**3GPP TSG-SA WG6 Meeting #36-BIS-e S6-200581**

**E-meeting, 31st March – 8th April 2020 (revision of S6-200531)**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **23.280** | **CR** | **0243** | **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 |  | Core Network | **X** |

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| ***Title:*** | Additional details to the Location information report | | | | | | | | | |
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| ***Source to WG:*** | BDBOS, KRRI | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | enh3MCPTT | | | | |  | ***Date:*** | | | 2020-04-07 |
|  |  | | | |  | |  | | |  |
| ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The current information flow does not provide any information, which kind of information may reported as location information.  3GPP TS 22.280 defines “Location” in clause 3.1 as “The currentposition and if available information about the instantaneous velocity and direction of the MCX UE.”, but other information as “coordinates” are not considered so far.  3GPP TS 22.280 is asking with the requirement: “[R-5.9a-015] The MCX Service system shall allow an MCX Service Administrator to make use of information (e.g. operational schedules, locations, velocity or direction) from external sources to create or delete a functional alias.” for more information, than just the coordinates.  3GPP TS 22.280 is asking with the requirement: “[R-5.11-002a] The MCX Service shall be able to provide a mechanism for obtaining high accuracy Location information by integrating position information from multiple external sources (e.g. magnetometers, orientation sensors, GNSS)” for more information than just the coordinates.  3GPP TS 22.280 is asking with the requirement: “[R-5.11-006] The conveyed Location information shall be the most recently obtained information about the position of the MCX UE at the time of the Location information conveyance.” for the most current location, but only coordinates does not allow any evaluation. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adding a more detailed list of possible information elements, as part of the location information. | | | | | | | | |
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| ***Consequences if not approved:*** | | Clarity about the location information elements is missing, while detailed requirements are exist. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 3.1, 10.9.2.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \* \*

# 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 22.179: "Mission Critical Push to Talk (MCPTT); Stage 1".

[3] 3GPP TS 22.280: "Mission Critical Services Common Requirements (MCCoRe); Stage 1".

[4] 3GPP TS 22.281: "Mission Critical Video services".

[5] 3GPP TS 22.282: "Mission Critical Data services".

[6] 3GPP TS 23.002: "Network Architecture".

[7] 3GPP TS 23.179: "Functional architecture and information flows to support mission critical communication services; Stage 2"

[8] 3GPP TS 23.203: "Policy and charging control architecture".

[9] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".

[10] 3GPP TS 23.237: "IP Multimedia Subsystem (IMS) Service Continuity; Stage 2".

[11] 3GPP TS 23.246: "Multimedia Broadcast/Multicast Service (MBMS); Architecture and functional description".

[12] 3GPP TS 23.281: "Functional architecture and information flows to support Mission Critical Video (MCVideo); Stage 2".

[13] 3GPP TS 23.282: "Functional architecture and information flows to support Mission Critical Data (MCData); Stage 2".

[14] 3GPP TS 23.303: "Proximity-based services (ProSe); Stage 2".

[15] 3GPP TS 23.335: "User Data Convergence (UDC); Technical realization and information flows".

[16] 3GPP TS 23.379: "Functional architecture and information flows to support Mission Critical Push To Talk (MCPTT); Stage 2".

[17] 3GPP TS 23.401: "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".

[18] 3GPP TS 23.468: "Group Communication System Enablers for LTE (GCSE\_LTE); Stage 2".

[19] 3GPP TS 29.283: "Diameter Data Management Applications".

[20] Void

[21] 3GPP TS 36.300: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2".

[22] IETF RFC 5245 (April 2010): "Interactive Connectivity Establishment (ICE): A Protocol for Network Address Translator (NAT) Traversal for Offer/Answer Protocols".

[23] GSMA PRD IR.92 v10.0: "IMS Profile for Voice and SMS".

[24] GSMA PRD IR.88 v15.0: "LTE and EPC Roaming Guidelines".

[25] 3GPP TS 33.180: "Security of the mission critical service".

[26] IETF RFC 6733 (October 2012): "Diameter Base Protocol".

[27] 3GPP TS 29.214: "Policy and Charging Control over Rx reference point".

[28] 3GPP TS 22.011: "Service accessibility".

[29] 3GPP TS 23.271: "Functional stage 2 description of Location Services (LCS)".

[X] 3GPP TS 25.305: "Stage 2 functional specification of User Equipment (UE) positioning in UTRAN".

[Y] 3GPP TS 23.032: "Universal Geographical Area Description (GAD)".

\* \* \* Next Change \* \* \* \*

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

**Accuracy:** Reflects the uncertainty of the location at the moment of location measurement, e.g. see 3GPP TS 25.305 [X] and 3GPP TS 23.032 [Y].

**Active MC service user profile:** The MC service user profile that is currently used by an MC service client of an MC service user while receiving MC service.

**Altitude:** Third dimension for the geographical coordinates at the moment of location measurement, e.g. see 3GPP TS 25.305 [X] and 3GPP TS 23.032 [Y].

**Bearing:** Direction at the moment of location measurement, e.g. see 3GPP TS 25.305 [X].

**ECGI:** E-UTRAN Cell Global Identifier which is used to identify cells globally, where the ECGI is constructed from the Mobile Country Code (MCC), Mobile Network Code (MNC) and the E-UTRAN Cell Identifier (ECI).

**Interconnection:** A means of communication between MC systems whereby MC service users obtaining MC service from one MC system can communicate with MC service users who are obtaining MC service from one or more other MC systems.

**Interconnection group:** An MC service group that is configured to allow inclusion of MC service group members who are MC service users from partner MC system(s).

**LCS network:** The 3GPP network that provides location service as defined in 3GPP TS 23.271 [29].

**Location:** The current physical location of the MC service UE.

**MBMS SAI:** Multimedia Broadcast Multicast Service Area Identity which is mapped to the MBMS service area.

**MC gateway server:** A server providing topology hiding for MC service interconnection with a partner MC system, where that partner MC system is in a different trust domain.

**MC service:** A generic name for any one of the three mission critical services: either MCPTT, or MCVideo, or MCData.

**MC service affiliated group member:** An MC service user who has indicated an interest in a particular MC service group and has been accepted to participate in MC service group communication for that MC service group.

**MC service client:** A generic name for the client application function of a specific MC service. MC service client could be replaced by MCPTT client, or MCVideo client, or MCData client depending on the context.

**MC service group:** A defined set of MC service users with associated communication dispositions (e.g. media restrictions, default priority and commencement directions) configured for the use with one or more MC services.

**MC service group affiliation:** A mechanism by which an MC service user's MC service(s) communication interest in one or more MC service groups is determined.

**MC service group call:** A mechanism by which an MC service user can make a one-to-many MC service(s) transmission to other users that are members of MC service group(s).

**MC service group de-affiliation:** A mechanism by which an MC service user's MC service(s) communication interest in one or more MC service groups is removed.

**MC service group home system:** The MC system where the MC service group is defined.

**MC service group host MC service server:** The MC service server within an MC system which provides centralised support for a particular MC service of an MC service group defined in a MC service group home system.

**MC service group member:** An MC service user, whose MC service ID is listed in a particular MC service group.

**MC service ID:** A generic name for the user ID of a mission critical user within a specific MC service. MC service ID could be replaced by MCPTT ID, or MCVideo ID, or MCData ID depending on the context.

**MC service server:** A generic name for the server application function of a specific MC service. MC service server could be replaced by MCPTT server, MCVideo server, or MCData server depending on the context.

**MC service user:** An authorized user, who can use an MC service UE to participate in one or more MC services.

**MC service user profile:** The set of information associated to an MC service user that allows that user to employ one or more MC services in a given role and from a given MC service UE.

**MC service UE:** A UE that can be used to participate in one or more MC services.

**MC system:** The collection of applications, services, and enabling capabilities required to provide a single mission critical service or multiple mission critical services to one or more mission critical organizations.

**MC user:** A user, identified by an MC ID, who, after authorization, obtains mission critical service(s).

**Migration:** A means for an MC Service user to obtain MC service directly from a partner MC system.

**Partner MC system:** Allied MC system that provides MC services to an MC service user based on the MC service user profiles that are defined in the primary MC system of that MC service user.

**Preconfigured MC service group:** an MC service group used only for regrouping that has been configured in advance of a group or user regrouping operation to serve as the source of regroup group configuration.

**Pre-selected MC service user profile:** The MC service user profile that is to be selected as the active MC service user profile through configuration, and applicable for an authenticated MC service user upon MC service authorization.

**Primary MC system:** MC system where the MC service user profiles of an MC service user are defined.

**Requested Priority:** A value for use in a MC service group or MC private communication that, if accepted, is used by the MCX service server to temporarily replace the priority level that is predefined in the MC service group or MC service user profile. This value is used in combination with other factors to determine the application priority for the requested communication.

**Selected MC service user profile:** The MC service user profile that is to be selected as the active MC service user profile for an MC service upon request by an MC service user.

**Serving MC service server:** The MC service server which is providing MC service to an MC service client.

NOTE 1: There is one serving MC service server for each MC service, which can be the primary MC service server of the MC service user of the MC service client, or can be a partner MC service server to which the MC service user has migrated.

**Serving MC system:** The MC system which is providing MC service to an MC user.

NOTE 2: The MC system can be the primary MC system of the MC service user, or can be a partner MC system to which the MC service user has migrated.

**Speed:** Movement at the moment of location measurement, e.g. see 3GPP TS 25.305 [X] and 3GPP TS 23.032 [Y].

**Time of measurement:** Date and time expressed with a certain precision to reflect the moment of the location measurement.

For the purposes of the present document, the following terms given in 3GPP TS 22.280 [3] apply

**Mission Critical**

**Mission Critical Applications**

**Mission Critical Organization**

**Mission Critical Service**

**Functional alias**

For the purposes of the present document, the following terms given in 3GPP TS 22.179 [2] apply

**Multi-talker control**

\* \* \* Next Change \* \* \* \*

#### 10.9.2.2 Location information report

Table 10.9.2.2-1 describes the information flow from the location management client to the location management server for the location information reporting.

Table 10.9.2.2-1: Location information report

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| Set of MC service IDs | M | Set of identities of the reporting MC service user on the MC service UE (e.g. MCPTT ID, MCVideo ID, MCData ID) |
| Functional alias(es) (see NOTE 1) | O | Functional alias that corresponds to the MC service ID. |
| Triggering event | M | Identity of the event that triggered the sending of the report |
| Location Information (see NOTE 2) | M | Location information of the individual MC service user |
| NOTE 1: Each functional alias corresponds to an individual MC service ID.  NOTE 2: This may contain multiple sets of elements for the MC service user. The following elements shall accompany the location information elements: time of measurement and optional accuracy. The following location information elements shall be optional (configurable) present: longitude, latitude, speed, bearing, altitude, ECGI, MBMS SAIs, with at least one provided. | | |

\* \* \* End of Change \* \* \* \*