**3GPP TSG-RAN WG2 Meeting #127 *R2-2407618***

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

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.306** | **CR** | **draftCR** | **rev** | **-** | **Current version:** | **18.2.0** |  |
|  | | | | | | | | |
| *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:*** | Introduction of LTE TN to NR NTN Mobility UE Capability | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | vivo | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | LTE\_TN\_NR\_NTN\_mob-Core | | | | |  | ***Date:*** | | | 2024-08-23 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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 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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Introduction of UE capability for inter-RAT cell measurement on NR NTN cell | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | A new optional UE capability without siganlling is introduced to allow inter-RAT measurement for cell reselection from LTE TN cell to NR NTN cell. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Inter-RAT cell reselection from LTE TN to NR NTN is not supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.8.x (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 36.331 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

## 6.8 Other features

### 6.8.1 System Information Block Type 16

It is optional for UE, including UEs of any *ue- Category-NB*, to support the reception of *SystemInformationBlockType16* as specified in TS 36.331 [5].

### 6.8.2 QCI1 indication in Radio Link Failure Report

It is optional for the UE to include *drb-EstablishedWithQCI-1* in *RLF-Report* as specified in TS 36.331 [5].

### 6.8.3 Enhanced random access power control

It is optional for UE to support enhanced random access power control for FDD as specified in TS 36.321 [4] and TS 36.213 [22], clauses 16.2.1.1.1 and 16.3.1. This feature is only applicable if the UE supports any *ue-Category-NB*.

### 6.8.4 MO-EDT for Control Plane CIoT EPS Optimization

It is optional for UE to support MO-EDT for Control Plane CIoT EPS optimizations as specified in TS 24.301 [28]. This feature is only applicable if the UE supports *ce-ModeA-r13*, or for FDD if the UE supports any *ue-Category-NB*.

### 6.8.5 Void

### 6.8.6 Enhanced PHR

It is optional for UE to support enhanced PHR in MSG3 for FDD, as defined in TS 36.321 [4]. This feature is only applicable if the UE supports any *ue-Category-NB*.

### 6.8.7 void

### 6.8.8 Resynchronization Signals

It is optional for UE to support resynchronization signals, as defined in TS 36.211 [17]. This feature is only applicable if the UE supports *ce-ModeA-r13*.

### 6.8.9 Measurement gaps for higher UE velocity

It is optional for UE to support measurement gaps for higher UE velocity, as defined in TS 36.331 [5] and TS 36.133[16]. This feature is only applicable if the UE supports *ce-ModeA-r13*.

### 6.8.10 MT-EDT for Control Plane CIoT EPS Optimisation

It is optional for UE to support MT-EDT for Control Plane CIoT EPS Optimisation, as defined in TS 24.301 [28]. If the UE supports 'MT-EDT for Control Plane CIoT EPS Optimisation' it shall support 'MO-EDT for Control Plane CIoT EPS Optimisation' as described in clause 6.8.4. This feature is only applicable if the UE supports *ce-ModeA-r13,* or for FDD if the UE supports any *ue-Category-NB*.

### 6.8.11 MT-EDT for User Plane CIoT EPS Optimisation

It is optional for UE to support MT-EDT for User Plane CIoT EPS Optimisation, as defined in TS 24.301 [28]. If the UE supports 'MT-EDT for User Plane CIoT EPS Optimisation' it shall support *earlyData-UP-r15* as described in clause 4.3.8.7. This feature is only applicable if the UE supports *ce-ModeA-r13,* or for FDD if the UE supports any *ue-Category-NB*.

### 6.8.12 Void

### 6.8.13 Reduced MIB/SIB1-BR acquisition time

It is optional for UE to support reduced MIB/SIB1-BR acquisition time requirements as specified in TS 36.133 [16]. This feature is only applicable if the UE supports *ce-ModeB-r13.*

### 6.8.14 High speed dedicated network features

It is optional for UE to support HSDN cell reselection handling in RRC\_IDLE and RRC\_INACTIVE (if the UE supports *eutra-5GC-r15*) as specified in TS 36.304 [14] and TS 36.331 [5].

### 6.8.15 Carrier specific NRSRP thresholds for NPRACH resource selection

It is optional for UE to support carrier specific NRSRP thresholds for NPRACH resource selection as specified in TS 36.321 [4]. This feature is only applicable if the UE supports any *ue-Category-NB* and *multiCarrier-NPRACH-r14* or *multiCarrierPagingTDD-r15*.

### 6.8.16 Protection against improper reselection to GERAN/UTRAN

It is optional for UE to support protection against improper reselection to GERAN/UTRAN as specified in TS 36.304 [14].

### 6.8.17 Inter-RAT cell reselection of an NR mobile IAB cell

It is optional for UE to support inter-RAT cell reselection priority handling of an NR mobile IAB cell in RRC\_IDLE and RRC\_INACTIVE (if the UE supports *eutra-5GC-r15*) as specified in TS 36.304 [14] and TS 36.331 [5].

### 6.8.x Inter-RAT measurement on an NR NTN cell

It is optional for UE in RRC\_IDLE, or in RRC\_INACTIVE (if the UE supports *eutra-5GC-r15*) to support inter-RAT measurement for cell reselection from LTE TN cell to NR NTN cell as specified in TS 36.304 [14] and TS 36.331 [5].

END OF CHANGE