**3GPP TSG-CT WG1 Meeting #126-eC1-20abcd**

**Electronic meeting, 15-23 October 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **24.548** | **CR** | **0007** | **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 |  | ME |  | Radio Access Network |  | Core Network | **x** |

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| ***Title:*** | Stage 3 procedure overlap | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SEAL | | | | |  | ***Date:*** | | | 2020-10-07 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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:*** | | In CT1#125e stage 3 specification duplication between CT1 and CT3 was identified for V2XAPP. As the duplicated specification was related to network internal procedures, it was agreed to remove these parts from CT1 and keep the CT3 specification (and add references when applicable).  The same type of stage 3 duplication has now been identified for SEAL between 3GPP TS 24.548 and 3GPP TS 29.549. It is proposed to remove the duplication from 3GPP TS 24.548 to avoid the increased effort of specification maintenance and minimize the risk of misalignment and contradicting requirements. | | | | | | | | |
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| ***Summary of change:*** | | Network internal procedures included in 3GPP TS 29.549 are replaced with references. | | | | | | | | |
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| ***Consequences if not approved:*** | | Duplicated stage 3 requirements risks misalignment and contradictions leading to incompatible implementations. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 6.2.2, 6.2.3.2.1, 6.2.3.2.2, 6.2.3.5.2, 6.2.3.7.1, 6.2.3.8.2, 6.2.3.9.1, 6.2.3.9.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 23.434: "Service Enabler Architecture Layer for Verticals (SEAL); Functional architecture and information flows".

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

[4] 3GPP TS 23.203: "Policy and charging control architecture".

[5] 3GPP TS 24.008: "Mobile Radio Interface Layer 3 specification; Core Network Protocols; Stage 3".

[6] 3GPP TS 24.229: "IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".

[7] 3GPP TS 24.486: "Vehicle-to-Everything (V2X) Application Enabler (VAE) layer; Protocol aspects; Stage 3".

[8] 3GPP TS 24.545: "Location Management - Service Enabler Architecture Layer for Verticals (SEAL); Protocol specification".

[9] 3GPP TS 24.547: "Identity management - Service Enabler Architecture Layer for Verticals (SEAL); Protocol specification".

[10] 3GPP TS 26.346: "Multimedia Broadcast/Multicast Service (MBMS); Protocols and codecs".

[11] 3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting packet based services and Packet Data Networks (PDN)".

[12] 3GPP TS 29.214: "Policy and Charging Control over Rx reference point".

[13] 3GPP TS 29.468: "Group Communication System Enablers for LTE (GCSE\_LTE); MB2 reference point; Stage 3".

[14] 3GPP TS 29.514: "5G System; Policy Authorization Service; Stage 3".

[15] IETF RFC 2616: "Hypertext Transfer Protocol -- HTTP/1.1".

[16] IETF RFC 3095: "RObust Header Compression (ROHC): Framework and four profiles: RTP, UDP, ESP, and uncompressed".

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

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

[19] IETF RFC 4825: "The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)".

[20] IETF RFC 5795: "The Robust Header Compression (ROHC) Framework".

[21] OMA OMA-TS-XDM\_Group-V1\_1\_1-20170124-A: "Group XDM Specification".

[x] 3GPP TS 29.549: "Service Enabler Architecture Layer for Verticals (SEAL); Application Programming Interface (API) specification; Stage 3".

\*\*\* Next change \*\*\*

### 6.2.2 Unicast resource management

NOTE: Stage 3 for Unicast resource management is specified in 3GPP TS 29.549 [x].

\*\*\* Next change \*\*\*

##### 6.2.3.2.1 VAL server procedure

NOTE: Stage 3 for VAL server procedure is specified in 3GPP TS 29.549 [x].

\*\*\* Next change \*\*\*

##### 6.2.3.2.2 Server procedure

Upon receiving an HTTP POST request message as specified in 3GPP TS 29.549 [x], the SNRM-S shall determine to activate MBMS bearer, and then generate an HTTP POST request message according to IETF RFC 2616 [15]. In the HTTP POST request message, the SNRM-S:

1) shall set the Request-URI to the URI corresponding to the identity of the SNRM-C;

2) shall include a Content-Type header field set to "application/vnd.3gpp.seal-mbms-usage-info+xml";

3) shall include in a MIME body with Content-Type header field set to "application/vnd.3gpp.seal-info+xml", the <seal-request-uri> element set to the VAL user ID of the user;

4) shall include an application/vnd.3gpp.seal-mbms-usage-info+xml MIME body with the <version> element set to "1" and one or more <announcement> elements associated with the pre-activated MBMS bearers in the <mbms-info> root element. Each set of an <announcement> element:

i) shall include a <TMGI> element set to a TMGI value;

NOTE 1: The same TMGI value can only appear in one <announcement> element. The TMGI value is also used to identify the <announcement> when updating or cancelling the <announcement> element.

NOTE 2: The security key active for the general purpose MBMS subchannel on which the mapping (i.e. the Map Group To Bearer message) of media or media control to this MBMS bearer was indicated, is used for MBMS subchannels on this MBMS bearer, unless a different key or an indication of not using encryption is in place.

ii) may include an <alternative-TMGI> element set to a list of additional alternative TMGI used in roaming scenarios;

iii) may include the QCI value in the <QCI> element;

iv) shall include one or more MBMS service area IDs in <mbms-service-area-id> elements in the <mbms-service-areas> element;

NOTE 3: Initial mappings of groups to MBMS subchannels on an MBMS bearer for the purpose of carrying media or media control can occur only where the MBMS service area for this bearer and the MBMS service area for the bearer carrying the general purpose MBMS subchannel on which the Map Group To Bearer message is sent intersect. However, once media or media control were successfully mapped to this bearer, the reception by the SNRM-C can continue (until Unmap Group To Bearer is received or until timeout) throughout the entire MBMS service area of this bearer.

v) if multiple carriers are supported, shall include the frequency to be used in the <frequency> element;

NOTE 4: In the current release if the <frequency> element is included, the frequency in the <frequency> element is the same as the frequency used for unicast.

vi) shall include a <seal-mbms-sdp> element set to the SDP with media and application control information applicable to groups that can use this bearer;

vii) may include a <monitoring-state> element set to "monitoring" or "not-monitoring" used to control if the client is actively monitoring the MBMS bearer quality or not;

viii) may include an <announcement-acknowlegement> element set to "true" or "false" indicating if the NRM server requires an acknowledgement of the MBMS bearer announcement;

ix) may include an <unicast-status> element set to "listening" or "not-listening" indicating if the listening status of the unicast bearer is requested; and

x) if the packet headers are compressed with ROHC specified in IETF RFC 5795 [20] in this MBMS bearer, shall include a <seal-mbms-rohc> element; and

5) shall send the HTTP POST request message towards the SNRM-C according to IETF RFC 2616  [15].

Upon receiving an HTTP POST request message containing:

a) a Content-Type header field set to "application/vnd.3gpp.seal-mbms-usage-info+xml"; and

b) an application/vnd.3gpp.seal-mbms-usage-info+xml MIME body with an <mbms-listening-status-report> element;

the SNRM-S:

a) shall determine the identity of the sender of the received HTTP POST request as specified in clause 6.2.1.1, and:

1) if the identity of the sender of the received HTTP POST request is not authorized to report mbms listening status, shall respond with a HTTP 403 (Forbidden) response to the HTTP POST request and shall skip rest of the steps; and

2) shall support handling an HTTP POST request from a SNRM-C according to procedures specified in IETF RFC 4825 [19] "POST Handling";

b) shall generate an HTTP 200 (OK) response message according to IETF RFC 2616 [15]. In the HTTP 200 (OK) response message, the SNRM-S:

1) shall set the Request-URI to the URI corresponding to the identity of the VAL server;

2) shall include a Content-Type header field set to "application/vnd.3gpp.seal-mbms-usage-info+xml";

3) shall include an application/vnd.3gpp.seal-mbms-usage-info+xml MIME body with an <mbms-bearers> element in the <mbms-info> root element which:

i) shall include a <result> element set to "success" or "failure" indicating success or failure of the MBMS bearers request operation;

ii) may include a <TMGI> element set to a TMGI value;

iii) shall include a <user-plane-address> element set to the BM-SC user plane IP address and port; and

iv) may include a <service-description> element indicating MBMS bearer related configuration information as defined in 3GPP TS 26.346 [10]; and

c) shall send the response message towards the VAL server according to 3GPP TS 29.549 [x].

\*\*\* Next change \*\*\*

##### 6.2.3.5.2 Server procedure

NOTE: Stage 3 for Server procedure is specified in 3GPP TS 29.549 [x].

Upon receiving an HTTP POST request message containing:

a) a Content-Type header field set to "application/vnd.3gpp.seal-mbms-usage-info +xml"; and

b) an application/vnd.3gpp.seal-mbms-usage-info+xml MIME body with an <mbms-listening-status-report> elment;

the SNRM-S:

a) shall determine the identity of the sender of the received HTTP POST request as specified in clause 6.2.1.1, and:

1) if the identity of the sender of the received HTTP POST request is not authorized to report mbms listening status, shall respond with a HTTP 403 (Forbidden) response to the HTTP POST request and shall skip rest of the steps; and

2) shall support handling an HTTP POST request from a SNRM-C according to procedures specified in IETF RFC 4825 [19] "POST Handling"; and

b) shall send the HTTP POST request towards the VAL server according to 3GPP TS 29.549 [x]

Upon receiving an HTTP POST request message containing:

a) a Content-Type header field set to "application/vnd.3gpp.seal-location-info+xml";

b) an application/vnd.3gpp.seal-location-info+xml MIME body with a <report> element in the <location-info> root element;

the SNRM-S:

a) shall determine the identity of the sender of the received HTTP POST request as specified in clause 6.2.1.1, and:

1) if the identity of the sender of the received HTTP POST request is not authorized to report location information, shall respond with a HTTP 403 (Forbidden) response to the HTTP POST request and shall skip rest of the steps; and

2) shall support handling an HTTP POST request from a SNRM-C according to procedures specified in IETF RFC 4825 [19] "POST Handling"; and

b) shall send an MBMS bearer announcement message with information related to TMGI 2 as specified in clause 6.2.3.3 towards the SNRM-C.

\*\*\* Next change \*\*\*

##### 6.2.3.7.1 Server procedure

NOTE: Stage 3 for Server procedure is specified in 3GPP TS 29.549 [x].

\*\*\* Next change \*\*\*

##### 6.2.3.8.2 Server procedure

Upon receiving an HTTP POST request message containing:

a) a Content-Type header field set to "application/vnd.3gpp.seal-mbms-usage-info+xml"; and

b) an application/vnd.3gpp.seal-mbms-usage-info+xml MIME body with an <mbms-listening-status-report> element;

the SNRM-S:

a) shall determine the identity of the sender of the received HTTP POST request as specified in clause 6.2.1.1, and:

1) if the identity of the sender of the received HTTP POST request is not authorized to report mbms listening status, shall respond with a HTTP 403 (Forbidden) response to the HTTP POST request and shall skip rest of the steps; and

2) shall support handling an HTTP POST request from a SNRM-C according to procedures specified in IETF RFC 4825 [19] "POST Handling";

b) shall send a user plane delivery mode as described in 3GPP TS 29.549 [x] towards the VAL server.

\*\*\* Next change \*\*\*

##### 6.2.3.9.1 VAL server procedure

NOTE: Stage 3 for VAL server procedure is specified in 3GPP TS 29.549 [x].

\*\*\* Next change \*\*\*

##### 6.2.3.9.2 Server procedure

Upon receiving an HTTP POST request message as specified in 3GPP TS 29.549 [x], the SNRM-S shall determine to activate MBMS bearer, and then send an MBMS bearer announcement message as described in clause 6.2.3.2.2 towards the SNRM-C.

Upon receiving an HTTP POST request message containing:

a) a Content-Type header field set to "application/vnd.3gpp.seal-mbms-usage-info+xml"; and

b) an application/vnd.3gpp.seal-mbms-usage-info+xml MIME body with an <mbms-listening-status-report> element;

the SNRM-S:

a) shall determine the identity of the sender of the received HTTP POST request as specified in clause 6.2.1.1, and:

1) if the identity of the sender of the received HTTP POST request is not authorized to report mbms listening status, shall respond with a HTTP 403 (Forbidden) response to the HTTP POST request and shall skip rest of the steps; and

2) shall support handling an HTTP POST request from a SNRM-C according to procedures specified in IETF RFC 4825 [19] "POST Handling"; and

b) shall send the response message as described in 3GPP TS 29.549 [x] towards the VAL server.

\*\*\* End of changes \*\*\*