**3GPP TSG- Meeting #bis *R2-22xxxxx***

**, 2022-10-10 – 2022-10-19**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** | **3557** | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *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:*** | Correction to disasterRoamingFromAnyPLMN [MINT] | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson, Lenovo | | | | | | | | | |
| ***Source to TSG:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI17 | | | | |  | ***Date:*** | | | 2022-09-29 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | |  |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | In the LS C1-225386, CT1 indicated that the RAN2-description of the so called “single bit-approach” for MINT, which in NR RRC is indicated with the value “disasterRoamingFromAnyPLMN”, is not aligned with the CT1 description of this indication. CT1 asks RAN2 to consider replacing description of disasterRoamingFromAnyPLMN in TS 38.331 with a reference to the definition of the "disaster related indication" in TS 23.122 section 4.4.3.1.1, as shown here for reference:  5) an NG-RAN cell of the PLMN or of a shared network where the PLMN is available:  A) broadcasts the disaster related indication for the PLMN. The disaster related indication broadcasted by the NG-RAN cell for the PLMN indicates that the PLMN is accessible for disaster inbound roamers, that this PLMN accepts disaster inbound roamers from any PLMN(s) other than the PLMN(s) available on the NG-RAN cell, and that a disaster condition applies to all PLMN(s) other than the PLMN(s) available on the NG-RAN cell in the location of the broadcast. If the disaster related indication is broadcasted, the disaster inbound roamers attempt to determine the MS determined PLMN with disaster condition as per bullet q2); or | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Change the description of disasterRoamingFromAnyPLMN so it refers to TS 23.122. Also changing the name of this indication to be aligned with the CT1-term for this indication, namely "disasterRelatedIndication".  **Impact Analysis**  Impacted 5G architecture options: NR SA, NE-DC,NR-DC  Impacted functionality:  MINT  Inter-operability:  No inter-operability issues are foreseen. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The RAN2 definition of the “single bit-approach” is not aligned with CT1 definition which may lead to inconsistent UE behaviour with regards to disaster roaming. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 6.3.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Rev 1: Minor polishing. | | | | | | | | |

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 38.300: "NR; Overall description; Stage 2".

[3] 3GPP TS 38.321: "NR; Medium Access Control (MAC); Protocol specification".

[4] 3GPP TS 38.322: "NR; Radio Link Control (RLC) protocol specification".

[5] 3GPP TS 38.323: "NR; Packet Data Convergence Protocol (PDCP) protocol specification".

[6] ITU-T Recommendation X.680 (08/2015) "Information Technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation" (Same as the ISO/IEC International Standard 8824-1).

[7] ITU-T Recommendation X.681 (08/2015) "Information Technology – Abstract Syntax Notation One (ASN.1): Information object specification" (Same as the ISO/IEC International Standard 8824-2).

[8] ITU-T Recommendation X.691 (08/2015) "Information technology – ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)" (Same as the ISO/IEC International Standard 8825-2).

[9] 3GPP TS 38.215: "NR; Physical layer measurements".

[10] 3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRA) Radio Resource Control (RRC); Protocol Specification".

[11] 3GPP TS 33.501: "Security Architecture and Procedures for 5G System".

[12] 3GPP TS 38.104: "NR; Base Station (BS) radio transmission and reception".

[13] 3GPP TS 38.213: "NR; Physical layer procedures for control".

[14] 3GPP TS 38.133: "NR; Requirements for support of radio resource management".

[15] 3GPP TS 38.101-1: "NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1 Standalone".

[16] 3GPP TS 38.211: "NR; Physical channels and modulation".

[17] 3GPP TS 38.212: "NR; Multiplexing and channel coding".

[18] ITU-T Recommendation X.683 (08/2015) "Information Technology – Abstract Syntax Notation One (ASN.1): Parameterization of ASN.1 specifications" (Same as the ISO/IEC International Standard 8824-4).

[19] 3GPP TS 38.214: "NR; Physical layer procedures for data".

[20] 3GPP TS 38.304: "NR; User Equipment (UE) procedures in Idle mode and RRC Inactive state".

[21] 3GPP TS 23.003: "Numbering, addressing and identification".

[22] 3GPP TS 36.101: "E-UTRA; User Equipment (UE) radio transmission and reception".

[23] 3GPP TS 24.501: "Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3".

[24] 3GPP TS 37.324: "Service Data Adaptation Protocol (SDAP) specification".

[25] 3GPP TS 22.261: "Service requirements for the 5G System".

[26] 3GPP TS 38.306: "User Equipment (UE) radio access capabilities".

[27] 3GPP TS 36.304: "E-UTRA; User Equipment (UE) procedures in idle mode".

[28] ATIS 0700041: "WEA 3.0: Device-Based Geo-Fencing".

[29] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".

[30] 3GPP TS 33.401: "3GPP System Architecture Evolution (SAE); Security architecture".

[31] 3GPP TS 36.211: "E-UTRA; Physical channels and modulation".

[32] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".

[33] 3GPP TS 36.104:"E-UTRA; Base Station (BS) radio transmission and reception".

[34] 3GPP TS 38.101-3 "NR; User Equipment (UE) radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios".

[35] 3GPP TS 38.423: "NG-RAN, Xn application protocol (XnAP)".

[36] 3GPP TS 38.473: "NG-RAN; F1 application protocol (F1AP)".

[37] 3GPP TS 36.423: "E-UTRA; X2 application protocol (X2AP)".

[38] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core network protocols; Stage 3".

[39] 3GPP TS 38.101-2 "NR; User Equipment (UE) radio transmission and reception; Part 2: Range 2 Standalone".

[40] 3GPP TS 36.133:"E-UTRA; Requirements for support of radio resource management".

[41] 3GPP TS 37.340: "E-UTRA and NR; Multi-connectivity; Stage 2".

[42] 3GPP TS 38.413: "NG-RAN, NG Application Protocol (NGAP)".

[43] 3GPP TS 23.502: "Procedures for the 5G System; Stage 2".

[44] 3GPP TR 36.816: "Evolved Universal Terrestrial Radio Access (E-UTRA); Study on signalling and procedure for interference avoidance for in-device coexistence ".

[45] 3GPP TS 25.331: "Universal Terrestrial Radio Access (UTRA); Radio Resource Control (RRC); Protocol specification".

[46] 3GPP TS 25.133: "Requirements for Support of Radio Resource Management (FDD)".

[47] 3GPP TS 38.340: "Backhaul Adaptation Protocol (BAP) specification"

[48] 3GPP TS 37.213: "Physical layer procedures for shared spectrum channel access".

[49] 3GPP TS 37.355: "LTE Positioning Protocol (LPP)".

[50] IEEE 802.11-2012, Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications, IEEE Std.

[51] Bluetooth Special Interest Group: "Bluetooth Core Specification v5.0", December 2016.

[52] 3GPP TS 32.422: "Telecommunication management; Subscriber and equipment trace; Trace control and configuration management".

[53] 3GPP TS 38.314: "NR; layer 2 measurements".

[54] Void.

[55] 3GPP TS 23.287: "Architecture enhancements for 5G System (5GS) to support Vehicle-to-Everything (V2X) services".

[56] 3GPP TS 23.285: "Technical Specification Group Services and System Aspects; Architecture enhancements for V2X services".

[57] 3GPP TS 24.587: " Technical Specification Group Core Network and Terminals; Vehicle-to-Everything (V2X) services in 5G System (5GS)".

[58] Military Standard WGS84 Metric MIL-STD-2401 (11 January 1994): "Military Standard Department of Defence World Geodetic System (WGS)".

[59] 3GPP TS 38.101-4 "NR; User Equipment (UE) radio transmission and reception; Part 4: Performance Requirements".

[60] 3GPP TS 33.536: "Technical Specification Group Services and System Aspects; Security aspects of 3GPP support for advanced Vehicle-to-Everything (V2X) services".

[61] 3GPP TS 37.320: "Radio measurement collection for Minimization of Drive Tests (MDT); Overall description; Stage 2".

[62] 3GPP TS 36.306: "User Equipment (UE) radio access capabilities".

[63] 3GPP TS 38.174: "NR; Integrated Access and Backhaul (IAB) radio transmission and reception".

[64] 3GPP TS 38.472: "NG-RAN; F1 signalling transport".

[65] 3GPP TS 23.304: "Proximity based Services (ProSe) in the 5G System (5GS)".

[66] 3GPP TS 38.351: "NR; Sidelink Relay Adaptation Protocol (SRAP) Specification".

[67] 3GPP TS 23.247: "Architectural enhancements for 5G multicast-broadcast services; Stage 2"

[68] 3GPP TS 26.247: "Transparent end-to-end Packet-switched Streaming Service (PSS); Progressive Download and Dynamic Adaptive Streaming over HTTP (3GP-DASH)".

[69] 3GPP TS 26.114: "IP Multimedia Subsystem (IMS); Multimedia Telephony; Media handling and interaction".

[70] 3GPP TS 26.118: "Virtual Reality (VR) profiles for streaming applications".

[71] NIMA TR 8350.2, Third Edition, Amendment 1, 3 January 2000: "DEPARTMENT OF DEFENSE WORLD GEODETIC SYSTEM 1984".

[72] 3GPP TS 24.554: "Technical Specification Group Core Network and Terminals; Proximity-services (ProSe) in 5G System (5GS) protocol".

[73] 3GPP TS 38.305: "NG Radio Access Network (NG-RAN); Stage 2 functional specification of User Equipment (UE) positioning in NG-RAN".

[X] 3GPP TS 23.122: "Non-Access-Stratum (NAS) functions related to Mobile Station (MS) in idle mode".

[Next change]

### 6.3.1 System information blocks

[Omitted unchanged parts]

#### – *SIB15*

*SIB15* contains configurations of disaster roaming information.

*SIB15* information element

-- ASN1START

-- TAG-SIB15-START

SIB15-r17 ::= SEQUENCE {

commonPLMNsWithDisasterCondition-r17 SEQUENCE (SIZE (1..maxPLMN)) OF PLMN-Identity OPTIONAL, -- Need R

applicableDisasterInfoList-r17 SEQUENCE (SIZE (1..maxPLMN)) OF ApplicableDisasterInfo-r17 OPTIONAL, -- Need R

lateNonCriticalExtension OCTET STRING OPTIONAL,

...

}

ApplicableDisasterInfo-r17 ::= CHOICE {

noDisasterRoaming-r17 NULL,

disasterRelatedIndication-r17 NULL,

commonPLMNs-r17 NULL,

dedicatedPLMNs-r17 SEQUENCE (SIZE (1..maxPLMN)) OF PLMN-Identity

}

-- TAG-SIB15-STOP

-- ASN1STOP

| *SIB15* field descriptions |
| --- |
| ***commonPLMNsWithDisasterCondition***  A list of PLMN(s) for which disaster condition applies and that disaster inbound roaming is accepted, which can be commonly applicable to the PLMNs sharing the cell. |
| ***applicableDisasterInfoList***  A list indicating the applicable disaster roaming information for the networks indicated in *plmn-IdentityInfoList* and *npn-IdentityInfoList-r16*. The network indicates in this list one entry for each entry of *plmn-IdentityInfoList*, followed by one entry for each entry of *npn-IdentityInfoList-r16*, meaning that this list will have as many entries as the number of entries of the combination of *plmn-IdentityInfoList* and *npn-IdentityInfoList-r16*. The first entry in this list indicates the disaster roaming information applicable for the network(s) in the first entry of *plmn-IdentityInfoList*/*npn-IdentityInfoList-r16*, the second entry in this list indicates the disaster roaming information applicable for the network(s) in the second entry of *plmn-IdentityListInfo*/*npn-IdentityInfoList-r16*, and so on. Each entry in this list can either be having the value *noDisasterRoaming*, *disasterRelatedIndication*, *commonPLMNs*, or *dedicatedPLMNs*. If an entry in this list takes the value *noDisasterRoaming*, disaster inbound roaming is not allowed in this network(s). If an entry in this list takes the value *disasterRelatedIndication*, the meaning of this field for this network(s) is as specified for "disaster related indication" in TS 23.122 [X], subclause 4.4.3.1.1. If an entry in this list takes the value *commonPLMNs*, the PLMN(s) with disaster conditions indicated in the field *commonPLMNsWithDisasterCondition* apply for this network(s). If an entry in this list contains the value *dedicatedPLMNs*, the listed PLMN(s) are the PLMN(s) with disaster conditions that the network(s) corresponding to this entry accepts disaster inbound roamers from. For SNPNs, the network indicates the value *noDisasterRoaming*. |

#### – *SIB15*

*SIB15* contains configurations of disaster roaming information.

*SIB15* information element

-- ASN1START

-- TAG-SIB15-START

SIB15-r17 ::= SEQUENCE {

commonPLMNsWithDisasterCondition-r17 SEQUENCE (SIZE (1..maxPLMN)) OF PLMN-Identity OPTIONAL, -- Need R

applicableDisasterInfoList-r17 SEQUENCE (SIZE (1..maxPLMN)) OF ApplicableDisasterInfo-r17 OPTIONAL, -- Need R

lateNonCriticalExtension OCTET STRING OPTIONAL,

...

}

ApplicableDisasterInfo-r17 ::= CHOICE {

noDisasterRoaming-r17 NULL,

disasterRelatedIndication-r17 NULL,

commonPLMNs-r17 NULL,

dedicatedPLMNs-r17 SEQUENCE (SIZE (1..maxPLMN)) OF PLMN-Identity

}

-- TAG-SIB15-STOP

-- ASN1STOP

| *SIB15* field descriptions |
| --- |
| ***commonPLMNsWithDisasterCondition***  A list of PLMN(s) for which disaster condition applies and that disaster inbound roaming is accepted, which can be commonly applicable to the PLMNs sharing the cell. |
| ***applicableDisasterInfoList***  A list indicating the applicable disaster roaming information for the networks indicated in *plmn-IdentityInfoList* and *npn-IdentityInfoList-r16*. The network indicates in this list one entry for each entry of *plmn-IdentityInfoList*, followed by one entry for each entry of *npn-IdentityInfoList-r16*, meaning that this list will have as many entries as the number of entries of the combination of *plmn-IdentityInfoList* and *npn-IdentityInfoList-r16*. The first entry in this list indicates the disaster roaming information applicable for the network(s) in the first entry of *plmn-IdentityInfoList*/*npn-IdentityInfoList-r16*, the second entry in this list indicates the disaster roaming information applicable for the network(s) in the second entry of *plmn-IdentityInfoList*/*npn-IdentityInfoList-r16*, and so on. Each entry in this list can either be having the value *noDisasterRoaming*, *disasterRoamingFromAnyPLMN*, *commonPLMNs*, or *dedicatedPLMNs*. If an entry in this list takes the value *noDisasterRoaming*, disaster inbound roaming is not allowed in this network(s). If an entry in this list takes the value *disasterRelatedIndication*, the meaning of this field for this network(s) is as specified for "disaster related indication" in TS 23.122 [X], subclause 4.4.3.1.1. If an entry in this list takes the value *commonPLMNs*, the PLMN(s) with disaster conditions indicated in the field *commonPLMNsWithDisasterCondition* apply for this network(s). If an entry in this list contains the value *dedicatedPLMNs*, the listed PLMN(s) are the PLMN(s) with disaster conditions that the network(s) corresponding to this entry accepts disaster inbound roamers from. For SNPNs, the network indicates the value *noDisasterRoaming*. |