**3GPP TSG-RAN WG2 Meeting #117-e *R2-22xxxxx***

**Electronic, 2022-02-21 - 2022-03-03**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.306** | **CR** | **0676** | **rev** | **1** | **Current version:** | **16.7.0** |  |
|  | | | | | | | | |
| *For* [***HELP***](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 MINT [MINT] | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson, Lenovo, Motorola Mobility | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI17 | | | | |  | ***Date:*** | | | 2022-02-17 |
|  |  | | | |  | |  | | |  |
| ***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 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | CT1 is specifying a feature referred to as MINT. This feature is about PLMNs which experiencing outage during disasters. This feature allows UEs of PLMN which is experiencing so called "disaster conditions" to roam in other networks. Such type of roaming is called disaster roaming.  Two aspects of this feature impacts RAN2 specifications. Namely:   1. **Provision of disaster roaming information**: A network should be able to indicate which PLMNs' UEs are allowed to do disaster roaming. 2. **UAC for disaster roaming UEs**: A network should be able to bar UEs doing disaster roaming more aggresively than non-disaster roaming UEs. A UE that is doing disaster roaming will be applying Access Identity 3.   These aspects are optional features and do no need a AS capability indication. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Captured MINT as an optional feature without AS capability indications. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | MINT is not supported in 38.306. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.4 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 38.300 CR 0402  TS 38.304 CR 0226  TS 38.331 CR 2883 | | |
| ***affected:*** | |  | **N** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **N** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | **Rev 1:**  Editorial corrections on the cover page. | | | | | | | | |

# 5 Optional features without UE radio access capability parameters

## 5.1 PWS features

| Definitions for feature |
| --- |
| **CMAS**  It is optional for UE to support CMAS reception as specified in TS 38.331 [9]. It is optional for a CMAS-capable UE to support Geofencing information (*warningAreaCoordinates*) as specified in TS 38.331 [9]. |
| **ETWS**  It is optional for UE to support ETWS reception as specified in TS 38.331 [9]. |
| **KPAS**  It is optional for UE to support Korean Public Alert System (KPAS) reception as specified in TS 38.331 [9]. KPAS uses the same AS mechanisms as defined for CMAS. Therefore a KPAS-capable UE shall support all behaviour that is included in TS 38.331 [9] and TS 38.304 [21] for a CMAS-capable UE. |
| **EU-Alert**  It is optional for UE to support EU-Alert reception as specified in TS 38.331 [9]. EU-Alert uses the same AS mechanisms as defined for CMAS. Therefore a EU-Alert-capable UE shall support all behaviour that is included in TS 38.331 [9] and TS 38.304 [21] for a CMAS-capable UE. |

## 5.2 UE receiver features

| Definitions for feature |
| --- |
| SU-MIMO Interference Mitigation advanced receiver  - R-ML (reduced complexity ML) receivers with enhanced inter-stream interference suppression for SU-MIMO transmissions with rank 2 with 2 RX antennas  - R-ML (reduced complexity ML) receivers with enhanced inter-stream interference suppression for SU-MIMO transmissions with rank 2, 3, and 4 with 4 RX antennas  UE supporting the feature is required to meet the Enhanced Receiver Type requirements in TS 38.101-4 [18]. |

## 5.3 RRC connection

| Definitions for feature |
| --- |
| **RRC connection release with deprioritisation**  It is optional for UE to support *RRCRelease* with *deprioritisationReq* as specified in TS 38.331 [9]. |
| **RRC connection establishment failure with temporary offset**  It is optional for UE to support RRC connection establishment failure with temporary offset (*Qoffsettemp*) as specified in TS 38.331 [9]. |

## 5.4 Other features

| Definitions for feature |
| --- |
| **Segmentation for UE capability information**  It is optional for UE to support segmentation of *UECapabilityInformation* as specified in TS 38.331 [9]. |
| **eCall over IMS**  It is optional for UE to support eCall over IMS as specified in TS 38.331 [9]. |
| **Access Category 1 selection assistance information enhancement**  It is optional for UE that is configured for delay tolerant service to support Access Category 1 selection assistance information enhancement, according to *uac-AC1-SelectAssistInfo-r16* as specified in TS 38.331 [9]. |
| **Random access prioritization for MPS and MCS**  It is optional for UE that is configured for MPS or MCS to support random access prioritization for Access Identity 1 or 2 as specified in TS 38.321 [8]. |
| **Minimization of service interruption**  It is optional for UE to support minimization of service interruption including reporting to NAS of disaster roaming information for available PLMNs and Access Barring check for Access Identity 3, as specified in TS 38.331 [9]. |

## 5.5 Sidelink Features

| Definitions for feature |
| --- |
| **Short-term time-scale TDM for in-device coexistence**  It is optional for UE to support prioritization between LTE sidelink transmission/reception and NR sidelink transmission/reception.  This field is only applicable if the UE supports at least one of *sl-Reception-r16*, *sl-TransmissionMode1-r16* and *sl-TransmissionMode2-r16*, and if the UE supports V2X sidelink communication in the band combination. |
| **Rank 2 PSSCH transmission**  It is optional for UE to support rank 2 PSSCH transmission. This field is only applicable if the UE supports *csi-ReportSidelink-r16* with *csi-RS-PortsSidelink* = p2. |

## 5.6 RRM measurement features

| Definitions for feature |
| --- |
| **Relaxed measurement**  It is optional for UE to support relaxed RRM measurements of neighbour cells in RRC\_IDLE/RRC\_INACTIVE as specified in TS 38.304 [21]. |

## 5.7 MDT and SON features

| Definitions for feature |
| --- |
| **Mobility history information storage**  It is optional for UE to support the storage of 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. |