Technical Specification Group Services and System Aspects *TSGS#09(00)0396*
Meeting #9, Kapolei, Hawaii, USA, 25-28 September 2000 **Agenda Item: 7.4.3**

3GPP TSG-SA Codec Working Group *TSGS4#12(00)0430*
TSG-S4#12: September 4-8, 2000, Bethesda, Maryland, USA

3GPP TSG-SA4#12
Bethesda, USA, 4-8 Sep 2000

Document S4(00)430
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

26.111	CR	006	Current Version:	v.3.2.0

GSM (AA.BB) or 3G (AA.BBB) specification number ↑ *↑ CR number as allocated by MCC support team*

For submission to:	TSG-SA#9	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ↑		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)* (U)SIM [ ] ME [X] UTRAN / Radio [ ] Core Network [ ]

Source: TSG-SA WG4 **Date:** 26 Sept 2000

Subject: MPEG-4 interface to multiplex

Work item: 3GPP TSG SA WG4 WI2 MULTIMEDIA CODEC

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: Unlike H.263, the interface to the H.223 MUX in 3G-324M is not specified for MPEG-4. As with H.263, an equivalent description of such an interface is necessary for MPEG-4. This CR contains the missing description indicating how the MPEG-4 Visual bitstream shall be segmented for placement in AL-SDUs.

Clauses affected: 6.6.2

Other specs Affected:

Other 3G core specifications	[ ]	→ List of CRs:
Other GSM core specifications	[ ]	→ List of CRs:
MS test specifications	[ ]	→ List of CRs:
BSS test specifications	[ ]	→ List of CRs:
O&M specifications	[ ]	→ List of CRs:

Other comments: This CR document requests to create a new subclause 6.6.2.

help.doc

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6.6 Video channels

Support for H.261 is optional. Support for MPEG-4 is optional. MPEG-4 provides error concealment as part of the simple profile through Data Partitioning (DP), Reversible Variable Length Coding (RVLC), Resynchronization Marker (RM) and header extension code. MPEG-4 is baseline compatible with H.263.

When opening a logical channel for MPEG-4 Visual, configuration information (Visual Object Sequence Header, Visual Object Header, and Video Object Layer Header) shall be sent in the decoderConfigurationInformation parameter. The same information shall also be sent in the MPEG-4 video bitstream. If the operational mode of MPEG-4 encoder needs to be changed, the existing MPEG-4 video logical channel shall be closed and H.245 procedures for opening a new MPEG-4 video logical channel shall be started. The new operational mode shall be indicated in the parameters of the new logical channel.

6.6.1 Requirements for MPEG-4 usage

The following requirements (a)-(e) apply to the usage of specific parameters within MPEG-4.

a) Each 3G-324M MPEG-4 decoder shall be able to decode all frame-rates up to 15 frames per second, but need not support higher rates when MPEG-4 Simple Profile Level 1 is used.

b) Each 3G-324M MPEG-4 encoder shall use a fixed f-code value of 1 when MPEG-4 Simple Profile Level 1 is used.

c) Each 3G-324M MPEG-4 encoder shall use a fixed intra_dc_vlc_threshold of 0 when MPEG-4 Simple Profile Level 1 is used.

d) Each 3G-324M MPEG-4 decoder shall be able to decode all horizontal luminance pixel resolutions up to 176 pels/line when MPEG-4 Simple Profile Level 1 is used. The decoder shall not be required to support higher horizontal resolutions even if the resulting number of MBs was within the 99 MB limit stipulated in MPEG-4 Simple Profile Level 1.

e) Each 3G-324M MPEG-4 decoder shall be able to decode all vertical luminance pixel resolutions up to 144 pels/VOP when MPEG-4 Simple Profile Level 1 is used. The decoder shall not be required to support higher vertical resolutions even if the resulting number of MBs was within the 99 MB limit stipulated in MPEG-4 Simple Profile Level 1.

6.6.2 MPEG-4 Interface to multiplex

As H.263 encoders align picture start codes with the start of an AL-SDU, the same concept applies to MPEG-4 encoders. The following are the requirements of the MPEG-4 interface to the H.223 multiplex.

a) Each 3G-324M MPEG-4 encoder shall align each visual_object_sequence_start_code with the start of an AL-SDU.

b) Each 3G-324M MPEG-4 encoder shall align each group_of_vop_start_code (the beginning of a GOV field) with the start of an AL-SDU unless the GOV field immediately follows configuration information.

c) Each 3G-324M MPEG-4 encoder shall align each vop_start_code with the start of an AL-SDU unless the vop_start_code immediately follows configuration information or a GOV field.

In these requirements, GOV stands for Group_of_VideoObjectPlane() and Configuration information consists of Visual Object Sequence Header, Visual Object Header, and Video Object Layer Header.