**3GPP TSG-RAN WG2 Meeting #117-e *R2-220xxxx***

**Electronic meeting, 21st Feb – 3rd Mar 2022**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.306** | **CR** | **-** | **rev** | **-** | **Current version:** | **16.7.0** |  |
|  |
| *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 | **X** | Core Network |  |

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|  |
| ***Title:***  | 38.306 CR for SONMDT UE capabilities |
|  |  |
| ***Source to WG:*** | CATT |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NR\_ENDC\_SON\_MDT\_enh-Core |  | ***Date:*** | 2022-03-01 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***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)* |
|  |  |
| ***Reason for change:*** | Introduction of R17 features on SON and MDT. |
|  |  |
| ***Summary of change:*** | R17 UE capabilities for SON and MDT are defined. |
|  |  |
| ***Consequences if not approved:*** | No R17 UE capabilities for SON and MDT are defined. |
|  |  |
| ***Clauses affected:*** | 4.2.17, 4.2.18, 5.7, 6 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS38.331 CR TBD |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

*First change*

### 4.2.17 SON parameters

| Definitions for parameters | Per | M | FDD-TDD DIFF | FR1-FR2 DIFF |
| --- | --- | --- | --- | --- |
| ***onDemandSI-Report-r17***Indicates whether the UE supports delivery of on-Demand SI information upon request from the network as specified in TS 38.331 [9]. | UE | No | No | No |
| ***pscell-MHI-Report-r17***Indicates whether the UE supports the storage of PSCell mobility history information and the reporting in *UEInformationResponse* message as specified in TS 38.331 [9]. | UE | No | No | No |
| ***rach-Report-r16***Indicates whether the UE supports delivery of rachReport upon request from the network. | UE | No | No | No |
| ***rlfReportCHO-r17***Indicates whether the UE supports RLF-Report for conditional handover. | UE | No | No | No |
| ***rlfReportDAPS-r17***Indicates whether the UE supports RLF-Report for DAPS handover. | UE | No | No | No |
| ***success-HO-Report-r17***Indicates whether the UE supports the storage and delivery of Successful Handover Report. | UE | No | No | No |
| ***twoStepRACH-Report-r17***Indicates whether the UE supports the storage and delivery of 2-step RACH related information upon request from the network as specified in TS 38.331 [9]. | UE | No | No | No |

### 4.2.18 UE-based performance measurement parameters

| Definitions for parameters | Per | M | FDD-TDD DIFF | FR1-FR2 DIFF |
| --- | --- | --- | --- | --- |
| ***barometerMeasReport-r16***Indicates whether UE supports uncompensated barometeric pressure measurement reporting upon request from the network. | UE | No | No | No |
| ***excessPacketDelay-r17***Indicates whether the UE supports the UL PDCP excess packet delay measurement per DRB as specified in TS 38.314 [26]. A UE that supports the UL PDCP excess packet delay measurement shall also support the measurement configuration and reporting as specified in TS 38.331 [9].  | UE | No | No | No |
| ***immMeasBT-r16***Indicates whether the UE supports Bluetooth measurements in RRC\_CONNECTED state. | UE | No | No | No |
| ***immMeasWLAN-r16***Indicates whether the UE supports WLAN measurements in RRC\_CONNECTED state. | UE | No | No | No |
| ***loggedMeasBT-r16***Indicates whether the UE supports Bluetooth measurements in RRC\_IDLE and RRC\_INACTIVE state. | UE | No | No | No |
| ***loggedMeasurements-r16***Indicates whether the UE supports logged measurements in RRC\_IDLE and RRC\_INACTIVE. A UE that supports logged measurements shall support both periodical logging and event-triggered logging. The memory size of MDT logged measurements is 64KB. | UE | No | No | No |
| ***loggedMeasWLAN-r16***Indicates whether the UE supports WLAN measurements in RRC\_IDLE and RRC\_INACTIVE state. | UE | No | No | No |
| ***multipleCEF-Report-r17***Indicates whether the UE supports the storage and delivery of multiple CEF upon request from the network. | UE | No | No | No |
| ***orientationMeasReport-r16***Indicates whether the UE supports orientation information reporting upon request from the network. | UE | No | No | No |
| ***sigBasedLogMDT-OverrideProtect-r17***Indicates whether the UE supports the override protection of the signalling based Logged MDT configured in NR. | UE | No | No | No |
| ***speedMeasReport-r16***Indicates whether the UE supports speed information reporting upon request from the network. | UE | No | No | No |
| ***gnss-Location-r16***Indicates whether the UE is equipped with a GNSS or A-GNSS receiver that may be used to provide detailed location information along with SON or MDT related measurements in RRC\_CONNECTED, RRC\_IDLE and RRC\_INACTIVE. | UE | No | No | No |
| ***ulPDCP-Delay-r16***Indicates whether the UE supports UL PDCP Packet Average Delay measurement (as specified in TS 38.314 [26]) and reporting in RRC\_CONNECTED state. | UE | No | No | No |

*Next change*

## 5.7 MDT and SON features

| Definitions for feature |
| --- |
| **Mobility history information storage**It is optional for UE to support the storage of PCell mobility history information and the reporting in *UEInformationResponse* message as specified in TS 38.331 [9]. |
| **Cross RAT RLF Report**It is optional for UE to support the delivery of EUTRA RLF report to an NR node upon request from the network. |
| **Radio Link Failure Report for inter-RAT MRO EUTRA**It is optional for UE to support:- Inclusion of EUTRA CGI and associated TAC, if available, and otherwise to include the physical cell identity and carrier frequency of the target PCell of the failed handover as *failedPCellId* in *RLF-Report* upon request from the network as specified in TS 38.331 [9].- Inclusion of EUTRA CGI and associated TAC as *previousPCellId* in *RLF-Report* as specified in TS 38.331 [9].- Inclusion of *eutraReconnectCellId* in *reconnectCellId* in the *RLF-Report* as specified in TS 38.331 [9] upon UE has radio link failure or handover failure and successfully re-connected to an E-UTRA cell. |
| **SCG Failure Report for MRO**It is optional for UE to support the delivery of the SCG failure related parameters for MRO in *SCGFailureInformation* message to the network. |
| **SpCell ID indication**It is optional for UE to support the delivery of the SpCell ID in the RA-Report, if the RA procedure is performed in a SCell of the MCG/SCG. |

#  6 Conditionally mandatory features without UE radio access capability parameters

| Features | Condition |
| --- | --- |
| Skipping UL configured grant if no data to transmit. | Either *configuredUL-GrantType1* or *configuredUL-GrantType2* is supported. |
| Downlink SDAP header | Either NAS reflective QoS or *as-ReflectiveQoS* is supported. |
| IMS emergency call | It is mandatory to support IMS emergency call for UEs which are IMS voice capable in NR. |
| MAC subheaders with one-octet eLCID field | It is mandatory to support MAC subheaders with one-octet eLCID field for UEs/IAB-MTs supporting MAC CEs using extended LCID values as specified in TS 38.321 [8]. |
| Logged MDT measurement suspension due to IDC interference | It is mandatory to support Logged MDT measurement suspension due to IDC interference for UEs which are supporting logged measurements in RRC\_IDLE and RRC\_INACTIVE upon request from the network and in-device coexistence indication as specified in TS 38.331 [9]. |

*End of change*

# Annex:

The following table is R17 Layer-2 and Layer-3 feature list for NR\_ENDC\_SON\_MDT\_enh-Core for reference.

6.2.xx NR\_ENDC\_SON\_MDT\_enh-Core

**Table 6.2.xx-1: Layer-2 and Layer-3 feature list for NR\_ENDC\_SON\_MDT\_enh-Core**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Features** | **Index** | **Feature group** | **Components** | **Prerequisite feature groups** | **Field name in TS 38.331 [2]** | **Parent IE in TS 38.331 [2]** | **Need of FDD/TDD differentiation** | **Need of FR1/FR2 differentiation** | **Note** | **Mandatory/Optional** |
| xx. NR\_ENDC\_SON\_MDT\_enh-Core | xx-1 | RLF for CHO | Indicates whether the UE supports RLF-Report for conditional handover. |  | *rlfReportCHO-r17* | *SON-Parameters-r16* | No | No |  | Optional with capability signalling |
| xx-2 | RLF for DAPS HO | Indicates whether the UE supports RLF-Report for DAPS handover. |  | *rlfReportDAPS-r17* | *SON-Parameters-r16* | No | No |  | Optional with capability signalling |
| xx-3 | Report for SHR | Indicates whether the UE supports the storage and delivery of Successfu l Handover Report. |  | *success-HO-Report-r17* | *SON-Parameters-r16* | No | No |  | Optional with capability signalling |
| xx-4 | RA report for 2-step RA | Indicates whether the UE supports the storage and delivery of 2-step RACH related information upon request from the network as specified in TS 38.331 [2]. | 20-1 | *twoStepRACH-Report-r17* | *SON-Parameters-r16* | No | No |  | Optional with capability signalling |
| xx-5 | SpCell ID indication | It is optional for UE to support the delivery of the SpCell ID in the RA-Report, if the RA procedure is performed in a SCell of the MCG/SCG. | 20-1 | *N/A* | *N/A* | No | No |  | Optional without capability signalling |
| xx-6 | PSCell MHI storage | t is optional for UE to support the storage of PSCell mobility history information and the reporting in UEInformationResponse message as specified in TS 38.331 [2]. | 20-12 | *pscell-MHI-Report-r17* | *SON-Parameters-r16* | No | No |  | Optional with capability signalling |
| xx-7 | SCG Failure Report for MRO | It is optional for UE to support the delivery of the SCG failure related parameters for MRO in SCGFailureInformation message to the network. |  | *N/A* | *N/A* | No | No |  | Optional without capability signalling |
| xx-8 | On demand SI report | Indicates whether the UE supports delivery of on-Demand SI information upon request from the network as specified in TS 38.331 [2]. | 20-1 | *onDemandSI-Report-r17* | *SON-Parameters-r16* | No | No |  | Optional with capability signalling |
| xx-9 | Signaling Based Logged MDT Override Protection | Indicates whether the UE supports the override protection of the signalling based Logged MDT configured in NR. | 20-6 | *sigBasedLogMDT-OverrideProtect-r17* | *UE-BasedPerfMeas-Parameters-r16* | No | No |  | Optional with capability signalling |
| xx-10 | Multiple CEF report | Indicates whether the UE supports the storage and delivery of multiple CEF upon request from the network. |  | *multipleCEF-Report-r17* | *UE-BasedPerfMeas-Parameters-r16* | No | No |  | Optional with capability signalling |
| xx-11 | excess packet delay | Indicates whether the UE supports the UL PDCP excess packet delay measurement per DRB as specified in TS 38.314. A UE that supports the UL PDCP excess packet delay measurement shall also support the measurement configuration and reporting as specified in TS 38.331 [2]. |  | *excessPacketDelay-r17* | *UE-BasedPerfMeas-Parameters-r16* | No | No |  | Optional with capability signalling |
| xx-12 | Logged MDT Measurement Suspension due to IDC Interference | It is mandatory to support Logged MDT Measurement Suspension due to IDC Interference if both logged MDT and IDC are supported. | 20-6 and 24-7 | *N/A* | *N/A* | No | No |  | Conditional mandatory without capability signalling |