**3GPP TSG-CT WG1 Meeting #125-eC1-20xxxy**

**Electronic meeting, 20-28 August 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.582** | **CR** | **0005** | **rev** | **1** | **Current version:** | **16.1.0** |  |
|  | | | | | | | | |
| *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 | **X** | ME |  | Radio Access Network |  | Core Network |  |

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| ***Title:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Sepura Ltd | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | MCProtoc17 | | | | |  | ***Date:*** | | | 2020-08-06 |
|  |  | | | |  | |  | | |  |
| ***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) Rel-17 (Release 17)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Clause is needed as part of introduction of Standalone SDS over the media plane | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Clause 9.2.3.2 with clause 9.2.3.2.3 is introduced, based on corresponding clause in 3GPP TS 24.282 and existing approach in 3GPP TS 29.582 | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incomplete description of interworking of Standalone SDS over the media plane | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 9.2.3.2 (new), 9.2.3.2.3 (new), 9.2.3.2.4 (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | C1-204541 | | | | | | | | |

\* \* \* 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".

[4] 3GPP TS 24.229: "IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".

[5] 3GPP TS 23.379: "Functional architecture and information flows to support mission critical communication services; Stage 2".

[6] IETF RFC 3841 (August 2004): "Caller Preferences for the Session Initiation Protocol (SIP)".

[7] IETF RFC 4028 (April 2005): "Session Timers in the Session Initiation Protocol (SIP)".

[9] IETF RFC 6050 (November 2010): "A Session Initiation Protocol (SIP) Extension for the Identification of Services".

[16] IETF RFC 3711: "The Secure Real-time Protocol (SRTP)".

[20] IETF RFC 5366 (October 2008): "Conference Establishment Using Request-Contained Lists in the Session Initiation Protocol (SIP)".

[24] IETF RFC 3261 (June 2002): "SIP: Session Initiation Protocol".

[26] IETF RFC 6665 (July 2012): "SIP-Specific Event Notification".

[31] 3GPP TS 24.481: "Mission Critical Services (MCS) group management Protocol specification".

[33] IETF RFC 3428 (December 2002): "Session Initiation Protocol (SIP) Extension for Instant Messaging".

[37] IETF RFC 3903 (October 2004): "Session Initiation Protocol (SIP) Extension for Event State Publication".

[45] 3GPP TS 24.483: "Mission Critical Services (MCS) Management Object (MO)".

[46] IETF RFC 3986: "Uniform Resource Identifier (URI): Generic Syntax".

[49] 3GPP TS 24.482: "Mission Critical Services (MCS) identity management Protocol specification.

[50] 3GPP TS 24.484: "Mission Critical Services (MCS) configuration management Protocol specification".

[51] IETF RFC 3856 (August 2004): "A Presence Event Package for the Session Initiation Protocol (SIP)".

[67] IETF RFC 4122 (July 2005): "A Universally Unique IDentifier (UUID) URN Namespace".

[78] 3GPP TS 33.180: "Security of the mission critical service".

[80] 3GPP TS 23.283: "Mission Critical Communication Interworking with Land Mobile Radio Systems; Stage 2".

[81] 3GPP TS 24.379: "Mission Critical Push To Talk (MCPTT) call control; protocol specification;".

[82] 3GPP TS 24.282: " Mission Critical Data (MCData) signalling control; Protocol specification;"

[85] 3GPP TS 24.582: "Mission Critical Data (MCData) media plane control; Protocol specification".

[86] IETF RFC 1738 (December 1994): "Uniform Resource Locators (URL)".

[87] 3GPP TS 29.379: "Mission Critical Push To Talk (MCPTT) call control interworking with LMR systems; Protocol specification".

[89] IETF RFC 4826 (May 2007): "Extensible Markup Language (XML) Formats for Representing Resource Lists".

[xx] IETF RFC 3840 (August 2004): "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)".

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

#### 9.2.3.2 Procedures used by the IWF for users homed in the IWF

##### 9.2.3.2.3 Originating procedures

The IWF shall generate a SIP INVITE request in accordance with 3GPP TS 24.229 [4] with the clarifications given below.

The IWF:

1) shall include the g.3gpp.mcdata.sds media feature tag and the g.3gpp.icsi-ref media feature tag with the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.sds" in the Contact header field of the SIP INVITE request according to IETF RFC 3840 [xx];

2) shall include an Accept-Contact header field containing the g.3gpp.mcdata.sds media feature tag along with the "require" and "explicit" header field parameters according to IETF RFC 3841 [6];

3) shall include an Accept-Contact header field with the g.3gpp.icsi-ref media feature tag containing the value of "urn:urn-7:3gpp-service.ims.icsi.mcdata.sds" along with the "require" and "explicit" header field parameters according to IETF RFC 3841 [6];

4) shall include the ICSI value "urn:urn-7:3gpp-service.ims.icsi.mcdata.sds" (coded as specified in 3GPP TS 24.229 [4]), in a P-Preferred-Service header field according to IETF RFC 6050 [9] in the SIP INVITE request;

5) should include the "timer" option tag in the Supported header field;

6) should include the Session-Expires header field according to IETF RFC 4028 [7]. It is recommended that the "refresher" header field parameter is omitted. If included, the "refresher" header field parameter shall be set to "uac";

7) if a one-to-one standalone SDS message is to be sent:

a) shall insert in the SIP INVITE request a MIME resource-lists body with the MCData ID of the invited MCData user, according to rules and procedures of IETF RFC 5366 [20];

b) shall contain an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <mcdata-Params> element with:

i) the <request-type> element set to a value of "one-to-one-sds"; and

c) if an end-to-end security context needs to be established and the security context does not exist or if the existing security context has expired, then:

i) if necessary, shall instruct the key management client to request keying material from the key management server;

NOTE: How the IWF obtains the keying material is out of scope of the present document.

ii) shall use the keying material to generate a PCK as described in 3GPP TS 33.180 [78];

iii) shall use the PCK to generate a PCK-ID with the four most significant bits set to "0001" to indicate that the purpose of the PCK is to protect one-to-one communications and with the remaining twenty eight bits being randomly generated as described in 3GPP TS 33.180 [78];

iv) shall encrypt the PCK to a UID associated to the MCData client using the MCData ID of the invited user and a time related parameter as described in 3GPP TS 33.180 [78];

v) shall generate a MIKEY-SAKKE I\_MESSAGE using the encapsulated PCK and PCK-ID as specified in 3GPP TS 33.180 [78];

vi) shall add the MCData ID associated with the originating user homed in the IWF to the initiator field (IDRi) of the I\_MESSAGE as described in 3GPP TS 33.180 [78]; and

vii) shall sign the MIKEY-SAKKE I\_MESSAGE using the originating signing key determined by the IWF performing the role of an MCData server provided in the keying material together with a time related parameter, and add this to the MIKEY-SAKKE payload, as described in 3GPP TS 33.180 [78];

8) if a group standalone SDS message is to be sent:

a) shall contain in an application/vnd.3gpp.mcdata-info+xml MIME body with the <mcdatainfo> element containing the <mcdata-Params> element with:

i) the <request-type> element set to a value of "group-sds";

ii) the <mcdata-request-uri> element set to the MCData group identity; and

iii) the <mcdata-client-id> element set to the MCData client ID associated with the originating user homed in the IWF; and

9) shall include an SDP offer according to 3GPP TS 24.229 [4] with the clarifications given in clause 9.2.3.2.1.

##### 9.2.3.2.4 Terminating procedures

Upon receipt of an SDS intended for a user homed in the IWF, the IWF processes the message according to the procedures in clause 9.2.3.3.4.

\* \* \* End Changes \* \* \* \*