**3GPP TSG- Meeting #**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **rev** |  | **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:***  |  |
|  |  |
| ***Source to WG:*** |  |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** |  |  | ***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 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:*** | If a disposition notification for an LMR SDS multipoint message is requested (e.g. message read | delivered) then an LMR system such as TETRA may disable forwarding this request to users on (radio) congestion grounds and notify the originator of the request that this has happened. Notification of this decision is not currently supported in LMR-3GPP interworking for Stage 3, leading to a FASMO issue when an originating MC client decides on time-out that a message with dispostion request has not been delivered and decides to re-send to a group. |
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| ***Summary of change:*** | New value of SDS Disposition Nofication is created than an IWF can make use of to inform the originating MC client, along with associated procedural description. |
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| ***Consequences if not approved:*** | Risk of FASMO and congestion caused by an MC client repeatedly sending group SDS message unnecessarily. |
|  |  |
| ***Clauses affected:*** | 6.2.3.1, 12.2.1.2, 15.1.5.1, 15.2.5 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 24.282 CR 0299.  |
| ***affected:*** |  |  |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  |  |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** | Mirror CR to C1-221228 |
|  |  |
| ***This CR's revision history:*** | C1-221198, C1-220447 |

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

### 6.2.3 Disposition Notifications

#### 6.2.3.1 Generating an SDS Notification

In order to generate an SDS notification, the IWF performing the participating role:

1) shall generate an SDS NOTIFICATION message as specified in clause 15.1.5; and

2) shall include in the SIP request, the SDS NOTIFICATION message in an application/vnd.3gpp.mcdata-signalling MIME body as specified in 3GPP TS 24.282 [82] clause E.1.

When generating an SDS NOTIFICATION message as specified in clause 15.1.5, the IWF performing the participating role:

1) if sending a delivered notification, shall set the SDS disposition notification type IE as "DELIVERED" as specified in 3GPP TS 24.282 [82] clause 15.2.5;

2) if sending a read notification, shall set the SDS disposition notification type IE as "READ" as specified in clause 3GPP TS 24.282 [82] 15.2.5;

3) if sending a delivered and read notification, shall set the SDS disposition notification type IE as "DELIVERED AND READ" as specified in 3GPP TS 24.282 [82] clause 15.2.5;

4) if the SDS message could not be delivered, shall set the SDS disposition notification type IE as "UNDELIVERED" as specified in 3GPP TS 24.282 [82] clause 15.2.5;

5) if SDS disposition notification was prevented by the LMR system, shall set the SDS disposition notification type IE as "DISPOSITION PREVENTED BY SYSTEM" as specified in clause 15.2.5;

6) shall set the Date and time IE to the current time to as specified in 3GPP TS 24.282 [82] clause 15.2.8;

7) shall set the Conversation ID to the value of the Conversation ID that was received in the SDS message as specified in clause 15.2.9;

8) shall set the Message ID to the value of the Message ID that was received in the SDS message as specified in clause 15.2.10;

9) if the SDS message was destined for the user, shall not include an Application ID IE (as specified in 3GPP TS 24.282 [82] clause 15.2.7) and shall not include an Extended application ID IE (as specified in 3GPP TS 24.282 [82] clause 15.2.24); and

10) if the SDS message was destined for an application, shall include:

a) an Application ID IE set to the value of the Application ID that was included in the SDS message as specified in 3GPP TS 24.282 [82] clause 15.2.3; or

b) an Extended application ID IE set to the value of the Extended application ID that was included in the SDS message as specified in 3GPP TS 24.282 [82] clause 15.2.24.

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

#### 12.2.1.2 Sending a disposition notification message

The IWF performing the participating role may follow the procedures in this clause to:

- indicate to an MCData client that an SDS message was delivered, read or delivered and read when the originating client requested a delivery, read or delivery and read report;

- indicate to the participating MCData function serving the MCData user that an SDS message was undelivered; or

- indicate to the participating MCData function serving the MCData user that an SDS message had disposition notification by users homed in the LMR system prevented.

Before sending a disposition notification the IWF performing the participating role needs to determine:

- the group identity related to an SDS message request received as part of a group communication. The IWF performing the participating role determines the group identity from the contents of the <mcdata-calling-group-id> element contained in the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SDS message request; and

- the MCData user targeted for the disposition notification. The IWF performing the participating role determines the targetted MCData user from the contents of the <mcdata-calling-user-id> element contained in the application/vnd.3gpp.mcdata-info+xml MIME body of the incoming SDS message request.

The IWF performing the participating role generates a SIP MESSAGE request in accordance with 3GPP TS 24.229 [4] and IETF RFC 3428 [33] with the clarifications given below.

The IWF performing the participating role:

1) shall build the SIP MESSAGE request as specified in clause 6.2.4.1;

2) shall follow the rules specified in clause 6.4 for the handling of MIME bodies in a SIP message when processing the remaining steps in this clause;

3) shall insert in the SIP MESSAGE request an application/resource-lists+xml MIME body containing the MCData ID of the targeted MCData user, according to rules and procedures of IETF RFC 5366 [20];

4) if sending a disposition notification in response to an MCData group data request, shall include an <mcdata-calling-group-id> element set to the MCData group identity in the application/vnd.3gpp.mcdata-info+xml MIME body;

5) if sending an SDS notification, shall generate an SDS NOTIFICATION message and include it in the SIP MESSAGE request as specified in clause 6.2.3.1; and

6) shall send the SIP MESSAGE request according to rules and procedures of 3GPP TS 24.229 [4].

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

### 15.1.5 SDS NOTIFICATION message

#### 15.1.5.1 Message definition

This message is sent by the MCData client towards a participant homed in the IWF via the network and from the IWF towards MCData clients to share SDS disposition information. For the contents of the message see Table 15.1.5.1-1.

Message type: SDS NOTIFICATION

Direction: MCData server to IWF and IWF to MCData server

Table 15.1.5.1-1: SDS NOTIFICATION message content

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| IEI | Information Element | Type/Reference | Presence | Format | Length |
|  | SDS notification message identity | Message type15.2.2 | M | V | 1 |
|  | SDS disposition notification type | SDS disposition notification type15.2.5 | M | V | 1 |
|  | Date and time | Date and time3GPP TS 24.282 [82] clause 15.2.8 | M | V | 5 |
|  | Conversation ID | Conversation ID3GPP TS 24.282 [82] clause 15.2.9 | M | V | 16 |
|  | Message ID | Message ID15.2.10 | M | V | 16 |
| 22 | Application ID | Application ID3GPP TS 24.282 [82] clause 15.2.7 | O | TV | 2 |
| 7D | Extended application ID | Extended application ID3GPP TS 24.282 [82] clause 15.2.24 | O | TLV-E | 3-x |

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

### 15.2.5 SDS disposition notification type

The purpose of the SDS disposition notification type information element is to identify the type of SDS disposition notification sent from receiver to the sender.

The value part of the SDS disposition notification type information element is coded as shown in Table 15.2.5-1.

The SDS disposition notification type information element is a type 3 information element with a length of 1 octet.

Table 15.2.5-1: SDS disposition notification type

|  |  |  |
| --- | --- | --- |
| Bits |  |  |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |  | DISPOSITION PREVENTED BY SYSTEM |
|  |  |  |  |  |  |  |  |  |  |
| All other values and types are as defined in 3GPP TS 24.282 [82] clause 15.2.5. |

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