ETSI TS 126 140 V19.0.0 (2025-10)

TECHNICAL SPECIFICATION

Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
LTE;
5G;
Multimedia Messaging Service (MMS);
Media formats and codecs
(3GPP TS 26.140 version 19.0.0 Release 19)

Reference
RTS/TSGS-0426140vj00

Keywords
5G, GSM, LTE, UMTS

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI IPR online database.

Pursuant to the ETSI Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™**, **LTE™** and **5G™** logo are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM**® and the GSM logo are trademarks registered and owned by the GSM Association.

Legal Notice

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 3GPP and ETSI identities can be found at 3GPP to ETSI numbering cross-referencing.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Contents

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the specification;

The 3GPP Multimedia messaging service (MMS) specification consists of three 3GPP TSs; 3GPP TS 22.140, 3GPP TS 23.140 and the present document. The TS 3GPP TS 22.140 [22] provides a set of requirements which shall be supported for the provision of non real-time multimedia messaging service, seen primarily from the subscriber's and service providers' points of view. The TS 23.140 [23] identifies the functional capabilities and information flows needed to support the MMS. The present document provides the details of media types, formats and codecs used by the MMS service.

The issue of codecs for MMS services has been addressed initially in TS 23.140, owned by the 3GPP T2 group. During the TSG-T WG2 group meeting in Edinburgh in September 2001, the TSG-T WG2 group sent a Liaison statement (S4-AHP040) to the 3GPP SA WG4 group, requesting that the responsibility for the specification of codecs and formats to be used in MMS services is transferred to SA WG4 group starting with Release 5.

After the SA WG4 group agreed to take over this responsibility, and the present document is the result of such commitment on Release 6 and subsequent releases.

For the sake of interoperability and alignment it is important there is no contradiction between the recommendations made in the present document and in the 26.511 specification [67].

1 Scope

The present document specifies message bodies for MMS that include different media types, formats and codecs within the 3GPP system. The scope of the present document extends to codecs for speech, audio, video, still images, bitmap graphics, 3D scenes and assets, and other media in general, as well as scene description, multimedia integration and synchronization schemes.

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] The Unicode Consortium: "The Unicode Standard", Version 2.0, Addison-Wesley Developers Press, 1996.URL: http://www.unicode.org/.

[3] ANSI X3.4, 1986: "Information Systems; Coded Character Set 7 Bit; American National Standard Code for Information Interchange".

[4] ISO/IEC 8859-1:1998: "Information technology; 8-bit single-byte coded graphic character sets; Part 1: Latin alphabet No. 1".

[5] IETF; RFC 2279: "UTF-8, A Transformation format of ISO 10646", URL: http://www.ietf.org/rfc/rfc2279.txt.

[6] 3GPP TS 24.011: "Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface".

[7] 3GPP TS 26.090: "AMR speech Codec Transcoding functions".

[8] ITU-T Recommendation T.81: "Information technology; Digital compression and coding of continuous-tone still images: Requirements and guidelines".

[9] "JPEG File Interchange Format", Version 1.02, September 1, 1992.

[10] ITU-T Recommendation H.263 (02/98): "Video coding for low bit rate communication".

[11] ITU-T Recommendation H.263 – Annex X (03/04): "Annex X: Profiles and levels definition".

[12] Void [13](void).

[14] 3GPP TS 26.234: "End-to-end transparent streaming Service; Protocols and codecs".

[15] CompuServe Incorporated: "GIF Graphics Interchange Format: A Standard defining a mechanism for the storage and transmission of raster-based graphics information", Columbus, OH, USA, 1987.

[16] Compuserve Incorporated, Columbus, Ohio (1990): "Graphics Interchange Format (Version 89a)".

[17] IETF RFC 2083: "PNG (Portable Networks Graphics) Specification version 1.0 ", T. Boutell, et. al., March 1997.

[18] Void

[19] ISO/IEC 14496-3:2001, "Information technology -- Coding of audio-visual objects -- Part 3: Audio".

[20] W3C Last Call Working Draft: "Scalable Vector Graphics (SVG) 1.2", http://www.w3.org/TR/2004/WD-SVG12-20041027/, October 2004.

[21] W3C Last Call Working Draft: "Mobile SVG Profile: SVG Tiny, Version 1.2", http://www.w3.org/TR/2004/WD-SVGMobile12-20040813/, August 2004.

[22] 3GPP 22.140: "Service Aspects; Stage 1; Multimedia Messaging Service".

[23] 3GPP 23.140: "Multimedia Messaging Service (MMS); Functional Description; Stage 2".

[24] W3C Recommendation: "Synchronized Multimedia Integration Language (SMIL 2.0)", http://www.w3.org/TR/2001/REC-smil20-20010807/, August 2001.

[25] IETF RFC 2046: "Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types".

[26] 3GPP TS 26.071: "Mandatory Speech Codec speech processing functions; AMR Speech Codec; General description".

[27] 3GPP TS 26.171: "Speech codec speech processing functions; Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; General description".

[28] Scalable Polyphony MIDI Specification Version 1.0, RP-34, MIDI Manufacturers Association, Los Angeles, CA, February 2002.

[29] Scalable Polyphony MIDI Device 5-to-24 Note Profile for 3GPP, RP-35, MIDI Manufacturers Association, Los Angeles, CA, February 2002.

[30] WAP Forum Specification: "XHTML Mobile Profile", http://www1.wapforum.org/tech/terms.asp?doc=WAP-277-XHTMLMP-20011029-a.pdf, October 2001.

[31] "Standard MIDI Files 1.0", RP-001, in "The Complete MIDI 1.0 Detailed Specification, Document Version 96.1" The MIDI Manufacturers Association, Los Angeles, CA, USA, February 1996.

[32] IETF RFC 3267: "RTP payload format and file storage format for the Adaptive Multi-Rate (AMR) Adaptive Multi-Rate Wideband (AMR-WB) audio codecs ", March 2002.

[33] 3GPP TS 26.244: "Transparent end-to-end packet switched streaming service (PSS); 3GPP file format (3GP)"

[34] 3GPP TS 26.246: "Transparent end-to-end packet switched streaming service (PSS); 3GPP SMIL Language Profile".

[35] 3GPP TS 26.245: "Transparent end-to-end packet switched streaming service (PSS); Timed text format"

[36] IETF RFC 1952 "GZIP file format specification version 4.3", Deutsch P, May 1996.

[37] (void)

[38] Mobile DLS, MMA specification v1.0. RP-41 Los Angeles, CA, USA. 2004.

[39] Mobile XMF Content Format Specification, MMA specification v1.0., RP-42, Los Angeles, CA, USA. 2004.

[40] 3GPP TS 26.090: "Mandatory Speech Codec speech processing functions; Adaptive Multi-Rate (AMR) speech codec; Transcoding functions".

[41] 3GPP TS 26.073: "ANSI-C code for the Adaptive Multi Rate (AMR) speech codec".

[42] 3GPP TS 26.104: "ANSI-C code for the floating-point Adaptive Multi Rate (AMR) speech codec".

[43] 3GPP TS 26.190: "Speech Codec speech processing functions; AMR Wideband speech codec; Transcoding functions".

[44] 3GPP TS 26.173: "ANCI-C code for the Adaptive Multi Rate - Wideband (AMR-WB) speech codec".

[45] 3GPP TS 26.204: "ANSI-C code for the Floating-point Adaptive Multi-Rate Wideband (AMR-WB) speech codec".

[46] Void

[47] Void

[48] Void

[49] 3GPP TS 26.401: "General audio codec audio processing functions; Enhanced aacPlus general audio codec; General description".

[50] 3GPP TS 26.410: "General audio codec audio processing functions; Enhanced aacPlus general audio codec; Floating-point ANSI-C code".

[51] 3GPP TS 26.411: "General audio codec audio processing functions; Enhanced aacPlus general audio codec; Fixed-point ANSI-C code".

[52] ITU-T Recommendation H.264 (04/2013): "Advanced video coding for generic audiovisual services".

[53] (void)

[54] "Exchangeable image file format for digital still cameras: EXIF 2.2", Specification by the Japan Electronics and Information Technology Industries Association (JEITA), April 2002, URL: http://www.exif.org/

[55] Standard ECMA-327: "ECMAScript 3rd Edition Compact Profile", June 2001.

[56] "Digital Rights Management", Open Mobile AllianceTM, OMA-Download-DRM-v1_0, http://www.openmobilealliance.org/

[57] "DRM Rights Expression Language", Open Mobile AllianceTM, OMA-Download-DRMREL-v1_0, http://www.openmobilealliance.org/

[58] "DRM Content Format", Open Mobile AllianceTM, OMA-Download-DRMCF-v1_0, http://www.openmobilealliance.org/

[59] "vObject Minimum Interoperability Profile", Open Mobile AllianceTM, OMA-TS-vObjectOMAProfile-V1_0, http://www.openmobilealliance.org/

[60] 3GPP TR 26.936: "Performance characterization of 3GPP audio codecs".

[61] (void)

[62] ITU-T Recommendation H.265 (02/2018): "High efficiency video coding".

[63] 3GPP TS 26.307 "Presentation Layer for 3GPP Services".

[64] 3GPP TS 26.143: "Messaging Media Profiles".

[65] Khronos glTF 2.0, glTF™ 2.0 Specification (khronos.org)

[66] ISO/IEC 23090-14 AMD 2, Information technology — Coded representation of immersive media — Part 14: Scene description — Amendment 2: Support for haptics, augmented reality, avatars, Interactivity, MPEG-I audio, and lighting

[67] 3GPP TS 26.511: "5G Media Streaming (5GMS); Profiles, Codecs and Formats".

[68] 3GPP TS 26.117: "5G Media Streaming (5GMS); Speech and audio profiles".

[69] ISO/IEC 23008-12:2019 Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 12: Image File Format

[70] 3GPP TS 26.114: "IP Multimedia Subsystem (IMS); Multimedia telephony; Media handling and interaction".

[71] ISO/IEC 23000-22:2019 Information technology — Multimedia application format (MPEG-A) — Part 22: Multi-image application format (MIAF)

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

continuous media: media with an inherent notion of time, in the present document speech, audio and video

discrete media: media that itself does not contain an element of time, in the present document all media not defined as continuous media

scene description: description of the spatial layout and temporal behaviour of a presentation, it can also contain hyperlinks

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply:

3GP	3GPP file format
AAC	Advanced Audio Coding
AVC	Advanced Video Coding
CC/PP	Composite Capability/Preference Profiles
CPB	Coding Picture Buffer
DIMS	Dynamic and Interactive Multimedia Scene
DLS	Downloadable Sounds
DRM	Digital Rights Management
Enhanced aacPlus	MPEG-4 High Efficiency AAC plus MPEG-4 Parametric Stereo
EXIF	Exchangeable image file format
GIF	Graphics Interchange Format
glTF	Graphics Library Transmission Format
HDTV	High-definition television
HEVC	High Efficiency Video Coding
ITU-T	International Telecommunications Union - Telecommunications
JFIF	JPEG File Interchange Format
JPEG	Joint Picture Expert Group
MIDI	Musical Instrument Digital Interface
MIME	Multipurpose Internet Mail Extensions
MM	Multimedia Message
MMS	Multimedia Messaging Service
MPEG	Motion Picture Expert Group
MP4	MPEG-4 file format
PIM	Personal Information Manager
PSS	Packet-switched Streaming Service
SBR	Spectral Band Replication
SP-MIDI	Scalable Polyphony MIDI
SVG	Scalable Vector Graphics
UTF-8	Unicode Transformation Format (the 8-bit form)
VCL	Video Coding Layer
XMF	Extensible Music Format

3A MMS Message Body Formats

This specification defines message body formats for MMS.

MMS Message bodies conform to Internet Message Bodies as defined in RFC 2045.

MMS Message bodies may conform to MIME multipart format as defined in RFC 2046 [25].

The following multipart MIME type subtypes may be used:

- `mixed` as defined in RFC 2046
- `alternative` as defined in RFC 2046
- `parallel` as defined in RFC 2046
- `related` as defined in RFC 2387

4 Media Types

4.0 Introduction

In order to guarantee a minimum support and compatibility between multimedia messaging capable terminals, MMS User Agent supporting specific media types shall comply with the following selection of media formats.

Media Types supported in this specification are provided in Table 4.0-1

Table 4.0-1 Media Types and Capabilities defined in TS 26.140

Media Type in TS 26.140	Applicable capability(ies) as specified in TS 26.143 [64]	Supported Media subtype(s)	Definition(s)
Text	26143_TEXT_PLAIN 26143_TEXT_ENC_PLAIN	text/plain	Clause 4.1
Speech	26143_AUDIO_EVS 26143_AUDIO_AMR-WB 26143_AUDIO_AMR [26143_AUDIO_IVAS] 26143_AUDIO_ENC_EVS 26143_AUDIO_ENC_AMR-WB 26143_AUDIO_ENC_AMR [26143_AUDIO_ENC_IVAS]	audio/3gp	Clause 4.2
Audio	26143_AUDIO_XHE-AAC 26143_AUDIO_EAAC+ [26143_AUDIO_IVAS] 26143_AUDIO_ENC_XHE-AAC 26143_AUDIO_ENC_EAAC+	Audio/mp4	Clause 4.3

	[26143_AUDIO_ENC_IVAS]		
Synthetic audio	n/a	Audio/sp-midi	Clause 4.4
Still Image	26143_IMG_ JPEG 26143_IMG_ENC_JPEG 26143_IMG_HEIC	image/jpeg image/heic	Clause 4.5
Bitmap graphics	26143_IMG_GIF 26143_IMG_PNG	image/gif image/png	
Video	26143_VIDEO_AVC-HD 26143_VIDEO_AVC-FullHD 26143_VIDEO_HEVC-HD 26143_VIDEO_HEVC-FullHD 26143_VIDEO_HEVC-UHD	video/mp4	
Vector graphics	image	image/svg+xml	
Media synchronization and presentation format	26143_PRESENTATION_HTML5	Text/html	
Timed text	26143_TT_3GPP 26143_TT_IMSC11	Text/mp4 Application/mp4	
PIM	n/a	Tbd	
Dynamic and Interactive Multimedia Scene	n/a	Tbd	
3d scenes and assets	n/a	model/gltf+json model/gltf-binary	

In order to guarantee a minimum support and compatibility between multimedia messaging capable terminals, MMS User Agent supporting specific media types shall comply with the following selection of media formats:

4.1 Text

Plain text. Any character encoding (charset) that contains a subset of the logical characters in Unicode [2] shall be used (e.g. US-ASCII [3], ISO-8859-1 [4], UTF-8 [5], Shift_JIS, etc.).

Unrecognized subtypes of "text" shall be treated as subtype "plain" as long as the MIME implementation knows how to handle the charset. Any other unrecognized subtype and unrecognized charset shall be treated as "application/octet - stream".

Interoperability with SMS text type is according to [23].

4.2 Speech

NOTE: when Speech is supported, the following requirements imply support for narrow-band, wideband and super wideband operations, in alignment with MTSI TS 26.114 [70].

If Speech is supported, the AMR codec shall be supported for narrow-band speech [26][40][41][42].

The AMR wideband speech codec [27][43][44][45] shall be supported for wideband speech working at 16 kHz sampling frequency.

When using speech media type alone, AMR or AMR-WB data is stored according to the file format specified in [32] and EVS data is stored according to the storage specified in Clause A.2.6 of TS 26.445 [x3].

If Speech is supported, then **EVS** decoding capability shall be supported as defined in 3GPP TS 26.117 [68] clause 5.2; and the **EVS** encoding capabilities as defined in clause 5.3 of TS 26.117 [5] and the sender requirements in clause 6.2.4.3 of TS 26.117 [5] shall be supported.

Multi-channel sessions shall not be used when using AMR, AMR-WB and EVS codecs.

If Speech is supported, then **IVAS** decoding capability should be supported as defined in 3GPP TS 26.117 [68] clause 5.2; and the **IVAS** encoding capabilities as defined in clause 5.3 of TS 26.117 [5] and the sender requirements in clause 6.3.5.3 of TS 26.117 [5] should be supported.

NOTE: IVAS codec level setting is TBD.

4.3 Audio

If Audio is supported, then **eAAC+** decoding capability shall be supported as defined in 3GPP TS 26.117 [68] clause 5.2 and **eAAC+** encoding capability shall be supported as defined in 3GPP TS 26.117 [68] clause 5.3 and the sender requirements in clause 6.3.2.3 of TS 26.117.

If Audio is supported, then **xHE-AAC stereo** decoding capability should be supported as defined in 3GPP TS 26.117 [68] clause 5.2; and the **xHE-AAC stereo** encoding capabilities as defined in clause 5.3 of TS 26.117 [5] and the sender requirements in clause 6.4.2.3 of TS 26.117 [5] should be supported.

NOTE: xHE-AAC® is a registered trademark of Fraunhofer in Germany and other countries and is used with Fraunhofer's permission.

If Audio is supported, then **IVAS** decoding capability should be supported as defined in 3GPP TS 26.117 [68] clause 5.2; and the **IVAS** encoding capabilities as defined in clause 5.3 of TS 26.117 [5] and the sender requirements in clause 6.3.5.3 of TS 26.117 [5] should be supported.

NOTE: IVAS codec level setting is TBD.

4.4 Synthetic audio

If synthetic audio is supported, the Scalable Polyphony MIDI (SP-MIDI) content format defined in Scalable Polyphony MIDI Specification [28] and the device requirements defined in Scalable Polyphony MIDI Device 5-to-24 Note Profile for 3GPP [29] may be supported.

SP-MIDI content is delivered in the structure specified in Standard MIDI Files 1.0 [31], either in format 0 or format 1.

In addition the Mobile DLS instrument format defined in [38] and the Mobile XMF content format defined in [39] may be supported.

An MMS client supporting Mobile DLS may meet the minimum device requirements defined in [38] in section 1.3 and the requirements for the common part of the synthesizer voice as defined in [29] in sections 1.2.1.2. If Mobile DLS is supported, wavetables encoded with the G.711 A-law codec (wFormatTag value 0x0006, as defined in [38]) may also be supported. The optional group of processing blocks as defined in [39] may be supported. Mobile DLS resources are delivered either in the file format defined in [38], or within Mobile XMF as defined in [39]. For Mobile DLS files delivered outside of Mobile XMF, the loading application should unload Mobile DLS instruments so that the sound bank required by the SP-MIDI profile [29] is not persistently altered by temporary loadings of Mobile DLS files.

Content that pairs Mobile DLS and SP-MIDI resources is delivered in the structure specified in Mobile XMF [39]. As defined in [39], a Mobile XMF file shall contain one SP-MIDI SMF file and no more than one Mobile DLS file. MMS clients supporting Mobile XMF must not support any other resource types in the Mobile XMF file. Media handling behaviours for the SP-MIDI SMF and Mobile DLS resources contained within Mobile XMF are defined in [39].

4.5 Still Image and Bitmap graphics

If still images are supported, ISO/IEC JPEG [8] together with JFIF [9] shall be supported. The support for ISO/IEC JPEG only apply to the following two modes:

- mandatory: baseline DCT, non-differential, Huffman coding, as defined in table B.1, symbol 'SOF0' in [8];
- optional: progressive DCT, non-differential, Huffman coding, as defined in table B.1, symbol 'SOF2' [8].

For JPEG baseline DCT, EXIF compressed image file format should also be supported, as defined in [54]. In that case there is no requirement for the MMS client to interpret or present the EXIF parameters recorded in the file.

If still images are supported, HEIF should be supported which consists in conforming to:

- the `'heic'` brand as defined in ISO/IEC 23008-12 [69],
- the `'MiHB'` brand as defined in ISO/IEC 23000-22:2019 [71], and
- the contained elementary bitstream conforming to H.265 (HEVC) Main Profile, Main Tier, Level 5.1[62] bitstreams have `general_progressive_source_flag` equal to 1, `general interlaced_source_flag` equal to 0, `general_non_packed_constraint_flag` equal to 1, and `general_frame_only_constraint_flag` equal to 1.
- signalled with `image/heic, profile="heic,MiHB" itemTypes="hvc1.1.2.L153.B0"` or an equivalently compatible media type as defined in [71].

If bitmap graphics is supported, the following bitmap graphics formats should be supported:

- GIF87a [15];
- GIF89a, [16];
- PNG, [17].

4.6 Void

4.7 Video

If video is supported by the MMS client, the following applies:

- Image ratios of 16:9 and 9:16 shall be supported. Other image formats should be supported.
- the `26143_VIDEO_AVC-HD` capability as defined in clause 5.6.1 of TS 26.143 [67] shall be supported and the capability `26143_VIDEO_ENC_AVC-HD` as defined in clause 5.6.2 of TS 26.143 [67] may be supported.
- the `26143_VIDEO_HEVC-HD` capability as defined in clause 5.6.1 of TS 26.143 [67] should be supported and the capability `26143_VIDEO_ENC_HEVC-HD` as defined in clause 5.6.2 of TS 26.143 [67] may be supported.

If the reception of HD-HDR video is supported by the MMS client, then the following applies:

- the `26143_VIDEO_AVC-FullHD` capability as defined in clause 5.6.1 of TS 26.143 [67] shall be supported and the capability `26143_VIDEO_ENC_AVC-FullHD` as defined in clause 5.6.2 of TS 26.143 [67] may be supported.
- the `26143_VIDEO_HEVC-FullHD` capability as defined in clause 5.6.1 of TS 26.143 [67] shall be supported and the capability `26143_VIDEO_ENC_HEVC-FullHD` as defined in clause 5.6.2 of TS 26.143 [67] shall be supported.

- the 26143_VIDEO_HEVC-UHD capability as defined in clause 5.6.1 of TS 26.143 [67] should be supported and the capability 26143_VIDEO_ENC_HEVC-UHD as defined in clause 5.6.2 of TS 26.143 [67] may be supported.

If stereoscopic 3D video is supported, ITU-T Recommendation H.264 / MPEG-4 (Part 10) AVC [52] Stereo High Profile (SHP) Level 3.1 with frame_mbs_only_flag=1 should be supported. When an H.264 (AVC) SHP sub-bitstream containing the base view only complies with Level 1.3 or below, it should be constrained as follows: the value of the profile_idc should be equal to 66 and the value of the constraint_set1_flag should be equal to 1 in all active sequence parameter sets, i.e. the H.264 (AVC) Constrained Baseline Profile should be indicated to be used for the base view.

NOTE: When the base view sub-bitstream of the MM complies with H.264 (AVC) CPB Level 1.3 or below, the base view of an MM can be played back by any MMS (Release 11) client supporting video, or the MM can be modified without re-encoding to an MM including 2D video to be played back in H.264 (AVC) CPB compatible MMS clients.

There are no requirements on output timing conformance of H.264 (AVC) decoding (Annex C of [52]) or H.265 (HEVC) decoding (Annex C of [62]).

4.8 Vector graphics

If 2D vector graphics is supported, Scalable Vector Graphics (SVG) Tiny 1.2 [20][21] and ECMAScript [55] may be supported.

NOTE 1: The compression format for SVG content is GZIP [35], in accordance with the SVG specification [20].

NOTE 2: Only media formats supported by MMS, as specified in clause 4 of this specification, shall be used. MMS clients do not support the Ogg Vorbis format.

NOTE 3: Content creators of SVG Tiny 1.2 for MMS clients are strongly recommended to follow the content creation guidelines provided for PSS clients in Annex L of [14].

NOTE 4: If SVG Tiny 1.2 will not be published within a reasonable timeframe, the decision to adopt SVG Tiny 1.2 in favour of SVG Tiny 1.1 may be reconsidered.

4.9 File Format for video and associated speech/audio media types

To ensure interoperability for the transport of video and associated speech/audio and timed text in an MM, the 3GPP file format with Basic profile shall be supported.

The usage of the 3GPP file format shall follow the technical specifications and the implementation guidelines specified in TS 26.233 [33]:

- For the AMR encoded content, the ISO BMFF track shall conform with the requirements of the codec entry 'samr' as defined in TS 26.244 [26].

- For the AMR-WB encoded content, the ISO BMFF track shall conform with the requirements of the codec entry 'sawb' as defined in TS 26.244 [26].

- For the EVS encoded content, the ISO BMFF track shall conform with the requirements of the codec entry 'sevs' as defined in TS 26.244 [26].

- For the EAAC+ encoded content, the ISO BMFF track shall conform with the requirements of the codec entry 'mp4a.40.5' as defined in TS 26.244 [26].

- For the xHE-AAC encoded content, the ISO BMFF track shall conform with the requirements of the codec entry 'mp4a.40.29' as defined in TS 26.244 [26].

- For video encoded content, the ISO BMFF track shall conform with the requirements corresponding to the capability as indicated in TS 26.143 [67] clause 5.6.

NOTE: When using speech media type alone, AMR or AMR-WB data is stored according to the file format specified in [32].

4.10 Media synchronization and presentation format

MMS clients and servers that support HTML shall support the 3GPP HTML5 profile as defined in [63]. MMS servers should support translation from other scene description formats, such as SMIL [24] and XHTML Mobile Profile [30] to HTML5. The MMS client that supports HTML shall include the HTML5 MIME type "text/html" as part of the User Agent header field in the request sent to the server.

The MMS Relay/Server shall not accept an MMS message using HTML5 presentation unless it supports HTML5 presentation format.

A 3D scene as described in clause 4.15 may be used as the presentation format for the multimedia message. In that case, the glTF 2.0 document or the GLB file shall be carried as the first MIME part of the multi-part MIME message.

4.11 Timed text and subtitles

If timed text is supported, MMS clients shall support the `26143_TT_3GPP` and `26143_ENC_TT_3GPP` capabilities as defined in TS 26.143 [67].

4.12 Digital Rights Management

If Rights Management is supported, OMA Digital Rights Management (DRM) 1.0 [56][57][58] shall be supported.

NOTE: alignment with TS 26.511 clause 5.2.7.6 Encrypted content is FFS.

4.13 PIM

If Personal Data Interchange is supported this shall be done according to the OMA vObject Minimum Interoperability Profile [59].

4.14 Dynamic and Interactive Multimedia Scene

If dynamic and interactive multimedia scene is supported, MMS clients and servers shall support 3GPP TS 26.142 [61].

4.15 3D scenes and assets

If 3D scenes and assets are supported, the `26143_SCENE_GLTF20` capability and the `26143_SCENE_GLTF20_GLB` capability as defined in clause 5.8 of TS 26.143 [64] shall be supported assuming either a single body part or a `multipart/related` body part as defined in clause 3A.

If 3D AR scenes and assets are supported, the `26143_SCENE_GLTF20_AR` and the `26143_SCENE_GLTF20_GLB_AR` capability as defined in clause 5.8 of TS 26.143 [64] shall be supported assuming either a single body part or a `multipart/related` body part as defined in clause 3A.

Annex A (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
2002-03	15	SP-020075			Version 2.0.0 presented for approval	2.0.0	5.0.0
2002-06	16	SP-020224	001		Correcting the reference to AMR and AMR-WB RTP payload	5.0.0	5.1.0
2002-12	18	SP-020691	002		Code points for H.263	5.1.0	5.2.0
2002-12	18	SP-020691	003	1	File Format name change from MP4 to 3GP	5.1.0	5.2.0
2004-09	25	SP-040641	006	2	Introduction of Extended AMR-WB and Enhanced aacPlus into MMS service	5.2.0	6.0.0
2004-09	25	SP-040650	007	1	Update of MMS codecs and formats with Release 6 functionality	5.2.0	6.0.0
2004-09	25	SP-040655	008	1	Update of MMS codecs and formats with H.264	5.2.0	6.0.0
2004-12	26	SP-040838	009	1	Support for EXIF in MMS	6.0.0	6.1.0
2004-12	26	SP-040838	010		Adoption of SVG Tiny 1.2 for MMS	6.0.0	6.1.0
2005-12	27	SP-050175	011	2	Introduction of PIM and DRM	6.1.0	6.2.0
2006-03	31	SP-060009	0012	1	Addition of a reference to TR 26.936	6.2.0	6.3.0
2006-09	33	SP-060600	0013		Editorial correction of references	6.3.0	7.0.0
2007-06	36	SP-070319	0014	2	Inclusion of DIMS in MMS	7.0.0	7.1.0
2008-12	42				Version for Release 8	7.1.0	8.0.0
2009-12	46				Version for Release 9	8.0.0	9.0.0
2011-03	51				Version for Release 10	9.0.0	10.0.0
2012-03	55	SP-120026	0016	4	On MMS video enhancements	10.0.0	11.0.0
2012-09	57	SP-120509	0017	2	Inclusion of MVC support for MMS	11.0.0	11.1.0
2014-03	63	SP-140009	0018		HEVC support	11.1.0	12.0.0
2015-12	70	SP-150653	0019	5	HTML5 as Presentation Layer for MMS	12.0.0	13.0.0

Change history							
Date	**Meeting**	**TDoc**	**CR**	**Rev**	**Cat**	**Subject/Comment**	**New version**
2017-03	75					Version for Release 14	14.0.0
2018-06	80					Version for Release 15	15.0.0
2020-07	-	-	-	-	-	Update to Rel-16 version (MCC)	**16.0.0**
2020-09	SA#89-e	SP-200804	0020	-	C	Removing H.263 from MMS	**16.1.0**
2022-04	-	-	-	-	-	Update to Rel-17 version (MCC)	**17.0.0**
2023-03	SA#103	SP-240047	0021	8	B	CR 26.140-0021r7 Updates to codecs and formats (Rel-18)	**18.0.0**
2025-10	-	-	-	-	-	Update to Rel-19 version (MCC)	**19.0.0**

History

Document history		
V19.0.0	October 2025	Publication