and *duration* parameter from the *smtc1* configuration. The first subframe of each SMTC occasion occurs at an SFN and subframe of the NR SpCell meeting the above condition.

On the indicated *ssbFrequency*, the UE shall not consider SS/PBCH block transmission in subframes outside the SMTC occasion for RRM measurements based on SS/PBCH blocks and for RRM measurements based on CSI-RS except for SFTD measurement (see TS 38.133 [14], clause 9.3.8).

*1st CHANGE ENDS*