

CR-Form-v7	
CHANGE REQUEST	
⌘ 24.229 CR 284 ⌘ rev 4 ⌘ Current version: 5.2.0 ⌘	⌘ 3 ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ SDP media policy rejection ⌘		
Source:	⌘ Dynamicsoft, Ericsson, Hutchison, Vodafone, Nokia, AWS ⌘		
Work item code:	⌘ IMS-CCR ⌘	Date:	⌘ 5/12/2002 ⌘
Category:	⌘ F ⌘	Release:	⌘ Rel-5 ⌘
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction 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 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ Current procedures for codec and media characteristics flow negotiation are not compliant with RFC 3261 and may introduce interoperability problems when new codecs and media types are introduced or when extensions are made to SDP. ⌘
Summary of change:	⌘ Modified clauses 5.1.3.1, 6.2 and 6.3 to have P-CSCF and S-CSCF return 488 (Not Acceptable Here) response containing allowed SDP instead of deprecated SDP modification and Clause 6.1 for UE to handle 488 response. ⌘
Consequences if not approved:	⌘ Non-Compliance with IETF procedures in RFC 3261 causing potential interoperability problems with IETF SIP clients and applications ⌘

Clauses affected:	⌘ 5.1.3.1, 6.1, 6.2, 6.3 ⌘										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="padding: 2px; text-align: center;">X</td> <td style="padding: 2px;"></td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px; text-align: center;">X</td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px; text-align: center;">X</td> </tr> </table>	Y	N	X			X		X	Other core specifications	⌘ 23.228 CR 237, 24.228 ⌘
	Y	N									
	X										
	X										
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		Test specifications									
		O&M Specifications									
Other comments:	⌘ ⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

First proposed change

5.1.3 Call initiation - mobile originating case

5.1.3.1 Initial INVITE

Upon generating an initial INVITE request, the UE shall:

- indicate the support for reliable provisional responses and specify it using the Supported header mechanism;
- indicate the requirement of precondition and specify it using the Require header mechanism.

If the UA receives a 503 (Service Unavailable) response to an initial INVITE request containing a Retry-After header, then the UE shall not automatically reattempt the request until after the period indicated by the Retry-After header contents.

[If the UE receives a 488 \(Not Acceptable Here\) response to an initial INVITE request, the UE should send a new INVITE request containing SDP according to the procedures defined in subclause 6.1](#)

[NOTE: An example of where a new request would not be built is where knowledge exists within the UE, or interaction occurs with the user, such that it is known that the resultant SDP would describe a session that did not meet the user requirements.](#)

Next proposed change

6 Application usage of SDP

6.1 Procedures at the UE

Usage of SDP by the UE:

1. In order to authorize the media streams, the P-CSCF and S-CSCF have to be able to inspect ~~and possibly modify~~ the SDP payloads. Hence, the UE shall not encrypt the SDP payloads.
2. An INVITE request generated by a UE shall contain SDP payload. The SDP payload shall reflect the calling user's terminal capabilities and user preferences for the session. The UE shall order the SDP payload with the most preferred codec listed first. In addition, the calling user shall indicate the desired QoS for the session, using the segmented status type. In an initial INVITE the UE shall indicate that it mandates local QoS and that this precondition is not yet satisfied, i.e. the UE shall include the following preconditions:

a=des: qos mandatory local sendrecv

a=curr: qos local none
3. The first 183 (Session Progress) provisional response sent out shall contain the answer for the SDP received in the INVITE. The SDP payload shall reflect the called user's terminal capabilities and user preferences.
4. When UE sends out an 183 (Session Progress) response with SDP payload, it shall request confirmation for the result of the resource reservation at the originating end point.
5. During session establishment procedure, SIP messages shall only contain SDP payload if that is intended to modify the session description.
6. For "video" and "audio" media types that utilize the RTP/RTCP, the UE shall specify the proposed bandwidth for each media stream utilizing the "b=" media descriptor in the SDP. For other media streams the "b=" media descriptor may be included. The value or absence of the "b=" parameter will affect the assigned QoS which is defined in 3GPP TS 29.208 [13].
7. The UE shall include the DTMF media format at the end of the "m=" media descriptor in the SDP for audio media flows that support both audio codec and DTMF payloads in RTP packets as described in RFC 2833 [23].
8. If the UE builds SDP for an INVITE request generated after receiving a 488 (Not Acceptable Here) response, as described in subclause 5.1.3.1, the UE shall include SDP payload containing a subset of the allowed media types, codecs and other parameters from the SDP payload of ~~any~~all 488 (Not Acceptable Here) responses related to the same session establishment attempt (i.e. a set of INVITE requests used for the same session establishment) INVITE request. The UE shall order the codecs in the SDP payload according to the order of the codecs in the SDP payload of the 488 (Not Acceptable Here) response.

NOTE: The UE may be attempting a session establishment through multiple networks with different policies and potentially may need to send multiple INVITE requests and receive multiple 488 (Not Acceptable Here) responses from different CSCF nodes. The UE therefore takes into account the SDP contents of all the 488 (Not Acceptable Here) responses received related to the same session establishment when building a new INVITE request.

6.2 Procedures at the P-CSCF

When the P-CSCF receives an INVITE request or reINVITE request, the P-CSCF shall examine the media parameters in the received SDP. ~~If the P-CSCF finds any media parameters, and remove those~~ which are not allowed on the network by local policy, the P-CSCF shall return a 488 (Not Acceptable Here) response containing SDP payload. This SDP payload contains the media types, codecs and other SDP parameters which are allowed according to the local policy. The P-CSCF shall build the SDP payload in the 488 (Not Acceptable Here) response in the same manner as a UAS builds the SDP in a 488 (Not Acceptable Here) response as specified in RFC 3261 [26]. The P-CSCF shall order the SDP payload with the most preferred codec listed first. ~~The P-CSCF will also remove those codecs from the approved media streams which are not allowed by local policy. If the P-CSCF modifies the SDP, it shall also revise the SDP to reflect the modified bandwidth requirements. For the rejected media streams, the P-CSCF should ignore the b= lines.~~

6.3 Procedures at the S-CSCF

When the S-CSCF receives an INVITE request or reINVITE request, the S-CSCF shall examine the media parameters in the received SDP, ~~and remove those media streams.~~ If the S-CSCF finds any media parameters which are not allowed based on either local policy or the subscription, the S-CSCF shall return a 488 (Not Acceptable Here) response containing SDP payload. This SDP payload contains the media types, codecs and other SDP parameters which are allowed according to the local policy and users subscription. The S-CSCF shall build the SDP payload in the 488 (Not Acceptable Here) response in the same manner as a UAS builds the SDP in a 488 (Not Acceptable Here) response as specified in RFC 3261 [26]. ~~The S-CSCF will also remove those codecs from the approved media streams which are not allowed by the subscription. If the S-CSCF modifies the SDP, it shall also revise the SDP to reflect the modified bandwidth requirements. For the rejected media streams, the S-CSCF should ignore the b= lines.~~

6.4 Procedures at the MGCF

The usage of SDP by the MGCF is the same as its usage by the UE, as defined in the subclause 6.1 and A.3.2. When sending an SDP, the MGCF shall not include the "i", "u", "e", "p", "r", and "z" descriptors in the SDP, and it shall ignore them when received in the SDP.

6.4.1 Calls originating from circuit-switched networks

When the MGCF generates and sends an INVITE request for a call originating in a circuit-switched network, the MGCF shall:

- populate the SDP with the codecs supported by the associated MGW (see 3GPP TS 26.235 [10] for the supported codecs).

When the MGCF receives 183 (Session Progress) response to an INVITE request, the MGCF shall:

- check that a supported codec has been indicated in the SDP.

6.4.2 Calls terminating in circuit-switched networks

When the MGCF receives an initial INVITE request, the MGCF shall:

- check for a codec that matches the requested SDP, which may include DTMF support.

When the MGCF generates and sends a 183 (Session Progress) response to an initial INVITE request, the MGCF shall:

- set SDP indicating the selected codec, which may include DTMF support.

6.5 Procedures at the MRFC

Void.