Source: **TSG-SA WG4**

Title: CRs to TS 26.234 on Corrections Based on Interoperability Issues, and Mime media type update (Release 4)

Document for: **Approval**

Agenda Item: **7.4.3**

The following CRs, agreed at the TSG-SA WG4 meeting #21, are presented to TSG SA #16 for approval.

Spec	CR	Rev	Phase	Subject	Cat	Vers	WG	Meeting	S4 doc
26.234	025	3	REL-4	Mime media type update	F	4.3.0	S4	TSG-SA WG4#21	S4-020348
26.234	028	1	REL-4	Corrections Based on Interoperability Issues	F	4.3.0	S4	TSG-SA WG4#21	S4-020350

CR-Form-v5

CHANGE REQUEST

⌘	**26.234** CR **025**	⌘rev **3** ⌘	Current version: **4.3.0** ⌘

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

Proposed change affects: ⌘   (U)SIM ☐   ME/UE **X**   Radio Access Network ☐   Core Network ☐

Title: ⌘	Mime media type update		
Source: ⌘	TSG SA WG4		
Work item code: ⌘	PSTREAM	***Date:*** ⌘	11-June-2002

Category: ⌘ **F**   ***Release:*** ⌘ REL-4

Use <u>one</u> of the following categories:
 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.

Use <u>one</u> of the following releases:
 2 *(GSM Phase 2)*
 R96 *(Release 1996)*
 R97 *(Release 1997)*
 R98 *(Release 1998)*
 R99 *(Release 1999)*
 REL-4 *(Release 4)*
 REL-5 *(Release 5)*

Reason for change: ⌘	It is possible to send audio configuration for MPEG-4 audio inband (in the RTP payload) or outband (in the SDP) but not both. If the configuration information is send inband there is a risk that the information get lost and thus making it impossible to decode the stream.

MPEG4 video configuration information is transported inband and outband. However the RFC 3016 does not clearly express this. The information from RFC 3016 thus needs to be repeated in 26.234, and it is explicitly mandated to transport MPEG4 configuration information outband (in the SDP) and inband (in the RTP payload).

It is not necessary to make this change for AMR, AMR-WB and H.263, even if the configuration information is carried inband, since those codecs regularly (on frame basis) repeats the configuration information. |
| ***Summary of change:*** ⌘ | Configuration information is mandated to be send in the SDP (which is transported over TCP and thus safely delivered to the terminal) for MPEG4 audio and MPEG4 video.

MPEG4 video configuration information that is resent in the RTP stream (as part of the payload) shall be the same as in the SDP (with exceptions of two field that may vary if present). |
| ***Consequences if not approved:*** ⌘ | Configuration information transported on an unreliable channel (RTP) may get lost. If lost the decoder in the terminal will not be able to decode the content correctly making the service unusable. |
| ***Clauses affected:*** ⌘ | 5.4 |

Other specs affected:	⌘	☐	Other core specifications	⌘	
		☐	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/3G_Specs/CRs.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.

5.4 MIME media types

For continuous media (speech, audio and video) the following MIME media types shall be used:

- AMR narrow band speech codec (see clause 7.2) MIME media type as defined in [11];

- AMR wide band speech codec (see clause 7.2) MIME media type as defined in [11];

- MPEG-4 AAC audio codec (see clause 7.3) MIME media type as defined in RFC 3016 [13]. When used in SDP the attribute "cpresent" SHALL be set to "0" indicating that the configuration information is only carried out of band in the SDP "config" parameter.

- MPEG-4 video codec (see clause 7.4) MIME media type as defined in RFC 3016 [13]. When used in SDP the configuration information shall be carried outband in the "config" SDP parameter and inband (as stated in RFC 3016). As described in RFC 3016, the configuration information sent inband and the config information in the SDP shall be the same except that first_half_vbv_occupancy and latter_half_vbv_occupancy which, if exist, may vary in the configuration information sent inband.

- H.263 [22] video codec (see clause 7.4) MIME media type as defined in annex C, clause C.1 of the present document.

MIME media types for JPEG, GIF and XHTML can be used both in the "Content-type" field in HTTP and in the "type" attribute in SMIL 2.0. The following MIME media types shall be used for these media:

- JPEG (see clause 7.5) MIME media type as defined in [15];

- GIF (see clause 7.6) MIME media type as defined in [15];

- XHTML (see clause 7.8) MIME media type as defined in [16].

MIME media type used for SMIL files shall be according to [31] and for SDP files according to [6].

3GPP TSG-SA WG4 Meeting #21
May 13-17, 2002, Rennes, France

Tdoc S4-020350

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CHANGE REQUEST

⌘	**26.234** CR **028**	⌘ **rev** **1**	⌘	Current version:	**4.3.0**	⌘

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

Proposed change affects: ⌘   (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network ☐

Title:	⌘	Corrections based on interoperability issues

Source:	⌘	TSG SA WG4

Work item code:	⌘	PSTREAM		**Date:**	⌘	11 June 2002

Category:	⌘	**F**		**Release:**	⌘	REL-4

Use *one* of the following categories:
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R96   (Release 1996)
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R98   (Release 1998)
R99   (Release 1999)
REL-4   (Release 4)
REL-5   (Release 5)

Reason for change:	⌘	Three issues were found to cause interoperability problems in IMTC PSS-AG testing.

Summary of change:	⌘	(a) A PSS Server shall include the Range header field in all PLAY responses. (b) A PSS Server offering AAC streams shall use the MIME parameters defined in rfc3016 to signal 'profile-level-id' and 'object' type in SDP. (c) Each AMR or AMR-WB track in a 3GPP/MP4 file shall be limited to referencing a single AMRSampleEntry.

Consequences if not approved:	⌘	(a) A PSS client which does not receive the Range header might experience synchronization problems or display clip position incorrectly after a seek. (b) Different interpretations of how these MIME parameters should be used will lead to inconsistent signalling by PSS servers; PSS clients will find it difficult to determine whether they can support an AAC stream, given the information in SDP. (c) Without clarification, some implementers will assume multiple AMRSampleEntries are allowed, and some will not. This will lead to interoperability problems between file authors and file readers.

Clauses affected:	⌘	5.3.2, 7.3, D.5

Other specs affected:	⌘	☐ Other core specifications	⌘	
		☐ Test specifications		
		☐ O&M Specifications		

Other comments:	⌘	

…

5.3.2 RTSP

RTSP [5] shall be used for session set-up and session control. PSS clients and servers shall follow the rules for minimal on-demand playback RTSP implementations in appendix D of [5]. In addition to this:

- PSS servers and clients shall implement the DESCRIBE method (see clause 10.2 in [5]);

- PSS servers and clients shall implement the Range header field (see clause 12.29 in [5]).

- PSS servers shall include the Range header field in all PLAY responses.

5.3.3 SDP

…

7.3 Audio

MPEG-4 AAC Low Complexity (AAC-LC) object type decoder [21] should be supported. The maximum sampling rate to be supported by the decoder is 48 kHz. The channel configurations to be supported are mono (1/0) and stereo (2/0). In addition, the MPEG-4 AAC Long Term Prediction (AAC-LTP) object type decoder may be supported.

When a server offers an AAC-LC or AAC-LTP stream with the specified restrictions, it shall include the "profile-level-id" and "object" MIME parameters in the SDP "a=fmtp" line. The following values shall be used:

Object Type	profile-level-id	object
AAC-LC	15	2
AAC-LTP	15	4

7.4 Video

…

D.5 AMRSampleEntry atom

For narrow-band AMR, the atom type of the AMRSampleEntry Atom shall be 'samr'. For AMR wide-band (AMR-WB), the atom type of the AMRSampleEntry Atom shall be 'sawb'. . Each AMR or AMR-WB track shall be associated with a single AMRSampleEntry.

The AMRSampleEntry Atom is defined as follows:

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