**3GPP TSG-SA WG6 Meeting #39 BIS-e S6-201743**

**e-meeting, 12 – 18 October, 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  | **23.282** | **CR** | **0246** | **rev** | - | **Current version:** | **17.4.0** |  |
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| *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:***  | Various corrections |
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| ***Source to WG:*** | AT&T |
| ***Source to TSG:*** | S6 |
|  |  |
| ***Work item code:*** | eMCData3 |  | ***Date:*** | 2020-10-06 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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 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-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:*** | 1. Misnumbered Figures or references to figures
2. Punctuation and/or use of language errors
3. References to missing or non-numbered procedure steps
4. Clarification that bearer priority for emergency communications can be different than for imminent peril communications
5. Hidden editor’s note due to misuse of style
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|  |  |
| ***Summary of change:*** | Corrections of reasons identified above. |
|  |  |
| ***Consequences if not approved:*** | Misleading and/or incorrect text couldlead to implementation errors.  |
|  |  |
| ***Clauses affected:*** | 6.8.1, 7.4.2.9, 7.4.2.9.2, 7.4.2.10.2, 7.4.2.11.2, 7.4.2.12.2, 7.4.2.13.2, 7.4.3.6.2, 7.5.2.8.2, 7.5.2.12.2, 7.5.2.13.2, 7.5.2.14.2, 7.5.2.15.2 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  |  |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  |  |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  |  |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

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

### 6.8.1 On-network functional model

Figure 6.8.1-1 shows the application plane functional model for User-IP connectivity.



Figure 6.8.1-1: Application plane functional model for IP connectivity

In the model shown in figure 6.8.1-1, the following apply:

- MCData-IPcon-1 reference point is used for MCData application signalling for establishing a session in support of MCData IP connectivity.

- MCData-IPcon-2 reference point carries bidirectional IP Data for point-to-point MCData IP connectivity over the media plane between the U-IPcon distribution function of the MCData server and the IPcon function of the MCData client(s).

- MCData-IPcon-3 reference point is used by the IP-con distribution function of the MCData server to send unidirectional downlink IP Data to the IP-con function of the MCData clients.

- IPcon-host reference point is used for a data host, e.g. server, to use IPconectivity service capabilities. This reference point is outside the scope of the present document.

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

#### 7.4.2.9 Group SDS communication upgrade to a group emergency SDS communication

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

##### 7.4.2.9.2 Procedure

The procedure in figure 7.4.2.9.2-1 describes the case where an authorized MCData user is upgrading an ongoing MCData group SDS communication to an MCData emergency group SDS communication. This procedure is applicable only when group MCData communication is established as described in subclause 7.4.2.6 "Group standalone short data service using media plane" or as described in subclause 7.4.2.7 "Group short data service session".

NOTE 1: For simplicity, a single MCData server is shown in place of a user home MCData server and a group hosting MCData server.

Pre-conditions:

1. The MCData group is previously defined on the group management server with MCData client 1, MCData client 2 and MCData client 3 affiliated to that MCData group.

2. All members of the MCData group belong to the same MCData system.

3. MCData group SDS communication is already in progress.

4. The initiating MCData client 1 has been configured to send an MCData emergency alert when upgrading an MCData emergency group communication.

 

Figure 7.4.2.9.2-1: MCData group SDS communication upgraded to MCData emergency group SDS communication

1. The MCData user at MCData client 1 initiates a group emergency. MCData client 1 sets its MCData emergency state. The MCData emergency state of MCData client 1 is retained until explicitly cancelled by the user of MCData client 1.

NOTE 2: While MCData client 1 is in the emergency state, all types of MCData one-to-one and group communications initiated by MCData client 1 are initiated as MCData emergency communications.

2. MCData client 1 requests the MCData server to upgrade the MCData group to an in-progress emergency state by sending a MCData group SDS communication upgrade request. The MCData client 1 sets the emergency indicator in the request. If configured to send an MCData alert when initiating an MCData emergency group SDS upgrade, the request also contains an indication that an MCData alert is to be initiated.

3. The MCData server sets the emergency state of the MCData group and adjusts the priority of the underlying bearer for all or selected participants in the MCData group SDS communication that receive the communication over unicast.

NOTE 3: The determination of the selected participants whose bearers have to be upgraded is left to implementation.

NOTE 4: While the MCData group is in the in-progress emergency state, all types of MCData communications within the group are processed as emergency group communications by the MCData server. MCData group members that are not in the emergency state do not indicate emergency in group communication requests.

4. MCData server sends the MCData group SDS communication upgrade request towards the MCData clients of each of those affiliated MCData group members. The request contains an indication of an MCData emergency alert if the request from the originator indicated MCData emergency alert.

5. MCData users are notified of the in-progress emergency state of the MCData group.

6. The receiving MCData clients send the MCData group SDS communication upgrade response to the MCData server to acknowledge the MCData group emergency request. For a multicast call, these acknowledgements are not sent.

7. The MCData server sends the MCData group SDS communication upgrade response to the MCData user 1 to confirm the upgrade request.

NOTE 5: Step 7 can occur at any time following step 3, depending on the conditions to proceed with the call.

MCData client 1, MCData client 2 and MCData client 3 continue with the MCData group SDS communication, which has been transformed into an MCData emergency group SDS communication.

#### 7.4.2.10 Group SDS communication in-progress emergency group state cancel

##### 7.4.2.10.1 General

This clause describes procedures related to MCData in-progress emergency group state cancel. The emergency state of the group can also be cancelled by the group FD in-progress emergency state cancellation procedure in subclause 7.5.2.13.2, or by the emergency alert cancellation procedure specified in 3GPP TS 23.280 [16], subclause 10.10.1.2.2.2.

##### 7.4.2.10.2 Procedure

The procedure in figure 7.4.2.10.2-1 describes the case where an authorized MCData user cancels MCData group's in-progress emergency.

Pre-conditions:

1. The MCData group is previously defined on the group management server with MCData client 1, MCData client 2 and MCData client 3 affiliated to that MCData group.

2. All members of the MCData group belong to the same MCData system.

3. MCData group members have been notified about the in-progress emergency.

4. The MCData group is in the in-progress emergency state and has prioritized bearer support.

5. MCData client 1 previously initiated the in-progress emergency for the group.

 

Figure 7.4.2.10.2-1: MCData group SDS in-progress emergency group state cancel

1. The user at the MCData client 1 initiates an MCData group SDS in-progress emergency group state cancel.

NOTE 1: An MCData user authorized to cancel in-progress emergencies on the MCData group can also be authorised to cancel the MCData emergency alert in addition to the initiator. However, only the initiator can cancel the initiator's local MCData emergency state.

2. The MCData client 1 sends an MCData group SDS communication in-progress priority state cancel request to the MCData server. The MCData client 1 also resets the emergency indicator in the request to inform MCData server about cancellation of in-progress emergency group state.

NOTE 2: If an MCData emergency alert relating to MCData client 1 is in effect together with an MCData in-progress emergency group state on the MCData group, the MCData emergency alert of MCData client 1 can be cancelled at the same time. In that case, the MCData group SDS in-progress priority group state cancel request carries an indication that the emergency alert of MCData client 1 is also being cancelled.

NOTE 3: If an MCData group SDS communication in-progress priority state cancel request is received by the MCData server while a group member that is in the emergency state is transmitting, the MCData group SDS communication in-progress priority state cancel request is rejected by the MCData server.

3. The MCData server adjusts the priority of the underlying bearer; priority treatment is no longer required. The MCData server cancels/resets the emergency in-progress state of the MCData group.

4. The MCData server sends an MCData group SDS in-progress priority state cancel request to the MCData group members.

5. MCData group members are notified of the MCData group SDS in-progress emergency state cancel.

6. The receiving MCData clients send the MCData group SDS in-progress priority state cancel response to the MCData server to acknowledge the MCData in-progress emergency group state cancel. For a multicast call scenario, these acknowledgements are not sent.

7. The MCData server sends the MCData group SDS in-progress priority state cancel response to the MCData user 1 to confirm the MCData in-progress emergency group state cancel. If the MCData in-progress emergency group state cancel request (in step 2) contained the "Alert indicator" IE, the MCData client 1 resets its local emergency status.

NOTE 4: Step 7 can occur at any time following step 3, depending on the conditions to proceed with the call.

#### 7.4.2.11 Group SDS communication upgrade to an imminent peril group SDS communication

##### 7.4.2.11.1 General

This clause is for adding procedures related to upgrade to an imminent peril group SDS communication.

##### 7.4.2.11.2 Procedure

This procedure is applicable only when group MCData SDS communication is established as described in subclause 7.4.2.6 "Group standalone short data service using media plane" or as described in subclause 7.4.2.7 "Group short data service session". The MCData service shall support the procedures and related information flows as specified in subclause 7.4.2.9 "Group SDS communication upgrade to a group SDS emergency communication" with the following clarifications:

- In step 2), the MCData client 1 sets the imminent peril indicator;

- In step 3), the bearers’ priority is adjusted as necessary, to correspond to an imminent peril priority which could be different than the setting used in the procedure in subclause 7.4.2.9; and

- In step 5), MCData users are notified of the in-progress imminent peril state of the MCData group.

#### 7.4.2.12 Group SDS communication in-progress imminent peril group state cancel

##### 7.4.2.12.1 General

This clause is for adding procedures related to group SDS communication in-progress imminent peril group state cancel.

##### 7.4.2.12.2 Procedure

The MCData service shall support the procedures and related information flows as specified in subclause 7.4.2.10 "Group SDS communication in-progress emergency group state cancel" with the following clarifications:

- In step 2), the MCData client 1 sets imminent peril indicator; and

- In step 5), MCData users are notified of the group SDS communication in-progress imminent peril state cancel.

#### 7.4.2.13 Providing data for a user entering an ongoing MCData group conversation

##### 7.4.2.13.1 General

The MCData service shall support mechanisms that allow a MCData user be presented with the whole content of a group conversation in a group that he is a member of. This includes the content (messages) exchanged before the MCData user joins the group conversation.

##### 7.4.2.13.2 Procedure

Figure 7.4.2.13.2-1 describes procedures for a MCData user joining late a group conversation.

Pre-conditions:

1. The MCData group is provisioned for lossless communication.

2. All members of the MCData group have an account created in the MCData message store.

3. MCData client 1, MCData client 2 and MCData client 3 are members of the same MCData group,

4. MCData client 1 and 2 are served by MCData server 1 and have registered and affiliated to the MCData group.

5. MCData client 3 is served by MCData server 2 and has not affiliated to the MCData group yet.

NOTE 1: The interactions of MCData client 1 and MCData client 2 to MCData message store are not shown in the figure.



Figure 7.4.2.13.2-1: Providing data for a user entering an ongoing MCData group conversation

1. A group conversation is initiated according to procedures in subclause 7.4.2.6, and all members of the group are invited into the communication whether affiliated or not. As MCData user 3 is not affiliated at this time, MCData server 2 accepts the invitation to the group conversation on behalf of MCData user 3.

2. The media plane is established for the group conversation. MCData server 2 is in the media plane to receive the conversation on behalf of MCData user 3.

3. MCData server 2 stores the received conversation to MCData user 3 account in the MCData message store.

NOTE 2: If the received conversation requests delivery notification the MCData server 2 will send message delivered to the message sender. If the received conversation requests read notification the MCData client 3 will send message read to the message sender once it has presented the message to the user.

4. MCData user 3 is online and using MCData client 3 to affiliate to the MCData group.

5. MCData client 3, through the message store client, synchronizes with the MCData user 3 account in the MCData message store.

6. MCData server 2 invites MCData client 3 to the MCData group conversation.

7. MCData user 3 joins the MCData group conversation.

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

##### 7.4.3.6.2 Procedure

Figure 7.4.3.6.2-1 describes procedures of a MCData user, MCData user 2, that has an account in MCData message store and how his off-network SDS group communication is stored in his account in the MCData message store. All other MCData clients in the figure follow the procedures described in subclause 7.4.3.4.

Pre-conditions:

1. MCData user 1 to N are in an off-network group communication.

2. Information for ProSe direct communications corresponding to the MCData group and its mapping to ProSe Layer-2 Group ID are pre-configured to MCData client 1 to N.

3. MCData client 1 to N are members of the same MCData group.

4. MCData user 2 has an account in the MCData message store.



Figure 7.4.3.6.2-1: Group standalone short data service with MCData message store

1. MCData client 1 to MCData client N are in an off-network group communication according to the procedures in subclause 7.4.3.4, SDS are exchanged among all MCData clients.

2. If the SDS is for MCData user consumption, the SDS is stored in the local message store on the MCData UE of MCData user 2.

NOTE: A pre-configured folder for off-network communication objects can be provisioned both on the UE and the user account on the MCData message store to be used for synchronization.

3. The off-network group communication comes to an end.

4. The MCData user 2 connects back to the network.

5. The MCData user 2 decides to keep the off-network communication in his account on the MCData message store. The message store client 2 uploads the off-network communication objects from the local message store to the MCData message store.

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

##### 7.5.2.8.2 Procedure for single MCData system

The procedure in figure 7.5.2.8.2-1 describes the case where a MCData user is removing the file that was previously uploaded to the MCData content server.

Pre-conditions:

1. The MCData user on the media storage client is registered for receiving MCData service.

2. The file has been successfully uploaded by the MCData user using the procedures defined in subclause 7.5.2.2.

3. The MCData content server has the ability to verify if the requesting MCData user is authorised to remove.



Figure 7.5.2.8.2-1: File removal using HTTP by authorised user

1. The user on the media storage client decides to remove a file that was previously uploaded.

2. The URL of the file to be removed is included in the request sent to the media storage function on the MCData content server.

3. The MCData content server remove the file indicated by the URL.

4. The MCData content server informs the media storage client if the file is successfully removed.

Editor's note: It is FFS if and how the recipients of the file URL need to be notified if the file is no longer available to be downloaded.

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

##### 7.5.2.12.2 Procedure

The procedure in figure 7.5.2.12.2-1 describes the case where an authorized MCData user is upgrading an onging MCData group FD communication to an MCData emergency group FD communication. This procedure is applicable only when group MCData FD communication is established as described in subclause 7.5.2.7 "Group standalone file distribution using media plane".

NOTE 1: For simplicity, a single MCData server is shown in place of a user home MCData server and a group hosting MCData server.

Pre-conditions:

1. The MCData group is previously defined on the group management server with MCData client 1, MCData client 2 and MCData client 3 are affiliated to that MCData group.

2. All members of the MCData group belong to the same MCData system.

3. An MCData group FD communication is already in progress.

4. The initiating MCData client 1 has been configured to send an MCData emergency alert when upgrading an MCData emergency group communication.

 

Figure 7.5.2.12.2-1: MCData group FD communication upgraded to an MCData emergency group FD communcation

1. The MCData user at MCData client 1 initiates a group emergency. MCData client 1 sets its MCData emergency state. The MCData emergency state of MCData client 1 is retained until explicitly cancelled by the user of MCData client 1.

NOTE 2: While MCData client 1 is in the emergency state, all types of MCData one-to-one and group communications initiated by MCData client 1 are initiated as MCData emergency communications.

2. MCData client 1 requests the MCData server to upgrade the MCData group to an in-progress emergency state by sending a MCData group FD upgrade request. The MCData client 1 sets the emergency indicator in the request. If configured to send an MCData alert when initiating an MCData emergency upgrade, the request also contains an indication that an MCData alert is to be initiated.

3. The MCData server sets the emergency state of the MCData group and adjusts the priority of the underlying bearer for all or selected participants in the MCData group FD communication that receive the communication over unicast.

NOTE 3: The determination of the selected participants whose bearers have to be upgraded is left to implementation.

NOTE 4: While the MCData group is in the in-progress emergency state, all types of MCData communications within the group are processed as emergency group communications by the MCData server. MCData group members that are not in the emergency state do not indicate emergency in group communication requests.

4. MCData server sends the MCData group FD upgrade request towards the MCData clients of each of those affiliated MCData group members. The request contains an indication of an MCData emergency alert if the request from the originator indicated MCData emergency alert.

5. MCData users are notified of the in-progress emergency state of the MCData group.

6. The receiving MCData clients send the MCData group FD upgrade response to the MCData server to acknowledge the MCData group emergency request. For a multicast call, these acknowledgements are not sent.

7. The MCData server sends the MCData group FD upgrade response to the MCData user 1 to confirm the upgrade request.

NOTE 5: Step 7 can occur at any time following step 3, depending on the conditions to proceed with the call.

MCData client 1, MCData client 2 and MCData client 3 continue with the MCData group FD communication, which has been transformed into an MCData emergency group FD communication.

#### 7.5.2.13 Group FD communication in-progress emergency group state cancel

##### 7.5.2.13.1 General

This clause describes procedures related to an MCData in-progress emergency group state cancel. The emergency state of the group can also be cancelled by the group SDS in-progress emergency state cancellation procedure in subclause 7.4.2.10.2, or by the emergency alert cancellation procedure specified in 3GPP TS 23.280 [16], subclause 10.10.1.2.2.2.

##### 7.5.2.13.2 Procedure

The procedure in figure 7.5.2.13.2-1 describes the case where an authorized MCData user cancels MCData group's in-progress emergency.

Pre-conditions:

1. The MCData group is previously defined on the group management server with MCData client 1, MCData client 2 and MCData client 3 affiliated to that MCData group.

2. All members of the MCData group belong to the same MCData system.

3. MCData group members have been notified about the in-progress emergency.

4. The MCData group is in the in-progress emergency state and has prioritized bearer support.

5. MCData client 1 previously initiated the in-progress emergency for the group.



Figure 7.5.2.13.2-1: MCData group FD in-progress emergency group state cancel

1. The user at the MCData client 1 initiates an MCData group FD in-progress emergency group state cancel.

NOTE 1: An MCData user authorized to cancel in-progress emergencies on the MCData group can also be authorised to cancel the MCData emergency alert in addition to the initiator. However, only the initiator can cancel the initiator's local MCData emergency state.

2. The MCData client 1 sends an MCData group FD in-progress priority state cancel request to the MCData server. The MCData client 1 also resets emergency indicator in the request to inform MCData server about cancellation of in-progress emergency group state.

NOTE 2: If an MCData emergency alert relating to MCData client 1 is in effect together with an MCData in-progress emergency group state on the MCData group, the MCData emergency alert of MCData client 1 can be cancelled at the same time. In that case, the MCData group FD in-progress priority group state cancel request carries an indication that the emergency alert of MCData client 1 is also being cancelled.

NOTE 3: If an MCData group FD in-progress priority state cancel request is received by the MCData server while a group member that is in the emergency state is transmitting, the MCData group FD in-progress priority state cancel request is rejected by the MCData server.

3. The MCData server adjusts the priority of the underlying bearer; priority treatment is no longer required. The MCData server cancels/resets the emergency in-progress state of the MCData group.

4. The MCData server sends an MCData group FD in-progress priority state cancel request to the MCData group members.

5. MCData group members are notified of the MCData group FD in-progress emergency state cancel.

6. The receiving MCData clients send the MCData group FD in-progress priority state cancel response to the MCData server to acknowledge the MCData in-progress emergency group state cancel. For a multicast call scenario, these acknowledgements are not sent.

7. The MCData server sends the MCData group FD in-progress priority state cancel response to the MCData user 1 to confirm the MCData in-progress emergency group state cancel. If the MCData in-progress emergency group state cancel request (in step 2) contained the "Alert indicator" IE, the MCData client 1 resets its local emergency status.

NOTE 4: Step 7 can occur at any time following step 3, depending on the conditions to proceed with the call.

#### 7.5.2.14 Group FD communication upgrade to an imminent peril group FD communication

##### 7.5.2.14.1 General

This clause is for adding procedures related to an imminent peril group FD communication.

##### 7.5.2.14.2 Procedure

This procedure is applicable only when group MCData communication is established as described in subclause 7.5.2.7 "Group standalone file distribution using media plane". The MCData service shall support the procedures and related information flows as specified in subclause 7.5.2.12 "Group FD communication upgrade to an emergency group FD communication" with the following clarifications:

- In step 2), the MCData client 1 sets the imminent peril indicator;

- In step 3), the bearers’ priority is adjusted as necessary, to correspond to an imminent peril priority which could be different than the setting used in the procedure in subclause 7.5.2.12; and

- In step 5), MCData users are notified of the in-progress imminent peril state of the MCData group.

#### 7.5.2.15 Group FD communication in-progress imminent peril group state cancel

##### 7.5.2.15.1 General

This clause is for adding procedures related to an imminent peril group state cancel.

##### 7.5.2.15.2 Procedure

The MCData service shall support the procedures and related information flows as specified in subclause 7.5.2.13 "Group FD communication in-progress emergency group state cancel" with the following clarifications:

- In step 2), the MCData client 1 sets the imminent peril indicator; and

- In step 5), MCData users are notified of the in-progress imminent peril state cancel.

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