

INTERNATIONAL STANDARD

**Digital living network alliance (DLNA) home networked device interoperability
guidelines –
Part 2: DLNA media formats**

Withdrawn



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INTERNATIONAL STANDARD

**Digital living network alliance (DLNA) home networked device interoperability
guidelines –
Part 2: DLNA media formats**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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DEVICE INTEROPERABILITY GUIDELINES –****Part 2: DLNA media formats****FOREWORD**

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The text of this standard is based on the following documents:

CDV	Report on voting
100/1128/CDV	100/1214/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of IEC 62481 series, published under the general title *Digital living network alliance (DLNA) home networked device interoperability guidelines*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

Withdrawn

DIGITAL LIVING NETWORK ALLIANCE (DLNA) HOME NETWORKED DEVICE INTEROPERABILITY GUIDELINES –

Part 2: DLNA media formats

1 Scope

This part of IEC 62481 specifies the DLNA media format profiles applicable to IEC 62481-1. Media format profiles are defined for each of the following media classes: audio, image, and AV. In addition, profile ID values that identify media collections and printer XHTML documents are also introduced.

It is envisioned that in the home network environment, devices will be capable of exchanging content items that originate from different sources. Content items will typically come encoded in different formats. The term "format" designates the compression and encoding tools utilized to generate the binary instance of a content item, which will be eventually exchanged over the home network using streaming or file transfer protocols. Examples of formats include MPEG-2, MPEG-4, WMV and others for video; or MP3, AAC, WMA and others for audio.

Formats alone, however, include as part of their specifications, multiple parameters, features and tools which can be used in a myriad of combinations to generate content binaries. In this standard, the notion of a format profile is introduced to identify a particular suitable combination of format parameters which define a way for representing content binaries. A format like MPEG-2, for example, can have multiple profiles depending on selections for the companion audio, the system-layer multiplexing specifications, allowed frame resolutions, allowed aspect ratios, allowed bit rates, etc.

This standard provides a quasi-exhaustive list of broadly-used format profiles for image, audio, and AV formats. For each particular format profile, this standard defines a profile ID text token to be used during the DLNA media discovery and media transfer operations. The profile ID is exposed in a server's content directory service (CDS) to signal to potential networked players or renderers the existence of a content item with particular coding and compression features defined precisely by the item's profile ID. This standard also describes the uses of format profiles which define media collections and printer XHTML documents.

The number of potential combinations for suitable profiles becomes large rather quickly, as evidenced by the long profile lists observed in the different sections of this standard. Consequently, this standard introduces the notion of mandatory profiles, supported by all devices, as a means to provide baseline content interoperability in the home. Servers have to be capable of exposing and transferring mandatory profiles while players and renderers have to be capable of decoding and rendering the mandatory profiles. Unfortunately, mandatory format profiles cannot be defined universally to suit all scenarios. For this reason, the definition of mandatory profiles is made taking into account the geographical region and the target device category.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62481-1, *Digital living network alliance (DLNA) home networked device interoperability guidelines – Part 1: Architecture and protocols*

ISO/IEC 10918-1:1994, *Information technology – Digital compression and coding of continuous-tone still images: Requirements and guidelines*

ISO/IEC 11172-1:1993, *Information technology – Coding of moving pictures and associated audio for digital storage media at up to about 1,5 Mbit/s – Part 1: Systems*

ISO/IEC 11172-2:1993, *Information technology – Coding of moving pictures and associated audio for digital storage media at up to about 1,5 Mbit/s – Part 2: Video*

ISO/IEC 11172-3:1993, *Information technology – Coding of moving pictures and associated audio for digital storage media at up to about 1.5 Mbit/s – Part 3: Audio*

ISO/IEC 13818-1:2000, *Information technology – Generic coding of moving pictures and associated audio information: Systems*

ISO/IEC 13818-2:2000, *Information technology – Generic coding of moving pictures and associated audio information: Video*

ISO/IEC 13818-3:1998, *Information technology – Generic coding of moving pictures and associated audio information – Part 3: Audio*

ISO/IEC 13818-11:2004, *Information technology – Generic coding of moving pictures and associated audio information – Part 11: IPMP on MPEG-2 systems*

ISO/IEC 14496-1:2001, *Information technology – Coding of audio-visual objects – Part 1: Systems*

ISO/IEC 14496-2:2004, *Information technology – Coding of audio-visual objects – Part 2: Visual*

Amendment 1 (2004)

Amendment 2 (2005)

Amendment 3 (2007)

ISO/IEC 14496-3:2005, *Information technology – Coding of audio-visual objects – Part 3: Audio*

ISO/IEC 14496-10:2005, *Information technology – Coding of audio-visual objects – Part 10: Visual*

ISO/IEC 14496-12:2005, *Information technology – Coding of audio-visual objects – Part 12: ISO base media file format*

ISO/IEC 14496-14:2003, *Information technology – Coding of audio-visual objects – Part 14: MP4 file format*

ISO/IEC 14496-15:2004, *Information technology – Coding of audio-visual objects – Advanced Video Coding (AVC) file format*

ISO/IEC 15948:2004, *Information technology – Computer graphics and image processing – Portable Network Graphics (PNG): Functional specification*

ITU-R Recommendation BS.1196-11:2001, *Audio coding for digital terrestrial television broadcasting*

ITU-T Recommendation G.726:1990, *40, 32, 24,16 kbit/s Adaptive Differential Pulse Code Modulation (ADPCM)*

ITU-T Recommendation H.263:2005, *Video coding for low bit rate communication*

ITU-T Recommendation H.264:2005, *Advanced video coding for generic audiovisual services*

ETSI TSR 101 154 V1.4:2004, *Digital Video Broadcasting (DVB*) – Implementation Guidelines for the use of MPEG-2 Systems, Video and Audio Coding in Broadcasting Applications based on the MPEG-2 Transport Stream*, European Telecommunications Standard Institute http://webapp.etsi.org/action/PU/20050111/ts_101154v010601p.pdf

3 Terms, definitions and acronyms

For the purposes of this document, the following terms, definitions and acronyms are applicable.

3.1 Terms and definitions

3.1.1

download controller

+DN+

one of the device capabilities defined by DLNA

3.1.2

printing controller

+PR1+, +PR2+

one of the device capabilities defined by DLNA

3.1.3

push uploader

+PU+

one of the device capabilities defined by DLNA

3.1.4

upload controller

+UP+

one of the device capabilities defined by DLNA

3.1.5

3rd generation partnership project

3GPP1

file format designed by this organization and used to encapsulate data.

3.1.6

audio code 3

AC-3

audio format standard popularly known as Dolby Digital* for delivering up to 5.1 audio channels developed by Dolby Laboratories

3.1.7

adaptive multi-rate

AMR

type of audio codec

3.1.8

extended adaptive multi-rate wideband

AMR-WB+

type of audio codec

3.1.9

AMR-WBplus

Same as AMR-WB+

3.1.10

association of radio industries and businesses

ARIB

one of the standard bodies for digital television broadcasting

3.1.11

adaptive transform acoustic coding 3 plus

ATRAC3plus

audio codec developed by Sony Corporation

3.1.12

advanced television systems committee

ATSC

one of the standard bodies for digital television broadcasting

3.1.13

audio with video

AV

any media content that contains both moving pictures and sound

3.1.14

advanced video codec

AVC

H.264 video codec

3.1.15

bit-sliced arithmetic coding

BSAC

type of audio codec

3.1.16

content directory service 1.0

CDS

UPnP service that provides network-based discovery of content. The content directory service specification is a standard UPnP DCP.

3.1.17

content receiver

endpoint that consumes content received via a network transfer from another endpoint

3.1.18

content source

endpoint that places content onto the network for transfer to another endpoint

3.1.19

decoder friendly alignment position

position in the bitstream defined for decoder friendly alignment; it is always a valid transport alignment position

3.1.20

device capability

set of device functions (at least 1) aggregated to support a system usage; it cannot stand alone and must be deployed in conjunction with an implementation of a valid DLNA device class. Since a device capability does not stand alone, it is not required to have content in

all layers of the DLNA architecture; it may have a one to one correspondence to a device function. It is a certifiable entity only when it is implemented as an addition to at least one device class

3.1.21 device category

group of device classes with the same environmental characteristics and sharing common system usages that are enabling home networking use case scenarios

NOTE Examples used within this standard are home network device (HND), mobile handheld device (MHD), and home infrastructure device (HID). While device classes are grouped within a device category, a single physical device may support device classes that fall into multiple device categories.

3.1.22 device class

class defined by a set of device functions. It specifies the features supported on a device regardless of its physical attributes. Examples used within this standard are digital media server (DMS) and digital media player (DMP). A single device may support multiple device classes. A DLNA device must support at least one device class and may support one or more device capabilities. A device class is the certifiable entity in DLNA.

3.1.23 digital living network alliance DLNA

organization that originally developed this standard

3.1.24 DLNA transport packet

term used to collectively refer to the three MPEG-2 transport stream packet formats defined by DLNA. These consist of a 188-byte ISO MPEG2 TS packet, a 192-byte packet consisting of a 188-byte ISO MPEG2 TS packet preceded by a 4-byte timestamp zero-value timestamp field, and a 192-byte packet consisting of a 188-byte ISO MPEG2 TS packet preceded by a 4-byte valid timestamp

3.1.25 digital media controller DMC

one of the device classes defined by DLNA

3.1.26 digital media player DMP

one of the device classes defined by DLNA

3.1.27 digital media printer DMPr

one of the device classes defined by DLNA

3.1.28 digital media renderer DMR

one of the device classes defined by DLNA

3.1.29 digital media server DMS

one of the device classes defined by DLNA

3.1.30

digital video broadcast

DVB

one of the standard bodies for digital television broadcasting

3.1.31

digital versatile disc

DVD

high-capacity multimedia data storage medium

3.1.32

elementary stream

general term for a coded video, coded audio, or other coded bitstream.

3.1.33

exchangeable image file

EXIF

standardized format for exchanging images

3.1.34

format

family of encoding algorithm that share similar features or characteristics, for example, the MPEG-4 family of AV encoding algorithms, the MPEG-2 family of encoding algorithms, or the WMV family of encoding algorithms.

3.1.35

format profile

particular instantiation of a media format; given one family of encoding algorithms, a particular combination of algorithms and encoding parameters results in content items encoded with very specific features. For example, given the MPEG-4 media format, a media format profile results from the selection of AVC encoding at main profile and Level 3, AAC audio, and the MP4 file format

3.1.36

high-definition

HD

picture quality at HDTV level

3.1.37

high-definition television

HDTV

television system which provides a higher quality display, with a vertical resolution display from 720p to 1080i and higher and an aspect ratio (the width to height ratio of the screen) of 16:9, for a viewing experience similar to watching a movie

3.1.38

home network device

HND

one of the device categories defined by DLNA

3.1.39

ID3, ID3v2

general tagging format for audio that makes it possible to store meta data about the audio inside the audio file itself. It is a tag mainly targeted at files encoded with MPEG-1/2 layer I, MPEG-1/2 layer II, MPEG-1/2 layer III, and MPEG-2.5, but may work with other types of encoded audio or as a stand-alone format for audio meta data

3.1.40
information file
IFO

file containing information regarding a content item utilized in DVD content encoding and creation

3.1.41
JPEG file interchange format
JFIF

standardized file format for the exchange of images

3.1.42
joint photographic experts group
JPEG

coding standard for compression of still images (pictures).

3.1.43
low complexity
LC

used with AAC

3.1.44
linear pulse code modulation
LPCM

uncompressed audio encoding

3.1.45
MHD digital media controller
MDMC

one of the device classes defined by DLNA

3.1.46
MHD digital media downloader
MDMD

one of the device classes defined by DLNA

3.1.47
MHD digital media player
MDMP

one of the device classes defined by DLNA

3.1.48
MHD digital media server
MDMS

one of the device classes defined by DLNA

3.1.49
MHD digital media uploader
MDMU

one of the device classes defined by DLNA

3.1.50
media class

class by which multimedia objects can be classified according to their purpose in audio-only, audio and video, or images; these options constitute the 3 media classes defined in the DLNA guidelines

3.1.51

mobile handheld device

MHD

one of the device categories defined by DLNA

3.1.52

multimedia home platform

MHP

optional application interface used together with MPEG-2 transmissions

3.1.53

multipurpose Internet mail extension

MIME

standard system for identifying the type of data contained in a file. MIME is an Internet protocol that allows sending binary files across the Internet as attachments to email messages. This includes graphics, photos, sound, video files, and formatted text documents

3.1.54

media management

MM

one of the architecture components of DLNA

3.1.55

MPEG-1 audio layer 3

MP3

coding standard for compression of audio data

3.1.56

MPEG-4 file format

MP4

tool for storing MPEG-4 data in a file

3.1.57

media server 1.0 control point

MSCP

UPnP AV control point that issues actions to an MSD

3.1.58

multiple program transport stream

MPEG

contains two or more distinct programs which have been multiplexed into a single stream formatted to be a compliant MPEG transport stream

3.1.59

national television systems committee

NTSC

standard for broadcast and reception of analogue television signals

3.1.60

phase alternating line

PAL

standard for broadcast and reception of analogue television signals

3.1.61

personal computer

PC

general-purpose computer equipped with a microprocessor and designed to run commercial software (such as a word processor or World Wide Web browser) for an individual user

3.1.62**personal digital assistant****PDA**

small electronic device used to store calendar information, contacts, etc.

3.1.63**profile parameter set**

collection of compression, encoding, and encapsulation parameters that results in a valid object binary

NOTE Each media format profile defined in these guidelines is identified by its profile ID. Each profile is defined selecting a subset of compression parameters, encoding parameters, and file format (or encapsulation) parameters. The implementer chooses certain parameters to produce a content object binary.

3.1.64**quality of service****QoS**

quality of service to provide guarantees on the ability of a network to deliver predictable results

3.1.65**quarter VGA****QVGA**

display format used in digital cameras

3.1.66**render**

function which reproduces the encoded content binary in a recognizable manner. The reproduction process may adjust the features of the content binary to the output characteristics of the device; for example, an A/V bitstream in high definition may be readjusted into SD resolution for display in standard definition TV

3.1.67**rendering endpoints**

content receiver devices with the capability of rendering the content they receive. These devices could play the content at the time of the transfer, right after the transfer has finished, or at a later time after the transfer has finished

NOTE For the purposes of this standard, devices in the following device classes constitute the only known rendering endpoints: DMP, DMR, DMPi, MDMP, MDMD.

3.1.68**red green blue****RGB**

colour composition scheme used by AV devices

3.1.69**real time transport protocol****RTP**

media transport that provides end-to-end network transport functions for transmitting real-time data, such as AV and provides services such as payload type identification, sequence numbering, time-stamping, and delivery monitoring

3.1.70**standard definition****SD**

picture quality at a SDTV level

3.1.71

standard definition television

SDTV

mode of operation of digital television that provides standard quality display, with a vertical resolution display less than 720p and an aspect ratio of 4:3, resulting in a viewing experience similar or slightly better than today's analogue television

3.1.72

serving endpoints

content source devices with the capability of making content available to any client device in the home network. In order to make content available to other home devices, content source devices act as UPnP media servers

NOTE For the purposes of this standard, devices in the following device classes constitute the only known serving endpoints: DMS, MDMS. It should be noticed that an uploader device (MDMU) does not constitute a serving endpoint although it acts as a content source device.

3.1.73

service information (in DVB specifications)

SI

system information (in SCTE specifications)

3.1.74

single program transport stream

MPEG transport stream containing a single program

3.1.75

selection information table

SIT

service(s) and event(s) carried by a partial TS

3.1.76

source of an XHTML-Print document

term describing the DLNA entity that creates the XHTML-Print document for the purpose of printing. Devices that include a Printer Controller (+PR1+) can act as the source of XHTML-Print documents. An XHTML-Print document will be pulled by a DMP_r from this source entity, or it will be pushed by this source entity to a DMP_r.

3.1.77

system or systems

term referring to the encapsulation and multiplexing protocol that allows the delivery of audio, and audio/video streams in the context of media formats. This layer provides rules for identifying individual audio and video components, rules for synchronizing audio and video components, and others

3.1.78

tolerance

term when used as a noun or as a verb indicates that when a particular endpoint (serving or rendering or even an intermediate device) receive data packets, the endpoint must be tolerant of information that it may not understand. A tolerant behaviour implies that the endpoint must be capable of decoding, parsing, and gracefully ignoring information that is not understood

3.1.79

transport alignment position

position in the bitstream defined for transport alignment

3.1.80

transport stream

collection of multiplexed audio, video, and data packets organized in one or more programs (or services) in compliance with the MPEG-2 systems specifications

3.1.81**uploading endpoints**

content source devices with the capability of uploading content to certain devices in the home network. In this case, these devices cannot serve to any potential client devices in the network. Instead they transfer content only to those devices capable of receiving uploads. A device that belongs to the MDMU device class, or a device that implements the +UP+ capability constitute uploading endpoints

3.1.82**universal plug and play****UPnP**

organization that defines some of the foundation standards for DLNA

3.2 Acronyms

AAC	Advanced Audio Coding
ADTS	Audio Data Transport Stream
AOT	Audio Object Types
ASF1	Advanced System Format
BIFS	Binary Format for Scenes
BP	Baseline Profile
bps	bits per second
CAT	Conditional Access Table
CBR	Constant Bit Rate
CIF	Common Intermediate Format
CRC	Cyclic Redundancy Check
DCP	Device Control Protocol
DDC	Device Discovery and Control
DIDL	Digital Item Declaration Language
DIT	Discontinuity Information Table
DPB	Decoded Picture Buffer
DTS	Decoding Time Stamp
DVD-VR	DVD Video Recording
EDTV	Enhanced Definition Television
ES	Elementary Streams
EU	European Union
fps	frames per second
GOP	Group Of Pictures
HEAAC	High Efficiency Advanced Audio Coding
HighMAT1	High-Performance Media Access Technology
HTTP	HyperText Transfer Protocol
ID	Identifier
IP	Internet Protocol
IPR	Intellectual Property Rights
IRD	Integrated Receiver Decoder
ISMA	Internet Streaming Media Alliance
Kbps	Kilobits per second

KO	Korea
LFE	Low Frequency Effects” or “Low Frequency Enhancement
LRG	Large
LTP	Long Term Prediction
Mbps	Megabits per second
MF	Media Format
MPEG	Moving Picture Experts Group
MPTS	Multiple-Program Transport Streams
MULT5	<u>M</u> ultiple channels, up to <u>5</u> .1 channels
MULT7	<u>M</u> ultiple channels, up to <u>7</u> .1 channels
NA	North America
PAT	Program Association Table
PCR	Program Clock Reference
PDL	Page Description Language
PES	Packetized Elementary Streams
PMT	Program Map Table
PNG	Portable Network Graphics
PS	Program Stream
PSI	Program Specific Information
PSM	Program Stream Map
PTS	Presentation Time Stamp
QCIF	Quarter Common Intermediate Format"
RDI	Real-time Data Information
SBR	Spectral Band Replication
SCR	System Clock Reference
SCTE	Society of Cable Telecommunications Engineers
SM	Small
SPTS	Single Program Transport Stream
STB	Set-Top Box
STC	System Time Clock
TS	Transport Stream
TTS	Timestamped Transport Stream
URI	Uniform Resource Identifier
URN	Uniform Resource Name
UTF	Unicode Transformation Format
VBI	Vertical Blanking Interval
VBR	Variable Bit Rate
VGA	Video Graphics Array
VOB	Video Object
VOP	Video Object Plane
W3C	World Wide Web Consortium
WM	Windows Media
WMA	Windows Media Audio

WMV	Windows Media Video
WMV9	Windows Media Version 9 Series
XHTML	XML Hypertext Markup Language
XML	Extensible Markup Language

4 Guideline terminology and conventions

4.1 Guideline compliance classifiers

Reference [40]¹ provides a description of terminology conventions used in all IETF RFC documents. The terminology and conventions used by these guidelines are adapted from this reference. The details of each guideline will carry a compliance classifier from the following set.

[M]ust, Required, Must: This is the minimum set of requirements that will ensure interoperability and/or robust operation between devices. All devices are expected to comply with these requirements when expressed in unconditional form. A conditional requirement expressed in the form, "If X, then Y must be implemented", means that the requirement "Y" must be met when the conditional aspect "X" applies to a given implementation. In this case must has the same meaning as shall in ISO/IEC documents.

[S]hould, Recommended: Recommended items are optional items that are strongly recommended for inclusion in products. The difference between "recommended" items and "optional" items, below, is one of priority. When considering features for inclusion in a product, recommended items should be included first.

[O]ptional, May: Optional items are suggestions for features that will enhance the user experience or are offered as a less preferred choice relative to another recommended feature. If optional features are included, they should comply with the requirement to ensure interoperability with other implementations.

E[X]pressly forbidden: This term means that an item must not be incorporated in a product implementation.

4.2 Standard or specification usage classifiers

When specifying guideline details, it is often useful to reiterate or clarify certain aspects of a standard or specification that are often violated or misunderstood. Furthermore, there may be guideline requirements that intentionally contradict or restrict implementation of certain aspects of a standard or specification in order to ensure interoperability between digital home devices. The following classifiers are used in the guidelines to indicate the relationship of a specific guideline requirement to a source standard or specification.

[A]dding: A guideline requirement that adds to or supplements a standard or specification to enhance interoperability.

[C]larifying: A guideline requirement that addresses vague or ambiguous aspects of a standard or specification.

[F]ixing: A guideline requirement that intentionally supersedes and fixes aspects of a standard or specification that is incorrect and would otherwise provide a poor user experience or prevent device interoperability.

¹ Figures in square brackets refer to the Bibliography.

[L]imiting: A guideline requirement that narrows or specifies an exact behavior in areas where a standard or specification provides for greater degrees of latitude in implementation.

[R]epeating: A guideline requirement that repeats what is already in a standard or specification because of observed and repeated problems with implementations. Whenever a guideline requirement with this usage classifier seems to be in conflict with the actual standard, the standard prevails over the guideline requirement.

4.3 Guideline font usage conventions

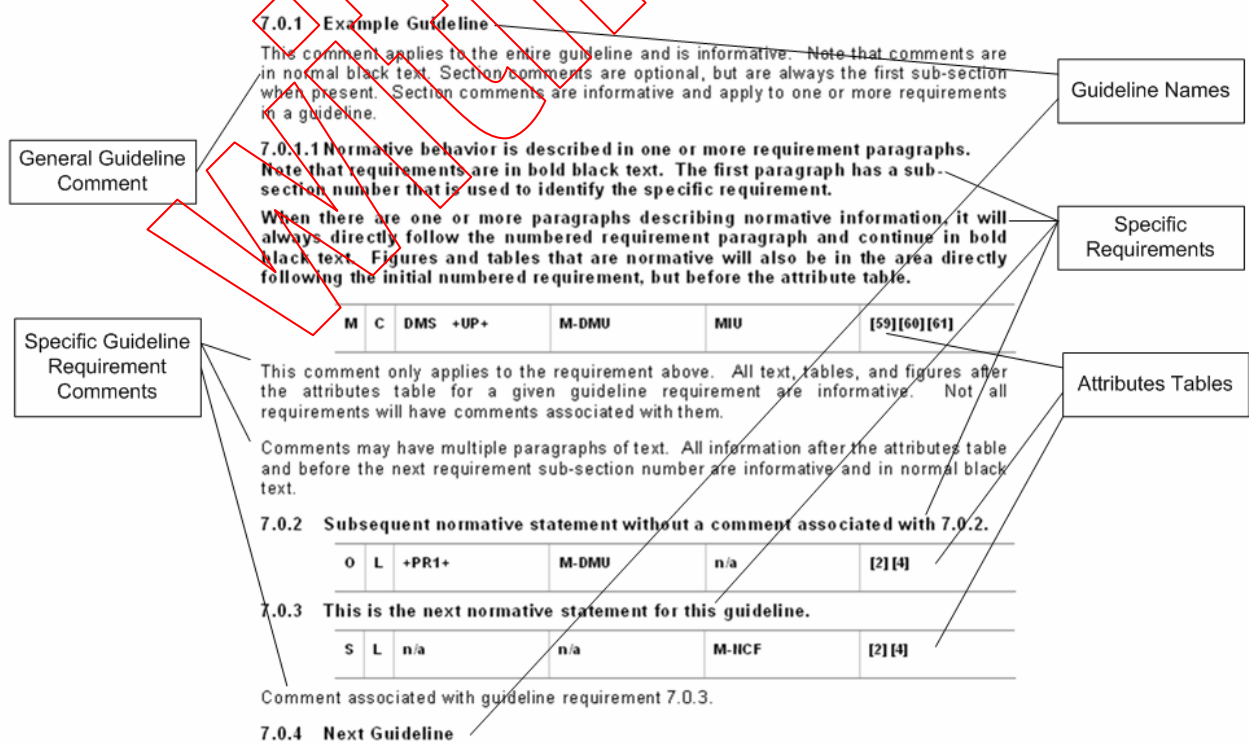
The following font usage conventions are used within the guidelines to provide additional clarity:

- Links to reference citations are indicated as document number or [Bibliography number]. For example ISO/IEC 14496-3 AMD.1, ISO/IEC 13818-3 or [11].
- Special terms may be *italicized*. Sometimes a guideline requirement will define a term for use within that guideline and the term will be *italicized*.
- Profile identifiers are always capitalized and sometimes they are in bold, such as **MPEG_PS_NTSC**

4.4 Layout for guidelines

This subclause covers the guidelines that enable vendors to build interoperable products. Devices built to the DLNA home networked device interoperability guidelines will be able to manage, transfer, and play personal media over a home network.

These guidelines are in a section/subsection format as shown in Figure 1.



IEC 1581/07

Figure 1 – Guideline layout and definitions

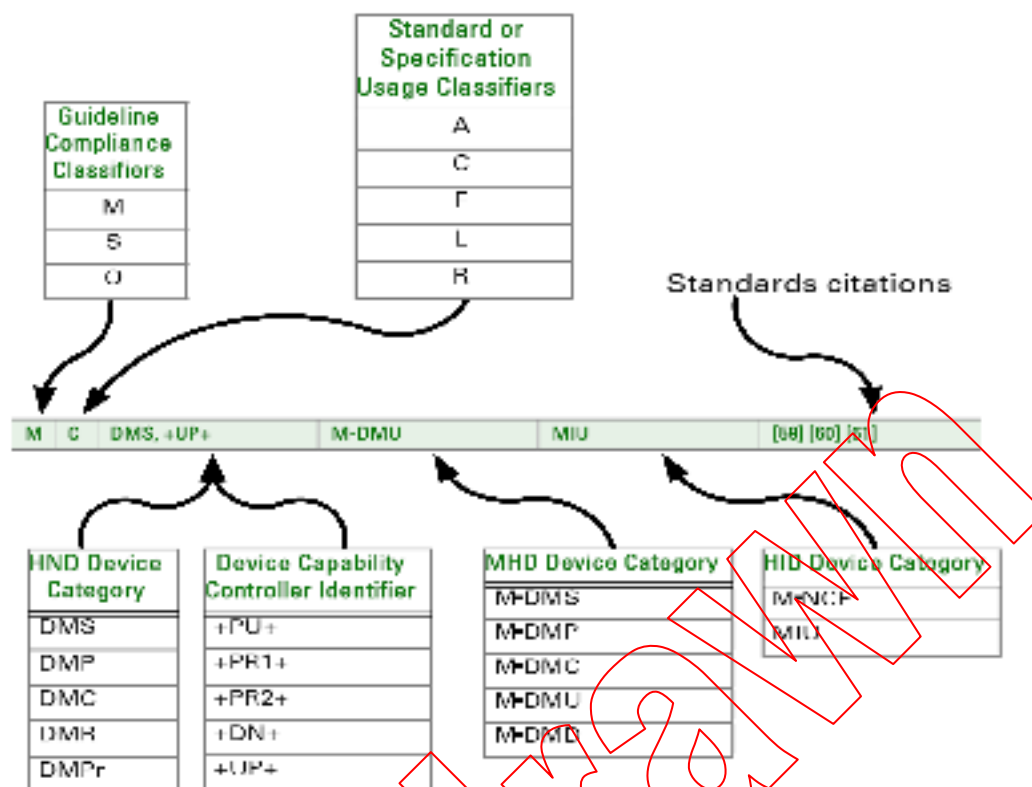
The following list describes the content of Figure 1.

- a) Name: A unique label for the guideline. The label is preceded with a sequentially increasing number to allow easy lookup.
- b) Requirements: The actual description of a guideline. A guideline is preceded with a sequentially increasing number to allow easy lookup. A given guideline may consist of several subrequirements that are also numbered.
- c) Attribute table: A summary of the essential attributes of a requirement. The table is a single row with the following definitions for the columns:
 - compliance classifier: M/S/O (see 6.1 for the definition of guideline compliance classifiers);
 - the specification usage classifier: A/C/F/L/R: for the guideline (see 6.2 for the definition of specification usage classifiers);
 - HND device classes with device capabilities (see Table 2 and Table 3 for definitions). Device capabilities were originally defined within the context of the HND device category and are listed in the HND column of the attribute table. Device capabilities can also apply equally to the MHD device category but have been omitted from the MHD column in the attribute table to provide for better readability;
 - MHD device classes(see Table 4 for definitions);
 - HID device classes(see Table 5 for definitions);
 - ref #: Standards that are referenced by the guideline. Standards citations are by number and are defined in Clause 2.

Guideline attribute columns that do not have a value have the designation "n/a" (not applicable). A visual map of possible values for the attribute tables is given in Figure 2.

- d) Supplementary information about a guideline such as a justification for the guideline, the specific interoperability issue that is addressed, etc.

It should be noted that many guidelines do not explicitly list MIU since guidelines which apply to a device class also apply to the virtualized variants.



IEC 1582/07

Figure 2 – Visual map of possible values for the attribute tables

Many of the guidelines in this standard define specific media format profiles. Each profile is composed of parameters like bit rate, sampling rate, resolution, etc. Each parameter admits one or more options recognized sometimes by textual description and other times by the use of a list of options signalled with the ">" entry indicator. For example, a guideline entry may have sampling rates defined as follows:

- 44,1 kHz
- 48 kHz

In this example, these two values define two different encoding parameters. Servers choose to support one or both, but players have to support both.

5 Compendium of media format profiles

5.1 General

This clause provides a comprehensive list of all media format profiles defined for this version of the media format guidelines. The description includes the profile ID values as well as a brief summary of features and usage scenarios.

Content objects exchanged according to the DLNA home network device interoperability guidelines belong to one of the following media classes: image, audio, and AV. Each media class typically includes multiple formats, and each format can be instantiated according to multiple profiles. This standard defines the particular media format profiles based on strict selection of format parameters and features. Each media class typically includes multiple formats, and each format can be instantiated according to multiple media format profiles. This standard also contains media format profiles for media collections and printer XHTML documents. These profiles do not map into any of these media classes.

This clause contains a set of tables which contain a summary of the various media format profile definitions contained in this standard. Each table has the header shown below in Figure 3.

Profile ID	Description	MIME Type	Label	Usage Scenarios
MPEG1-L	MPEG1-L-A	video/mpeg	F00	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

IEC 1617/07

Figure 3 – Profile summary table header

- **Profile ID:** Profiles are identified by an alphanumeric token that is known as the profile ID. This parameter is used by DLNA specifications and implementations whenever devices need to advertise or reference a content item of a particular profile. This clause provides a comprehensive list of all media format profiles, it describes their main features, and explains possible usage scenarios. Subsequent clauses of this standard describe the strict specifications that define each of the profiles.
- **Description:** A description of the profile ID.
- **MIME type:** The MIME type to be utilized along with the DLNA profile ID. It should be noted that the MIME types defined for each of the profiles are always case-insensitive.
- **Label:** A categorization label which helps identify related profile IDs.
- **Usage scenarios:** The rightmost column in the profile tables presented below describes existing and developing applicability scenarios for each of the DLNA media format profiles. The description in this column should be considered complementary information on each profile. It is not intended to be as an exhaustive list of all potential usage or applicability scenarios. In fact, many other usage scenarios may become applicable in the near future due to the emergence of new standards, new products, and new trends. In this column, the text in **bold** indicates applications or services whereas the text in *italics* indicates devices.

5.2 Categorization labels

The tables for DLNA media format profiles presented in this clause include a column called "label." Table 1 defines the meaning of these labels. Three audio labels, two image labels, and five video labels have been defined to provide guidance on the expected complexity level of each of the defined format profiles. The audio labels differentiate between single-channel, 2-channel and multi-channel scenarios. The video labels differentiate in terms of resolution; ranging from QCIF to high-definition (HD) scenarios. The image labels differentiate in terms of the purpose of usage. For a given audio or AV profile, the label indicates the most complex scenario. Readers should note that any given profile typically defines a range of scenarios, of which only the most complex is typically indicated by the label.

Table 1 – Categorization labels

Label name	Definition
mono	Single channel audio application scenarios (speech)
2 ch	2-channel audio application scenarios
multi	Multi-channel audio application scenarios
QCIF15	Low-resolution A/V application scenarios
CIF15	Medium-resolution A/V application scenarios with lower frame rates

CIF30	Medium-resolution A/V application scenarios
SD	Standard resolution A/V application scenarios
HD	High-resolution A/V application scenarios
picture	Image objects of different sizes used as content items
icon	Image objects of different sizes used only for icon or thumbnail representations

Table 2 – JPEG profiles

Profile ID	Description	MIME type	Label	Usage scenarios
JPEG_SM	Profile for image media class content of small resolution	image/jpeg	picture	A profile used by multiple types of devices (<i>cameras, cell phones, PCs</i>) to represent small images in compressed format
JPEG_MED	Profile for image media class content of medium resolution	image/jpeg	picture	A profile used by multiple types of devices (<i>cameras, cell phones, PCs</i>) to represent medium-size images in compressed format
JPEG_LRG	Profile for image media class content of high resolution	image/jpeg	picture	A profile used by multiple types of devices (<i>cameras, cell phones, PCs</i>) to represent large images in compressed format
JPEG_TN	Profile for image thumbnails	image/jpeg	icon	An image profile for images in thumbnail resolutions used to provide a compact visual representation (a companion image) of other media objects (images, audio, AV), using JPEG encoding. This profile is used by multiple types of devices ()
JPEG_SM_ICO	Profile for small icons	image/jpeg	icon	A profile used to represent small icons using JPEG image coding. This icon profile is used by multiple types of devices (<i>cameras, cell phones, PCs</i>) for UPnP device descriptions
JPEG_LRG_ICO	Profile for large icons	image/jpeg	icon	A profile used to represent large icons using JPEG image coding. This icon profile is used by multiple types of devices (<i>cameras, cell phones, PCs</i>) for UPnP device descriptions

Table 3 – Image class – PNG profiles

Profile ID	Description	MIME type	Label	Usage scenarios
PNG_TN	Profile for image thumbnails	image/png	icon	An image profile for images in thumbnail resolutions used to provide a compact visual representation (a companion image) of other media objects (images, audio, AV), using PNG encoding. This profile is used by multiple types of devices (<i>cameras, cell phones, PCs</i>)
PNG_SM_ICO	Profile for small icons	image/png	icon	A profile used to represent small icons using PNG image coding. This icon profile is used by multiple types of devices (<i>cameras, cell phones, PCs</i>) for UPnP device descriptions
PNG_LRG_ICO	Profile for large icons	image/png	icon	A profile used to represent large icons using PNG image coding. This icon profile is used by multiple types of devices (<i>cameras, cell phones, PCs</i>) for UPnP device descriptions
PNG_LRG	Profile for image class content of high resolution	image/png	picture	A profile used by multiple types of devices (<i>cameras, cell phones, PCs</i>) to represent large images in compressed format

Table 4 – Audio class – AC-3 profiles

Profile ID	Description	MIME type	Label	Usage scenarios
AC3	Profile for audio media class content	audio/vnd.dolby.dd-raw	2-ch multi	A profile used for audio content, including multichannel audio content . A related format profile is used in DVD-Audio for backward compatible multichannel audio content

5.3 Audio class – AMR profiles

Table 5 – Audio class – AMR profiles

Profile ID	Description	MIME type	Label	Usage scenarios
AMR_3GPP	Profile for audio media class content	audio/3gpp audio/mp4	mono	A profile utilized for audio capture and exchanging speech content in streaming and multimedia messaging services in 3GPP . This profile is supported by <i>Cellular Phones</i> and <i>PDA's</i>
AMR_WBplus	Profile for audio media class content	audio/3gpp	2-ch	This profile is used for 3GPP services . This profile is supported by <i>Cellular Phones</i> . A related format profile is recommended in 3GPP and optional in DVB

5.4 Audio class – ATRAC3plus profiles

Table 6 – Audio class – ATRAC3plus profiles

Profile ID	Description	MIME type	Label	Usage scenarios
ATRAC3plus	Profile for audio media class content	audio/x-sony-oma	2-ch multi	This profile is supported by <i>Personal Audio Players, Multichannel Audio Systems, and PCs</i>

Table 7 – Audio class – LPCM profiles

Profile ID	Description	MIME type	Label	Usage scenarios
LPCM	Profile for audio media class content	audio/L16	2-ch	A profile used for creating recordings of radio broadcasts and user-created audio content. This profile is supported by <i>CD players, audio systems, and PCs</i> NOTE According to 8.4.3, the use of this MIME type requires additional parameters.

Table 8 – Audio class – MP3 profiles

Profile ID	Description	MIME type	Label	Usage scenarios
MP3	Profile for audio media class content	audio/mpeg	2-ch	A profile used for creating recordings of music and voice for storage on devices and for Internet transmission. This profile is supported by <i>Personal Audio Players, Cellular Phones, and PCs</i>
MP3X	Profile for MP3 audio media class content with extensions for lower sampling rates and bit rates.	audio/mpeg	2-ch	A profile used for creating recordings of radio broadcasts and ripping CD audio content , and Internet radio broadcasting . This profile is supported by <i>personal audio players, cellular phones, and PCs</i>

Table 9 – Audio class – MPEG-4 profiles

Profile ID	Description	MIME type	Label	Usage scenarios
AAC_ADTS	Profile for audio media class content	audio/vnd.lna.adts	2-ch	A profile used for creating recordings of radio broadcasts and user-created audio content and for digital radio broadcasting . This profile is supported by <i>personal audio players, cellular phones, and PCs</i> . This Profile is used by ARIB radio
AAC_ADTS_320	Profile for audio media class content	audio/vnd.lna.adts	2-ch	A profile used for creating recordings of radio broadcasts and user-created audio content and for digital radio broadcasting . This profile is supported by <i>personal audio players, cellular phones, and PCs</i>
AAC_ISO	Profile for audio media class content	audio/mp4 audio/3gpp	2-ch	A profile used for creating recordings of radio broadcasts and user-created audio content and for digital radio broadcasting . This profile is supported by <i>personal audio players, cellular phones, and PCs</i> . A related format profile is used in <i>iTunes</i> and is required in ISMA . A related format profile is optional in DVB and 3GPP
AAC_ISO_320	Profile for audio media class content	audio/mp4 audio/3gpp	2-ch	A profile used for creating recordings of radio broadcasts and user-created audio content and for digital radio broadcasting . This profile is supported by <i>personal audio players, cellular phones, and PCs</i>

Table 9 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
AAC_LTP_ISO	Profile for audio media class content. In the case of the AAC LTP profiles, both the ISO file formats and the ADTS format are supported by the same profile.	audio/mp4 audio/3gpp audio/vnd.dlna.adts	2-ch	A Profile used for creating recording of radio broadcasts, the audio component of TV broadcast, and personal content . This profile is supported by <i>cellular phones</i> . A related format profile is optional in 3GPP
AAC_LTP_MULT5_ISO	Profile for audio media class content with up to 5.1 channels	audio/mp4 audio/3gpp audio/vnd.dlna.adts	multi	A Profile used for creating recording of radio broadcasts, the audio component of TV broadcast, and personal content . This profile is supported by <i>personal audio players, cellular phones, and PCs</i>
AAC_LTP_MULT7_ISO	Profile for audio media class content with up to 7.1 channels	audio/mp4 audio/3gpp audio/vnd.dlna.adts	multi	A profile used for creating recording of radio broadcasts, the audio component of TV broadcast, and personal content . This profile is supported by <i>cellular phones</i>
AAC_MULT5_ADTS	Profile for audio media class content with up to 5.1 channels	audio/vnd.dlna.adts	multi	A profile used for creating recording of radio broadcasts, and the audio component of TV broadcast . This profile is supported by <i>personal audio players and PCs</i>
AAC_MULT5_ISO	Profile for audio media class content with up to 5.1 channels	audio/mp4 audio/3gpp	multi	A profile used for creating multichannel recordings of audio. It is incorporated by reference in DLNA AV profiles. A related format profile is expected to be required in ISMA
HEAAC_L2_ADTS	Profile for audio media class content	audio/vnd.dlna.adts	2-ch	A profile used for creating recordings of radio broadcasts and user-created audio content and for digital radio broadcasting . This profile is supported by <i>personal audio players, cellular phones, and PCs</i>
HEAAC_L2_ISO	Profile for audio media class content	audio/mp4 audio/3gpp	2-ch	A profile used for creating recordings of Radio Broadcasts and User Created Audio Content and for Digital Radio Broadcasting . This Profile is supported by <i>Personal Audio Players, Cellular Phones, and PCs</i>
HEAAC_L3_ADTS	Profile for audio media class content	audio/vnd.dlna.adts	2-ch	A profile used for creating recordings of radio broadcasts and user-created audio content and for digital radio broadcasting . This profile is supported by <i>personal audio players, cellular phones, and PCs</i>
HEAAC_L3_ISO	Profile for audio media class content	audio/mp4 audio/3gpp	2-ch	A profile utilized in digital radio broadcasting . This profile is used in terrestrial and satellite broadcast digital radio. A related format profile is expected to be optional in 3GPP, ISMA, and DVB
HEAAC_MULT5_ADTS	Profile for audio media class content with up to 5.1 channels	audio/vnd.dlna.adts	multi	A profile utilized for creating multichannel music tracks from AV content . A related format profile is expected to be used in DVD-A
HEAAC_MULT5_ISO	Profile for audio media class content with up to 5.1 channels	audio/mp4 audio/3gpp	multi	A profile utilized for creating multichannel music tracks from AV content . A related format profile is expected to be optional in 3GPP, ISMA, and DVB

Table 9 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
HEAAC_L2_AD TS_320	Profile for audio media class content	audio/vnd.d lna.adts	2-ch	A profile used for creating recordings of radio broadcasts and user-created audio content and for digital radio broadcasting . This profile is supported by <i>personal audio players, cellular phones, and PCs</i>
HEAAC_L2_IS O_320	Profile for audio media class content	audio/mp4 audio/3gpp	2-ch	A profile used for creating recordings of radio broadcasts and user-created audio content and for digital radio broadcasting . This profile is supported by <i>personal audio players, cellular phones, and PCs</i>
BSAC_ISO	Profile for audio media class content	audio/mp4 audio/3gpp	2-ch	A profile used for creating recording of radio broadcasts, the audio component of TV broadcast, and personal content . This profile is supported by <i>personal audio players, cellular phones and PCs</i>
BSAC_MULT5_ ISO	Profile for audio media class content with up to 5.1 channels	audio/mp4 audio/3gpp	multi	A profile used for creating recording of radio broadcasts, the audio component of TV broadcast, and personal content . This profile is supported by <i>personal audio players, cellular phones, and PCs</i>

Table 10 – Audio class – WMA profiles

Profile ID	Description	MIME type	Label	Usage scenarios
WMABASE	WMA content (bit rates less than 193 Kbps)	audio/x- ms-wma	2-ch	A profile used for user-created audio content, Internet music services, and Internet radio . This profile is supported by <i>personal audio players and PCs</i>
WMAFULL	WMA content	audio/x- ms-wma	2-ch	A profile used for user-created audio content, Internet music services, and Internet radio . This profile is supported by <i>personal audio players and PCs</i>
WMAPRO	WMA professional version	audio/x- ms-wma	2-ch multi	A profile used by user-created audio content, and Internet music services . This profile is supported by <i>multichannel audio systems, and PCs</i>

Table 11 – AV Class – MPEG-1 profiles

Profile ID	Description	MIME type	Label	Usage scenarios
MPEG1	MPEG-1 video with 2 channel MPEG-1 Layer2 audio encapsulated in MPEG-1 system	video/mpeg	CIF30	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i>

Table 12 – AV Class – MPEG-2 profiles

Profile ID	Description	MIME type	Label	Usage scenarios
MPEG_PS_NTSC	Profile for NTSC-formatted AV class media	video/mpeg	SD	A profile used to create recordings of broadcast TV and for content storage in DVDs . This profile is supported by <i>DVD players</i> and <i>PCs</i>
MPEG_PS_NTSC_XAC3	Profile for NTSC-formatted AV class media	video/mpeg	SD	A profile used to create recordings of broadcast . This profile is supported by <i>PCs</i>
MPEG_PS_PAL	Profile for PAL-formatted AV class media	video/mpeg	SD	A profile used to create recordings of broadcast TV and for content storage in DVDs . This profile is supported by <i>DVD players</i> and <i>PCs</i>
MPEG_PS_PAL_XAC3	Profile for PAL-formatted AV class media	video/mpeg	SD	A profile used to create recordings of broadcast TV . This profile is supported by <i>PCs</i>
MPEG_TS_SD_NA	North America region profile for standard definition AV class utilizing a DLNA transport packet with zero value timestamp	video/vnd.dlna.mpeg-tts	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs</i> , <i>STBs</i> , and <i>PCs with DTV tuner cards</i>
MPEG_TS_SD_NA_T	North America region profile for standard definition AV class utilizing a DLNA transport packet with a valid timestamp	video/vnd.dlna.mpeg-tts	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs</i> , <i>STBs</i> , and <i>PCs with DTV tuner cards</i>
MPEG_TS_SD_NA_ISO	North America region profile for standard definition AV class utilizing a DLNA transport packet without a timestamp field	video/mpeg	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs</i> , <i>STBs</i> , and <i>PCs with DTV tuner cards</i>
MPEG_TS_HD_NA	North America region profile for high-definition AV class utilizing a DLNA transport packet with zero value timestamp	video/vnd.dlna.mpeg-tts	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs</i> , <i>STBs</i> , and <i>PCs with DTV tuner cards</i>
MPEG_TS_HD_NA_T	North America region profile for high-definition AV class utilizing a DLNA transport packet with a valid timestamp	video/vnd.dlna.mpeg-tts	HD	A profile derived from digital television broadcasting , and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs</i> , <i>STBs</i> , and <i>PCs with DTV tuner cards</i>
MPEG_TS_HD_NA_ISO	North America region profile for high-definition AV class utilizing a DLNA transport packet without a timestamp field	video/mpeg	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs</i> , <i>STBs</i> , and <i>PCs with DTV tuner cards</i>
MPEG_TS_SD_EU	European region profile for standard definition AV class utilizing a DLNA transport packet with zero value timestamp	video/vnd.dlna.mpeg-tts	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to DVB (terrestrial, cable, and satellite) systems. It is supported by <i>DTVs</i> , <i>STBs</i> , and <i>PCs with DTV tuner cards</i>

Table 12 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
MPEG_TS_SD_EU_T	European region profile for standard definition AV class utilizing a DLNA transport packet with a valid timestamp	video/vnd.dln a.mpeg-tts	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to DVB (terrestrial, cable, and satellite) systems. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_SD_EU_ISO	European region profile for standard definition AV class utilizing a DLNA transport packet without a timestamp field	Video/mpeg	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to DVB (terrestrial, cable, and satellite) systems. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_SD_KO	Korea region profile for standard definition AV utilizing a DLNA transport packet with zero value timestamp	video/vnd.dln a.mpeg-tts	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_SD_KO_T	Korea region profile for standard definition AV class utilizing a DLNA transport packet with a valid timestamp	video/vnd.dln a.mpeg-tts	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_SD_KO_ISO	Korea region profile for standard definition AV class utilizing a DLNA transport packet without a timestamp field	video/mpeg	SD	A profile derived from digital television broadcasting , and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_HD_KO	Korea region profile for high-definition AV class utilizing a DLNA transport packet with zero value timestamp	video/vnd.dln a.mpeg-tts	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_HD_KO_T	Korea region profile for high-definition AV class utilizing a DLNA transport packet with a valid timestamp	video/vnd.dln a.mpeg-tts	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_HD_KO_ISO	Korea region profile for high-definition AV class utilizing a DLNA transport packet without a timestamp field	video/mpeg	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_HD_KO_XAC3	Korea region profile for transcoded high-definition AV class media with a zero value timestamp	video/vnd.dln a.mpeg-tts	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>

Table 12 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
MPEG_TS_HD_KO_XAC3_T	Korea region profile for transcoded high-definition AV class media with a valid timestamp	video/vnd.dln a.mpeg-tts	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_HD_KO_XAC3_ISO	Korea region profile for transcoded high-definition AV class media without a timestamp field	video/mpeg	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_HD_NA_XAC3	North America region profile for transcoded high-definition AV class media with a zero value timestamp	video/vnd.dln a.mpeg-tts	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_HD_NA_XAC3_T	North America region profile for transcoded high-definition AV class media with a valid timestamp	video/vnd.dln a.mpeg-tts	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_HD_NA_XAC3_ISO	North America region profile for transcoded high-definition AV class media without a timestamp field	video/mpeg	HD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_SD_KO_XAC3	Korea region profile for standard definition AV class media with a zero value timestamp	video/vnd.dln a.mpeg-tts	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_SD_KO_XAC3_T	Korea region profile for standard definition AV class media with a valid timestamp	video/vnd.dln a.mpeg-tts	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_SD_KO_XAC3_ISO	Korea region profile for standard definition AV class media without a timestamp field	video/mpeg	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems with extensions for Korea. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_SD_NA_XAC3	North America region profile for standard definition AV class media with a zero value timestamp	video/vnd.dln a.mpeg-tts	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>

Table 12 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
MPEG_TS_SD_NA_XAC3_T	North America region profile for standard definition AV class media with a valid timestamp	video/vnd.dln a.mpeg-tts	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_SD_NA_XAC3_ISO	North America region profile for standard definition AV class media without a timestamp field	video/mpeg	SD	A profile derived from digital television broadcasting and also used for storing digital video streams . This profile applies to ATSC (terrestrial) and SCTE (cable) systems. It is supported by <i>DTVs, STBs, and PCs with DTV tuner cards</i>
MPEG_TS_MP_LL_AAC	MPEG-2 main profile at low level with AAC LC audio encapsulated in MPEG-2 TS with zero value timestamp	video/vnd.dln a.mpeg-tts	CIF30	A profile used for limited distribution of DTV broadcast content . This profile may be supported by <i>cellular phones and PDAs</i>
MPEG_TS_MP_LL_AAC_T	MPEG-2 main profile at low level with AAC LC audio encapsulated in MPEG-2 TS with valid timestamp	video/vnd.dln a.mpeg-tts	CIF30	A profile used for limited distribution of DTV broadcast content . This profile may be supported by <i>cellular phones and PDAs</i>
MPEG_TS_MP_LL_AAC_ISO	MPEG-2 main profile at low level with AAC LC audio encapsulated in MPEG-2 TS without a timestamp field	video/mpeg	CIF30	A profile used for limited distribution of DTV broadcast content . This profile may be supported by <i>cellular phones and PDAs</i>
MPEG_ES_PAL	Profile signalling ES encapsulation for transport of MPEG_PS_PAL over RTP	video/mpeg	SD	A profile derived from content that exists as recordings of broadcast TV and from content stored in DVDs . This profile is supported by DVD players and <i>PCs</i>
MPEG_ES_NTSC	Profile signalling ES encapsulation for transport of MPEG_PS_NTSC over RTP	video/mpeg	SD	A profile derived from content that exists as recordings of broadcast TV and from content stored in DVDs . This profile is supported by DVD players and <i>PCs</i>
MPEG_ES_PAL_XAC3	Profile signalling ES encapsulation for transport of MPEG_PS_PAL_XAC3 over RTP	video/mpeg	SD	A profile derived from content that exists as recordings of broadcast TV . This profile is supported by <i>PCs</i>
MPEG_ES_NTSC_XAC3	Profile signalling ES encapsulation for transport of MPEG_PS_NTSC_XAC3 over RTP	video/mpeg	SD	A profile derived from content that exists as recordings of broadcast TV . This profile is supported by <i>PCs</i>

Table 13 – AV class – MPEG-4 Part 2 profiles

Profile ID	Description	MIME type	Label	Usage scenarios
MPEG4_P2_MP4_SP_AAC	MPEG-4 Part 2 simple profile with AAC LC audio, encapsulated in MP4	video/mp4	CIF30	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>cellular phones</i> , <i>PDA's</i> , <i>portable video players</i> , and <i>PC's</i> . A subset of this profile is used by ISMA (Profile 0)
MPEG4_P2_MP4_SP_HEAAC	MPEG-4 Part 2 simple profile with HE AAC audio, encapsulated in MP4	video/mp4	CIF30	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>cellular phones</i> , <i>PDA's</i> , <i>portable video players</i> , and <i>PC's</i>
MPEG4_P2_MP4_SP_ATRAC3plus	MPEG-4 Part 2 simple profile with ATRAC3plus audio, encapsulated in MP4	video/mp4	CIF30	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>cellular phones</i> , <i>PDA's</i> , <i>portable video players</i> , and <i>PC's</i>
MPEG4_P2_MP4_SP_AAC_LTP	MPEG-4 Part 2 simple profile with AAC LTP audio encapsulated in MP4	video/mp4	CIF30	A profile utilized to create recordings of personal content with a mobile recording device . This profile is supported by <i>cellular phones</i> , <i>PDA's</i> , and <i>portable video players</i>
MPEG4_P2_MP4_SP_L2_AAC	MPEG-4 Part 2 simple profile Level 2 with AAC audio encapsulated in MP4	video/mp4	CIF15	A profile utilized for multimedia capture . This profile may be supported by <i>cellular phones</i> and <i>PDA's</i>
MPEG4_P2_MP4_SP_L2_AMR	MPEG-4 Part 2 simple profile Level 2 with AMR audio encapsulated in MP4	video/mp4	CIF15	A profile utilized for multimedia capture . This profile may be supported by <i>cellular phones</i> and <i>PDA's</i>
MPEG4_P2_TS_SP_AAC_C	MPEG-4 Part 2 simple profile with AAC LC audio encapsulated in MPEG-2-TS with a zero TTS	video/vnd.dln.a.mpeg-tts	CIF30	
MPEG4_P2_TS_SP_AAC_C_T	MPEG-4 Part 2 simple profile with AAC LC audio encapsulated in MPEG-2-TS with a valid TTS	video/vnd.dln.a.mpeg-tts	CIF30	
MPEG4_P2_TS_SP_AAC_C_ISO	MPEG-4 Part 2 simple profile with AAC LC audio encapsulated in MPEG-2-TS without a timestamp field	video/mpeg	CIF30	
MPEG4_P2_TS_SP_MPEG1_L3	MPEG-4 Part 2 simple profile with MPEG-1 Layer 3 audio encapsulated in MPEG-2-TS with a zero TTS	video/vnd.dln.a.mpeg-tts	CIF30	A profile utilized to transcode existing video content into lower spatial resolutions . This profile is supported by <i>cellular phones</i> , <i>PDA's</i> , and <i>portable video players</i>
MPEG4_P2_TS_SP_MPEG1_L3_T	MPEG-4 Part 2 simple profile with MPEG-1 Layer 3 audio encapsulated in MPEG-2-TS with a valid TTS	video/vnd.dln.a.mpeg-tts	CIF30	A profile utilized to transcode existing video content into lower spatial resolutions . This profile is supported by <i>cellular phones</i> , <i>PDA's</i> , and <i>portable video players</i>
MPEG4_P2_TS_SP_MPEG1_L3_ISO	MPEG-4 Part 2 simple profile with MPEG-1 Layer 3 audio encapsulated in MPEG-2-TS without a timestamp field	video/mpeg	CIF30	A profile utilized to transcode existing video content into lower spatial resolutions . This profile is supported by <i>cellular phones</i> , <i>PDA's</i> , and <i>portable video players</i>

Table 13 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
MPEG4_P2_TS_SP_AC3	MPEG-4 Part 2 simple profile with AC3 multi-channel audio encapsulated in MPEG-2-TS with a zero TTS.	video/vnd.dln a.mpeg-tts	CIF30	A profile utilized to transcode existing video content into lower spatial resolutions . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
MPEG4_P2_TS_SP_AC3_T	MPEG-4 Part 2 simple profile with AC3 multi-channel audio encapsulated in MPEG-2-TS with a valid TTS	video/vnd.dln a.mpeg-tts	CIF30	A profile utilized to transcode existing video content into lower spatial resolutions . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
MPEG4_P2_TS_SP_AC3_ISO	MPEG-4 Part2 simple profile with AC3 multi-channel audio encapsulated in MPEG-2-TS without a timestamp field	video/mpeg	CIF30	A profile utilized to transcode existing video content into lower spatial resolutions . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
MPEG4_P2_TS_SP_MPEG2_L2	MPEG-4 Part 2 simple profile with MPEG-1/2 Layer1/2 multi-channel audio encapsulated in MPEG-2-TS with a zero TTS	video/vnd.dln a.mpeg-tts	CIF30	A profile utilized to transcode existing video content into lower spatial resolutions . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
MPEG4_P2_TS_SP_MPEG2_L2_T	MPEG-4 Part 2 simple Profile with MPEG-1/2 Layer 1/2 multi-channel audio encapsulated in MPEG-2-TS with a valid TTS	video/vnd.dln a.mpeg-tts	CIF30	A profile utilized to transcode existing video content into lower spatial resolutions . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
MPEG4_P2_TS_SP_MPEG2_L2_ISO	MPEG-4 Part 2 simple profile with MPEG-1/2 Layer 1/2 multi-channel audio encapsulated in MPEG-2-TS without a timestamp field	video/mpeg	CIF30	A profile utilized to transcode existing video content into lower spatial resolutions . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
MPEG4_P2_ASF_SP_G726	MPEG-4 Part 2 simple profile with G.726 audio encapsulated in ASF	video/x-ms-asf	CIF30	A Profile utilized to create recordings of broadcast TV and personal content . This Profile is supported by <i>cellular phones, PDAs, portable video players, and PCs</i>
MPEG4_P2_MP4_SP_VGA_AAC	MPEG-4 Part 2 simple profile Level 3+ with AAC audio encapsulated in MP4	video/mp4	SD	A profile utilized for multimedia capture . This profile may be supported by <i>cellular phones and PDAs</i>
MPEG4_P2_MP4_SP_VGA_HEAAC	MPEG-4 Part 2 simple profile Level 3+ with HEAAC audio encapsulated in MP4	video/mp4	SD	A profile utilized for multimedia capture . This profile may be supported by <i>cellular phones and PDAs</i>
MPEG4_P2_MP4_ASP_AAC	MPEG-4 Part 2 advanced simple profile with AAC LC encapsulated in MP4.	video/mp4	SD	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>cellular phones, PDAs, portable video players, and PCs</i> . A subset of this profile is used by ISMA (Profile 1)
MPEG4_P2_MP4_ASP_HEAAC	MPEG-4 Part 2 advanced simple profile with HE AAC audio encapsulated in MP4	video/mp4	SD	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i>
MPEG4_P2_MP4_ASP_HEAAC_MULT5	MPEG-4 Part 2 advanced simple profile with HE AAC multi-channel audio encapsulated in MP4	video/mp4	SD	A profile utilized to create recording of broadcast TV and personal content . This profile is supported by <i>TVs, home theatre systems, and PCs</i>

Table 13 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
MPEG4_P2_MP4_ASP_ATRAC3plus	MPEG-4 Part 2 advanced simple profile with ATRAC3plus audio encapsulated in MP4	video/mp4	SD	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by TVs, cellular phones, PDAs, portable video players, and PCs
MPEG4_P2_TS_ASP_AAC	MPEG-4 Part 2 advanced simple profile with AAC LC audio encapsulated in MPEG-2-TS with a zero TTS	video/vnd.dln a.mpeg-tts	SD	
MPEG4_P2_TS_ASP_AAC_T	MPEG-4 Part 2 advanced simple profile with AAC LC audio encapsulated in MPEG-2-TS with a valid TTS	video/vnd.dln a.mpeg-tts	SD	
MPEG4_P2_TS_ASP_AAC_ISO	MPEG-4 Part 2 advanced simple profile with AAC LC audio encapsulated in MPEG-2-TS without a timestamp field	video/mpeg	SD	
MPEG4_P2_TS_ASP_MPEG1_L3	MPEG-4 Part 2 advanced simple profile with MPEG-1 Layer3 audio encapsulated in MPEG-2-TS with a zero TTS	video/vnd.dln a.mpeg-tts	SD	
MPEG4_P2_TS_ASP_MPEG1_L3_T	MPEG-4 Part 2 advanced simple profile with MPEG-1 Layer3 audio encapsulated in MPEG-2-TS with a valid TTS	video/vnd.dln a.mpeg-tts	SD	
MPEG4_P2_TS_ASP_MPEG1_L3_ISO	MPEG-4 Part 2 advanced simple profile with MPEG-1 Layer3 audio encapsulated in MPEG-2-TS without a timestamp field	video/mpeg	SD	
MPEG4_P2_TS_ASP_AAC3	MPEG-4 Part 2 advanced simple profile with AAC3 multi-channel audio encapsulated in MPEG-2-TS with a zero TTS	video/vnd.dln a.mpeg-tts	SD	
MPEG4_P2_TS_ASP_AAC3_T	MPEG-4 Part 2 advanced simple profile with AAC3 multi-channel audio encapsulated in MPEG-2-TS with a valid TTS	video/vnd.dln a.mpeg-tts	SD	
MPEG4_P2_TS_ASP_AAC3_ISO	MPEG-4 Part 2 advanced simple profile with AAC3 multi-channel audio encapsulated in MPEG-2-TS without a timestamp field	video/mpeg	SD	

Table 13 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
MPEG4_P2_MP4_ASP_L5_SO_AA_C	MPEG-4 Part 2 advanced simple profile up to Level 5 with only simple object with AAC LC audio encapsulated in MP4	video/mp4	SD	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>cellular phones, PDAs, portable video players, and PCs</i>
MPEG4_P2_MP4_ASP_L5_SO_HE_AAC	MPEG-4 Part 2 advanced simple profile up to Level 5 with only simple object with HE AAC audio encapsulated in MP4	video/mp4	SD	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>cellular phones, PDAs, portable video players, and PCs</i>
MPEG4_P2_MP4_ASP_L5_SO_HE_AAC_MULT5	MPEG-4 Part 2 advanced simple profile up to Level 5 with only simple object with HE AAC multi-channel audio encapsulated in MP4	video/mp4	SD	A profile utilized to create recording of broadcast TV and personal content . This profile is supported by <i>TVs, home theatre systems, and PCs</i>
MPEG4_P2_ASF_ASP_L5_SO_G726	MPEG-4 Part 2 advanced simple profile up to Level 5 with only simple object with G.726 audio encapsulated in ASF	video/x-ms-asf	SD	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i>
MPEG4_P2_MP4_ASP_L4_SO_AA_C	MPEG-4 Part 2 advanced simple profile up to Level 4 with only simple object with AAC LC audio encapsulated in MP4	video/mp4	CIF30	A profile utilized to create recordings of broadcast TV and personal content . It is utilized to create recordings with a mobile recording device. This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i>
MPEG4_P2_MP4_ASP_L4_SO_HE_AAC	MPEG-4 Part 2 advanced simple profile up to Level 4 with only simple object with HE AAC audio encapsulated in MP4	video/mp4	CIF30	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i>
MPEG4_P2_MP4_ASP_L4_SO_HE_AAC_MULT5	MPEG-4 Part 2 advanced simple profile up to Level 4 with only simple object with HE AAC multi-channel audio encapsulated in MP4	video/mp4	CIF30	A profile utilized to create recording of broadcast TV and personal content . This profile is supported by <i>TVs, home theatre systems, and PCs</i>
MPEG4_P2_ASF_ASP_L4_SO_G726	MPEG-4 Part 2 advanced simple profile up to Level 4 with only simple object with G.726 audio encapsulated in ASF	video/x-ms-asf	CIF30	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i>
MPEG4_H263_MP4_P0_L10_AAC	H263 profile 0 Level 10 with AAC LC audio encapsulated in MP4	video/3gpp	QCIF15	
MPEG4_H263_MP4_P0_L10_AAC_LTP	H263 profile 0 Level 10 with AAC LTP audio encapsulated in MP4	video/3gpp	QCIF15	A profile utilized to create recordings of personal content with a mobile recording device . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
MPEG4_H263_3GPP_P0_L10_AMR_WBplus	H263 profile 0 Level 10 with AMR-WB+ audio encapsulated in 3GPP	video/3gpp	QCIF15	This profile is used for 3GPP services . This profile is supported by <i>cellular phones</i>

Table 13 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
MPEG4_P2_TS_CO_A_C3	MPEG-4 Part 2 core profile with AC3 multi-channel audio encapsulated in MPEG-2-TS with a zero TTS	video/vnd.dln a.mpeg-tts	CIF30	This profile is utilized in broadcast TV . This profile is supported by <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i> . ARIB has adopted this profile for future digital TV broadcasting
MPEG4_P2_TS_CO_A_C3_T	MPEG-4 Part 2 core profile with AC3 multi-channel audio encapsulated in MPEG-2-TS with a valid TTS	video/vnd.dln a.mpeg-tts	CIF30	This profile is utilized in broadcast TV . This profile is supported by <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i> . ARIB has adopted this profile for future digital TV broadcasting
MPEG4_P2_TS_CO_A_C3_ISO	MPEG-4 Part 2 core profile with AC3 multi-channel audio encapsulated in MPEG-2-TS without a timestamp field	video/mpeg	CIF30	This profile is utilized in broadcast TV . This profile is supported by <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i> . ARIB has adopted this profile for future digital TV broadcasting
MPEG4_P2_TS_CO_MPEG2_L2	MPEG-4 Part 2 core profile with MPEG-1/2 Layer1/2 multi-channel audio encapsulated in MPEG-2 TS with a zero TTS	video/vnd.dln a.mpeg-tts	CIF30	This profile is utilized in broadcast TV . This profile is supported by <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i> . ARIB has adopted this profile for future digital TV broadcasting
MPEG4_P2_TS_CO_MPEG2_L2_T	MPEG-4 Part 2 core profile with MPEG-1/2 Layer1/2 multi-channel audio encapsulated in MPEG-2-TS with a valid TTS	video/vnd.dln a.mpeg-tts	CIF30	This profile is utilized in broadcast TV . This profile is supported by <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i> . ARIB has adopted this profile for future digital TV broadcasting
MPEG4_P2_TS_CO_MPEG2_L2_ISO	MPEG-4 Part 2 core profile with MPEG-1/2 Layer1/2 multi-channel audio encapsulated in MPEG-2-TS without a timestamp field.	video/mpeg	CIF30	This profile is utilized in broadcast TV . This profile is supported by <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i> . ARIB has adopted this profile for future digital TV broadcasting
MPEG4_P2_3GPP_SP_L0B_AAC	MPEG-4 Part 2 simple profile Level 0b with AAC audio encapsulated in 3GPP	video/3gpp video/mp4	QCIF15	A profile utilized for multimedia streaming and messaging services in 3GPP . This profile may be supported by <i>cellular phones</i> and <i>PDAs</i>
MPEG4_P2_3GPP_SP_L0B_AMR	MPEG-4 Part 2 simple profile Level 0b with AMR audio encapsulated in 3GPP	video/3gpp video/mp4	QCIF15	A profile utilized for multimedia conversations, streaming, and messaging services in 3GPP . This profile is supported by <i>cellular phones</i> and <i>PDAs</i>
MPEG4_H263_3GPP_P3_L10_AMR	MPEG-4 H.263 profile 3 Level 10 with AMR audio encapsulated in 3GPP	video/3gpp video/mp4	QCIF15	A profile utilized for multimedia conversations, streaming, and messaging services in 3GPP . This profile is supported by <i>cellular phones</i> and <i>PDAs</i>

Table 14 – AV Class – MPEG-4 Part 10 (AVC) profiles

Profile ID	Description	MIME type	Label	Usage scenarios
AVC_TS_M P_SD_AAC _MULT5	AVC wrapped in MPEG-2 TS main profile standard def with AAC audio with zero TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i> . This profile is used by DVB IP-IRD Capability D
AVC_TS_M P_SD_AAC _MULT5_T	AVC wrapped in MPEG-2 transport stream main profile standard def with AAC audio with valid TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i> . This profile is used by DVB IP-IRD Capability D
AVC_TS_M P_SD_AAC _MULT5_ISO	AVC wrapped in MPEG-2 transport stream main profile standard def with AAC audio without a timestamp field	video/mpeg	SD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i> . This profile is used by DVB IP-IRD Capability D
AVC_TS_M P_SD_HEAAC_L2	AVC wrapped in MPEG-2 TS main profile standard def with HEAAC L2 audio with zero TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for IP-based broadcast distribution , and recordings of traditional broadcast TV and personal content . This profile is supported by <i>TVs and PCs</i> . This profile is used by DVB IP-IRD Capability D
AVC_TS_M P_SD_HEAAC_L2_T	AVC wrapped in MPEG-2 TS main profile standard def with HEAAC L2 audio with valid TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for IP-based broadcast distribution , and recordings of traditional broadcast TV and personal content . This profile is supported by <i>TVs and PCs</i> . This profile is used by DVB IP-IRD Capability D
AVC_TS_M P_SD_HEAAC_L2_ISO	AVC wrapped in MPEG-2 TS main profile standard def with HEAAC L2 audio without a timestamp field	video/mpeg	SD	This profile is used for IP-based broadcast distribution , and recordings of traditional broadcast TV and personal content . This profile is supported by <i>TVs and PCs</i> . This profile is used by DVB IP-IRD Capability D
AVC_TS_M P_SD_MPEG1_L3	AVC wrapped in MPEG-2 TS main profile standard def with MPEG-1 layer 3 audio with zero TTS	video/vnd.dlna.mpeg-tts	SD	
AVC_TS_M P_SD_MPEG1_L3_T	AVC wrapped in MPEG-2 TS main profile standard def with MPEG-1 layer 3 audio with valid TTS	video/vnd.dlna.mpeg-tts	SD	
AVC_TS_M P_SD_MPEG1_L3_ISO	AVC wrapped in MPEG-2 TS main profile standard def with MPEG-1 layer 3 audio without a timestamp field	video/mpeg	SD	
AVC_TS_M P_SD_AC3	AVC wrapped in MPEG-2 TS main profile standard def with AC3 audio with zero TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i>
AVC_TS_M P_SD_AC3_T	AVC wrapped in MPEG-2 TS main profile standard def with AC3 audio with valid TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i>
AVC_TS_M P_SD_AC3_ISO	AVC wrapped in MPEG-2 TS main profile standard def with AC3 audio without a timestamp field	video/mpeg	SD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i>

Table 14 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
AVC_TS_M P_SD_AAC _LTP	AVC wrapped in MPEG-2 TS main profile standard def with AAC LTP audio with zero TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by TVs and PCs
AVC_TS_M P_SD_AAC _LTP_T	AVC wrapped in MPEG-2 TS main profile standard def with AAC LTP audio with valid TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by TVs and PCs
AVC_TS_M P_SD_AAC _LTP_ISO	AVC wrapped in MPEG-2 TS main profile standard def with AAC LTP audio without a Timestamp field	video/mpeg	SD	This profile is used for DTV broadcasting . This profile is supported by TVs and PCs
AVC_TS_M P_SD_AAC _LTP_MUL T5	AVC wrapped in MPEG-2 TS main profile standard def with AAC LTP audio with zero TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by TVs, home theatre systems, and PCs
AVC_TS_M P_SD_AAC _LTP_MUL T5_T	AVC wrapped in MPEG-2 TS main profile standard def with AAC LTP audio with valid TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by TVs, home theatre systems, and PCs
AVC_TS_M P_SD_AAC _LTP_MUL T5_ISO	AVC wrapped in MPEG-2 TS main profile standard def with AAC LTP audio without a timestamp field	video/mpeg	SD	This profile is used for DTV broadcasting . This profile is supported by TVs, home theatre systems, and PCs
AVC_TS_M P_SD_AAC _LTP_MUL T7	AVC wrapped in MPEG-2 TS main profile standard def with AAC LTP audio with zero TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by TVs, home theatre systems, and PCs
AVC_TS_M P_SD_AAC _LTP_MUL T7_T	AVC wrapped in MPEG-2 TS main profile standard def with AAC LTP audio with valid TTS	video/vnd.dlna.mpeg-tts	SD	This Profile is used for DTV Broadcasting . This Profile is supported by TVs, Home Theatre Systems, and PCs.
AVC_TS_M P_SD_AAC _LTP_MUL T7_ISO	AVC wrapped in MPEG-2 TS main profile standard def with AAC LTP audio without a timestamp field	video/mpeg	SD	This profile is used for DTV broadcasting . This profile is supported by TVs, home theatre systems, and PCs
AVC_TS_M P_SD_BSA C	AVC wrapped in MPEG-2 TS main profile standard def with BSAC audio with zero TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by TVs, home theatre systems, mobile handheld players, and PCs
AVC_TS_M P_SD_BSA C_T	AVC wrapped in MPEG-2 TS main profile standard def with BSAC audio with valid TTS	video/vnd.dlna.mpeg-tts	SD	This profile is used for DTV broadcasting . This profile is supported by TVs, home theatre systems, mobile handheld players, and PCs
AVC_TS_M P_SD_BSA C_ISO	AVC wrapped in MPEG-2 TS main profile standard def with BSAC audio without a timestamp field	video/mpeg	SD	This profile is used for DTV broadcasting . This profile is supported by TVs, home theatre systems, mobile handheld players, and PCs
AVC_MP4_ MP_SD_AA C_MULT5	AVC main profile standard def with AAC audio encapsulated in MP4	video/mp4	SD	This profile is used for DTV broadcasting and recordings of broadcast TV and personal content . This profile is supported by TVs, home theatre systems, and PCs. It is expected to be supported in the future by ISMA

Table 14 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
AVC_MP4_MP_SD_HEAAC_L2	AVC main profile standard def with HEAAC L2 audio encapsulated in MP4	video/mp4	SD	A profile utilized to create recording of broadcast TV and personal content . This profile is supported by <i>TVs</i> and <i>PCs</i> . It is expected to be supported in the future by ISMA
AVC_MP4_MP_SD_MPEG1_L3	AVC main profile standard def with MPEG-1 L3 audio encapsulated in MP4	video/mp4	SD	
AVC_MP4_MP_SD_AC3	AVC main profile standard def with AC3 audio encapsulated in MP4	video/mp4	SD	
AVC_MP4_MP_SD_AAC_LTP	AVC main profile standard def with AAC_LTP audio encapsulated in MP4	video/mp4	SD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs</i> and <i>PCs</i>
AVC_MP4_MP_SD_AAC_LTP_MU_LT5	AVC main profile standard def with AAC LTP audio encapsulated in MP4	video/mp4	SD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs</i> , <i>home theatre systems</i> , and <i>PCs</i>
AVC_MP4_MP_SD_AAC_LTP_MU_LT7	AVC main profile standard def with AAC LTP audio encapsulated in MP4	video/mp4	SD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs</i> , <i>home theatre systems</i> , and <i>PCs</i>
AVC_MP4_MP_SD_ATRAC3plus	AVC main profile standard def with ATRAC3plus audio encapsulated in MP4	video/mp4	SD	A profile utilized to create recordings of personal content . This profile is supported by <i>portable video players</i> , <i>TVs</i> , <i>home theatre systems</i> , and <i>PCs</i>
AVC_MP4_BL_L3L_SD_AAC	AVC baseline profile SD/VGA with AAC audio encapsulated in MP4	video/mp4	SD	A profile utilized for multimedia capture . This profile may be supported by <i>cellular phones</i> and <i>PDAs</i>
AVC_MP4_BL_L3L_SD_HEAAC	AVC baseline profile SD/VGA with HEAAC audio encapsulated in MP4	video/mp4	SD	A profile utilized for multimedia capture . This profile may be supported by <i>cellular phones</i> and <i>PDAs</i>
AVC_MP4_BL_L3L_SD_AAC	AVC baseline profile standard def with AAC audio encapsulated in MP4	video/mp4	SD	A profile utilized to create recording of broadcast TV and personal content . This profile is supported by <i>TVs</i> and <i>PCs</i>
AVC_MP4_MP_SD_BSAC	AVC baseline profile standard def with BSAC audio encapsulated in MP4	video/mp4	SD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs</i> , <i>home theatre systems</i> , <i>mobile handheld players</i> , and <i>PCs</i>
AVC_TS_B_L_CIF30_AAC_MULT5	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC audio with zero TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs</i> , <i>cellular phones</i> , <i>PDAs</i> , <i>portable video players</i> , and <i>PCs</i> . This profile is used by DVB IP-IRD Capability C
AVC_TS_B_L_CIF30_AAC_MULT5_T	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC audio with valid TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs</i> , <i>cellular phones</i> , <i>PDAs</i> , <i>portable video players</i> , and <i>PCs</i> . This profile is used by DVB IP-IRD Capability C

Table 14 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
AVC_TS_B L_CIF30_A AC_MULT5 _ISO	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC audio without a timestamp field	video/mpeg	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i> . This profile is used by DVB IP-IRD Capability C
AVC_TS_B L_CIF30_H EAAC_L2	AVC wrapped in MPEG-2 TS baseline profile CIF30 with HEAAC audio with zero TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i> . This profile is used by DVB IP-IRD Capability C
AVC_TS_B L_CIF30_H EAAC_L2_ T	AVC wrapped in MPEG-2 TS baseline profile CIF30 with HEAAC audio with valid TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i> . This profile is used by DVB IP-IRD Capability C
AVC_TS_B L_CIF30_H EAAC_L2_ ISO	AVC wrapped in MPEG-2 TS baseline profile CIF30 with HEAAC audio without a timestamp field	video/mpeg	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i> . This profile is used by DVB IP-IRD Capability C
AVC_TS_B L_CIF30_M PEG1_L3	AVC wrapped in MPEG-2 TS baseline profile CIF30 with MPEG-1 layer 3 audio with zero TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i>
AVC_TS_B L_CIF30_M PEG1_L3_ T	AVC wrapped in MPEG-2 TS baseline profile CIF30 with MPEG-1 layer 3 audio with valid TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i>
AVC_TS_B L_CIF30_M PEG1_L3_ ISO	AVC wrapped in MPEG-2 TS baseline profile CIF30 with MPEG-1 layer 3 audio without a timestamp field	video/mpeg	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i>
AVC_TS_B L_CIF30_A C3	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AC3 audio with zero TTS	video/vnd.dlna.mpeg-tts	CIF30	
AVC_TS_B L_CIF30_A C3_T	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AC3 audio with valid TTS	video/vnd.dlna.mpeg-tts	CIF30	
AVC_TS_B L_CIF30_A C3_ISO	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AC3 audio without a timestamp field	video/mpeg	CIF30	

Table 14 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
AVC_TS_B L_CIF30_A AC_LTP	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC LTP audio with zero TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_TS_B L_CIF30_A AC_LTP_T	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC LTP audio with valid TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_TS_B L_CIF30_A AC_LTP_ISO	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC LTP audio without a timestamp field	video/mpeg	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_TS_B L_CIF30_A AC_LTP_M ULT5	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC_LTP audio with zero TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_TS_B L_CIF30_A AC_LTP_M ULT5_T	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC_LTP audio with valid TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_TS_B L_CIF30_A AC_LTP_M ULT5_ISO	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC_LTP audio without a timestamp field	video/mpeg	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_TS_B L_CIF30_A AC_940	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC audio with zero TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of broadcast TV or personal content for mobile devices. This profile is supported by <i>TVs, digital video recorders, PCs, cellular phones, PDAs, and portable video players</i>
AVC_TS_B L_CIF30_A AC_940_T	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC audio with valid TTS	video/vnd.dlna.mpeg-tts	CIF30	A profile utilized to create recordings of broadcast TV or personal content for mobile devices. This profile is supported by <i>TVs, digital video recorders, PCs, cellular phones, PDAs, and portable video players</i>
AVC_TS_B L_CIF30_A AC_940_ISO	AVC wrapped in MPEG-2 TS baseline profile CIF30 with AAC audio without a timestamp field	video/mpeg	CIF30	A profile utilized to create recordings of broadcast TV or personal content for mobile devices. This profile is supported by <i>TVs, digital video recorders, PCs, cellular phones, PDAs, and portable video players</i>
AVC_MP4_ BL_CIF30_ AAC_MULT 5	AVC wrapped in MP4 baseline profile CIF30 with AAC audio	video/mp4	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, PDAs, portable video players, and PCs</i> . It is expected to be supported in the future by ISMA

Table 14 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
AVC_MP4_ BL_CIF30_ HEAAC_L2	AVC wrapped in MP4 baseline profile CIF30 with HEAAC audio	video/mp4	CIF30	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>cellular phones, PDAs, portable video players, and PCs</i>
AVC_MP4_ BL_CIF30_ MPEG1_L3	AVC wrapped in MP4 baseline profile CIF30 with MPEG-1 layer3 audio	video/mp4	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, cellular phones, PDAs, portable video players, and PCs</i>
AVC_MP4_ BL_CIF30_ AC3	AVC wrapped in MP4 baseline profile CIF30 with AC3 audio	video/mp4	CIF30	
AVC_MP4_ BL_CIF30_ AAC_LTP	AVC wrapped in MP4 baseline profile CIF30 with AAC LTP audio	video/mp4	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_MP4_ BL_CIF30_ AAC_LTP_ MULT5	AVC wrapped in MP4 baseline profile CIF30 with AAC LTP audio	video/mp4	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_MP4_ BL_L2_CIF 30_AAC	AVC wrapped in MP4 baseline profile CIF 30 with AAC audio	video/mp4	CIF30	A profile utilized to create recordings of broadcast TV and personal content . This profile is supported by <i>cellular phones, PDAs, portable video players, and PCs</i>
AVC_MP4_ BL_CIF30_ BSAC	AVC wrapped in MP4 baseline profile CIF30 with BSAC audio	video/mp4	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, PDAs, portable video players, and PCs</i>
AVC_MP4_ BL_CIF30_ BSAC_MUL T5	AVC wrapped in MP4 baseline profile CIF30 with BSAC audio	video/mp4	CIF30	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, PDAs, portable video players, and PCs</i>
AVC_MP4_ BL_CIF30_ AAC_912	AVC wrapped in MP4 baseline profile CIF30 with AAC audio	video/mp4	CIF30	A profile utilized to create recordings of broadcast TV or personal content for mobile devices. This profile is supported by <i>TVs, digital video recorders, PCs, cellular phones, PDAs, and portable video players</i>
AVC_MP4_ BL_CIF15_ HEAAC	AVC wrapped in MP4 baseline profile CIF15 with HEAAC audio	video/mp4	CIF15	A profile utilized for multimedia streaming and messaging services in 3GPP . This profile is supported by <i>cellular phones and PDAs</i>
AVC_MP4_ BL_CIF15_ AMR	AVC wrapped in MP4 baseline profile CIF15 with AMR audio	video/mp4	CIF15	A profile utilized for multimedia streaming and messaging services in 3GPP . This profile is supported by <i>cellular phones and PDAs</i>
AVC_TS_M P_HD_AAC _MULT5	AVC wrapped in MPEG-2 TS main profile HD with AAC audio with zero TTS	video/vnd.dlna.mpeg-tts	HD	A profile utilized to create recordings of personal content and for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, cellular phones, portable video players, and PCs</i> . This profile is used by DVB IP-IRD Capability E

Table 14 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
AVC_TS_M P_HD_AAC _MULT5_T	AVC wrapped in MPEG-2 TS main profile HD with AAC audio with valid TTS	video/vnd.dl na.mpeg-tts	HD	A profile utilized to create recordings of personal content and for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, cellular phones, portable video players, and PCs</i> . This profile is used by DVB IP-IRD Capability E
AVC_TS_M P_HD_AAC _MULT5_IS O	AVC wrapped in MPEG-2 TS main profile HD with AAC audio without a timestamp field	video/mpeg	HD	A profile utilized to create recordings of personal content and for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, cellular phones, portable video players, and PCs</i> . This Profile is used by DVB IP-IRD Capability E
AVC_TS_M P_HD_HEA AC_L2	AVC wrapped in MPEG-2 TS main profile HD with HEAAC audio with zero TTS	video/vnd.dl na.mpeg-tts	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs and PCs</i> . This profile is used by DVB IP-IRD Capability E
AVC_TS_M P_HD_HEA AC_L2_T	AVC wrapped in MPEG-2 TS main profile HD with HEAAC audio with valid TTS	video/vnd.dl na.mpeg-tts	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs and PCs</i> . This profile is used by DVB IP-IRD Capability E
AVC_TS_M P_HD_HEA AC_L2_ISO	AVC wrapped in MPEG-2 TS main profile HD with HEAAC audio without a timestamp field	video/mpeg	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs and PCs</i> . This profile is used by DVB IP-IRD Capability E
AVC_TS_M P_HD_MPE G1_L3	AVC wrapped in MPEG-2 TS main profile HD with MPEG-1 layer 3 audio with zero TTS	video/vnd.dl na.mpeg-tts	HD	
AVC_TS_M P_HD_MPE G1_L3_T	AVC wrapped in MPEG-2 TS main profile HD with MPEG-1 layer 3 audio with valid TTS	video/vnd.dl na.mpeg-tts	HD	
AVC_TS_M P_HD_MPE G1_L3_ISO	AVC wrapped in MPEG-2 TS main profile HD with MPEG-1 layer 3 audio without a timestamp field	video/mpeg	HD	
AVC_TS_M P_HD_AC3	AVC wrapped in MPEG-2 TS main profile HD with AC3 audio with zero TTS	video/vnd.dl na.mpeg-tts	HD	The profile is expected to be supported in the future by cable TV applications
AVC_TS_M P_HD_AC3 _T	AVC wrapped in MPEG-2 TS main profile HD with AC3 audio with valid TTS	video/vnd.dl na.mpeg-tts	HD	The profile is expected to be supported in the future by cable TV applications
AVC_TS_M P_HD_AC3 _ISO	AVC wrapped in MPEG-2 TS main profile HD with AC3 audio without a timestamp field	video/mpeg	HD	The profile is expected to be supported in the future by cable TV applications
AVC_TS_M P_HD_AAC	AVC wrapped in MPEG-2 TS main profile HD with AAC audio with zero TTS	video/vnd.dl na.mpeg-tts	HD	A profile utilized to create recordings of personal content with a mobile recording device . This profile is supported by <i>cellular phones, PDAs, portable video players, and PCs</i>
AVC_TS_M P_HD_AAC _T	AVC wrapped in MPEG-2 TS main profile HD with AAC audio with valid TTS	video/vnd.dl na.mpeg-tts	HD	A profile utilized to create recordings of personal content with a mobile recording device . This profile is supported by <i>cellular phones, PDAs, portable video players, and PCs</i>

Table 14 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
AVC_TS_M P_HD_AAC _ISO	AVC wrapped in MPEG-2 TS main profile HD with AAC audio without a timestamp field	video/mpeg	HD	A profile utilized to create recordings of personal content with a mobile recording device . This profile is supported by <i>cellular phones, PDAs, portable video players, and PCs</i>
AVC_TS_M P_HD_AAC _LTP	AVC wrapped in MPEG-2 TS main profile HD with AAC LTP audio with zero TTS	video/vnd.dln a.mpeg-tts	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs and PCs</i>
AVC_TS_M P_HD_AAC _LTP_T	AVC wrapped in MPEG-2 TS main profile HD with AAC LTP audio with valid TTS	video/vnd.dln a.mpeg-tts	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs and PCs</i>
AVC_TS_M P_HD_AAC _LTP_ISO	AVC wrapped in MPEG-2 TS main profile HD with AAC LTP audio without a timestamp field	video/mpeg	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs and PCs</i>
AVC_TS_M P_HD_AAC _LTP_MUL T5	AVC wrapped in MPEG-2 TS main profile HD with AAC LTP audio with zero TTS	video/vnd.dln a.mpeg-tts	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i>
AVC_TS_M P_HD_AAC _LTP_MUL T5_T	AVC wrapped in MPEG-2 TS main profile HD with AAC LTP audio with valid TTS	video/vnd.dln a.mpeg-tts	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i>
AVC_TS_M P_HD_AAC _LTP_MUL T5_ISO	AVC wrapped in MPEG-2 TS main profile HD with AAC LTP audio without a timestamp field	video/mpeg	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i>
AVC_TS_M P_HD_AAC _LTP_MUL T7	AVC wrapped in MPEG-2 TS main profile HD with AAC LTP audio with zero TTS	video/vnd.dln a.mpeg-tts	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i>
AVC_TS_M P_HD_AAC _LTP_MUL T7_T	AVC wrapped in MPEG-2 TS main profile HD with AAC LTP audio with valid TTS	video/vnd.dln a.mpeg-tts	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i>
AVC_TS_M P_HD_AAC _LTP_MUL T7_ISO	AVC wrapped in MPEG-2 TS main profile HD with AAC LTP audio without a timestamp field	video/mpeg	HD	This profile is used for DTV broadcasting . This profile is supported by <i>TVs, home theatre systems, and PCs</i>
AVC_TS_B L_CIF15_A AC	AVC wrapped in MPEG-2 TS baseline profile CIF15 with AAC audio with zero TTS	video/vnd.dln a.mpeg-tts	CIF15	A profile utilized to create recordings of broadcast TV or personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i> . This profile is used by DVB IP-IRD Capability A
AVC_TS_B L_CIF15_A AC_T	AVC wrapped in MPEG-2 TS baseline profile CIF15 with AAC audio with valid TTS	video/vnd.dln a.mpeg-tts	CIF15	A profile utilized to create recordings of broadcast TV or personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i> . This profile is used by DVB IP-IRD Capability A

Table 14 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
AVC_TS_BL_CIF15_AAC_ISO	AVC wrapped in MPEG-2 TS baseline profile CIF15 with AAC audio without a timestamp field	video/mpeg	CIF15	A profile utilized to create recordings of broadcast TV or personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i> . This profile is used by DVB IP-IRD Capability A
AVC_TS_BL_CIF15_AAC_540	AVC wrapped in MPEG-2 TS baseline profile CIF15 with AAC audio with zero TTS	video/vnd.dln a.mpeg-tts	CIF15	A profile utilized to create recordings of broadcast TV or personal content for mobile devices. This profile is supported by <i>TVs</i> , <i>digital video recorders</i> , <i>PCs</i> , <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i>
AVC_TS_BL_CIF15_AAC_540_T	AVC wrapped in MPEG-2 TS baseline profile CIF15 with AAC audio with valid TTS	video/vnd.dln a.mpeg-tts	CIF15	A profile utilized to create recordings of broadcast TV or personal content for mobile devices. This profile is supported by <i>TVs</i> , <i>digital video recorders</i> , <i>PCs</i> , <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i>
AVC_TS_BL_CIF15_AAC_540_ISO	AVC wrapped in MPEG-2 TS baseline profile CIF15 with AAC audio without a timestamp field	video/mpeg	CIF15	A profile utilized to create recordings of broadcast TV or personal content for mobile devices. This profile is supported by <i>TVs</i> , <i>digital video recorders</i> , <i>PCs</i> , <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i>
AVC_TS_BL_CIF15_AAC_LTP	AVC wrapped in MPEG-2 TS baseline profile CIF15 with AAC LTP audio with zero TTS	video/vnd.dln a.mpeg-tts	CIF15	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i>
AVC_TS_BL_CIF15_AAC_LTP_T	AVC wrapped in MPEG-2 TS baseline profile CIF15 with AAC LTP audio with valid TTS	video/vnd.dln a.mpeg-tts	CIF15	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i>
AVC_TS_BL_CIF15_AAC_LTP_ISO	AVC wrapped in MPEG-2 TS baseline profile CIF15 with AAC LTP audio without a timestamp field	video/mpeg	CIF15	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones</i> , <i>PDAs</i> , and <i>portable video players</i>
AVC_TS_BL_CIF15_BSA_C	AVC wrapped in MPEG-2 TS baseline profile CIF15 with BSAC audio with zero TTS	video/vnd.dln a.mpeg-tts	CIF15	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs</i> , <i>PDAs</i> , <i>portable video players</i> , and <i>PCs</i>
AVC_TS_BL_CIF15_BSA_C_T	AVC wrapped in MPEG-2 TS baseline profile CIF15 with BSAC audio with valid TTS	video/vnd.dln a.mpeg-tts	CIF15	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs</i> , <i>PDAs</i> , <i>portable video players</i> , and <i>PCs</i>
AVC_TS_BL_CIF15_BSA_C_ISO	AVC wrapped in MPEG-2 TS baseline profile CIF15 with BSAC audio without a timestamp field	video/mpeg	CIF15	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs</i> , <i>PDAs</i> , <i>portable video players</i> , and <i>PCs</i>

Table 14 (continued)

Profile ID	Description	MIME type	Label	Usage scenarios
AVC_MP4_B L_CIF15_AA C	AVC wrapped in MP4 baseline profile CIF15 with AAC audio	video/mp4	CIF15	A profile utilized to create recordings of broadcast TV or personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_MP4_B L_CIF15_AA C_520	AVC wrapped in MP4 baseline profile CIF15 with AAC LC audio	video/mp4	CIF15	A profile utilized for broadcast services, mobile services (for example, 3GPP services) and commercial A/V content services and to create recordings of personal content with a mobile recording device . This profile is supported by all devices in the MHD category that implement the AV media class
AVC_MP4_B L_CIF15_AA C_LTP	AVC wrapped in MP4 baseline profile CIF15 with AAC LTP audio	video/mp4	CIF15	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_MP4_B L_CIF15_AA C_LTP_520	AVC wrapped in MP4 baseline profile CIF15 with AAC LTP audio	video/mp4	CIF15	A profile utilized for 3GPP services and to create recordings of personal content with a mobile recording device . This profile is supported by <i>cellular phones, PDAs, portable video players, and PCs</i>
AVC_MP4_B L_CIF15_BS AC	AVC wrapped in MP4 baseline profile CIF 15 with BSAC audio	video/mp4	CIF15	A profile utilized to create recordings of personal content with a mobile recording device and for DTV broadcasting . This profile is supported by <i>TVs, PDAs, portable video players, and PCs</i>
AVC_MP4_B L_L12_CIF1 5_HEAAC	AVC wrapped in MP4 baseline profile CIF 15 with HEAAC L2 audio	video/mp4	CIF15	A profile utilized to create recordings of broadcast TV or personal content with a mobile recording device . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_MP4_B L_L1B_QCIF 15_HEAAC	AVC wrapped in MP4 baseline profile QCIF with HEAAC L2 audio	video/mp4	QCIF15	A profile utilized to create recordings of broadcast TV and personal content with a mobile recording device . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_3GPP_ BL_CIF30_A MR_WBplus	AVC wrapped in 3GPP baseline profile CIF30 with AMR-WB+ audio	video/3gpp	CIF30	A profile utilized for 3GPP services . This profile is supported by <i>cellular phones</i>
AVC_3GPP_ BL_CIF15_A MR_WBplus	AVC wrapped in 3GPP baseline profile CIF15 with AMR-WB+ audio	video/3gpp	CIF15	A profile utilized for 3GPP services . This profile is supported by <i>cellular phones</i>
AVC_3GPP_ BL_QCIF15_ AAC	AVC wrapped in 3GPP baseline profile QCIF15 with AAC audio	video/3gpp	QCIF15	A profile utilized to create recordings of broadcast TV and personal content with a mobile recording device . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_3GPP_ BL_QCIF15_ AAC_LTP	AVC wrapped in 3GPP baseline profile QCIF15 with AAC LTP audio	video/3gpp	QCIF15	A profile utilized to create recordings of personal content with a mobile recording device . This profile is supported by <i>cellular phones, PDAs, and portable video players</i>
AVC_3GPP_ BL_QCIF15_ HEAAC	AVC wrapped in 3GPP baseline profile QCIF15 with HEAAC Audio	video/3gpp video/mp4	QCIF15	A profile utilized for multimedia streaming and messaging services in 3GPP . This profile is supported by <i>cellular phones and PDAs</i>

Table 14 (continued)

Profile ID	Description	MIME Type	Label	Usage scenarios
AVC_3GPP_ BL_QCIF1 5_AMR_WB plus	AVC wrapped in 3GPP baseline profile QCIF15 with AMR-WB+ audio	video/3gpp	QCIF15	This profile is used for 3GPP services . This profile is supported by <i>cellular phones</i>
AVC_3GPP_ BL_QCIF1 5_AMR	AVC wrapped in 3GPP baseline profile QCIF15 with AMR Audio	video/3gpp video/mp4	QCIF15	A profile utilized for multimedia streaming and messaging services in 3GPP . This profile is supported by <i>cellular phones and PDAs</i>

Table 15 – AV Class – WMV9 profiles

Profile ID	Description	MIME type	Label	Usage scenarios
WMVMED_ BASE	Medium resolution video (main profile at medium level) with baseline WMA audio	video/x-ms-wmv	SD	A profile utilized for IP and web-based video distribution of content. This profile is supported by personal video players and PCs
WMVMED_ FULL	Medium resolution video (main profile at medium level) with full WMA audio	video/x-ms-wmv	SD	A profile utilized for IP and web-based video distribution of content. This profile is supported by personal video players and PCs
WMVMED_ PRO	Medium resolution video (main profile at medium level) with WMA professional audio	video/x-ms-wmv	SD	A Profile utilized for IP and web-based video distribution of content. This profile is supported by personal video players and PCs
WMVHIGH_ FULL	High-resolution video (main profile at high level) with full WMA audio	video/x-ms-wmv	HD	A profile utilized for IP and web-based video distribution of content. This profile is supported by personal video players and PCs
WMVHIGH_ PRO	High resolution video (main profile at high level) with WMA professional audio	video/x-ms-wmv	HD	A profile utilized for IP and web-based video distribution of content. This profile is supported by personal video players and PCs
WMVHM_B ASE	HighMAT profile	video/x-ms-wmv	SD	A profile utilized for distribution of content using optical media and the HightMAT format. This profile is supported by optical disk devices, <i>portable video players</i> , and PCs
WMVSPLL_ BASE	Low resolution video (simple profile at low level) with baseline WMA audio	video/x-ms-wmv	QCIF15	A profile used in the context of Internet-based video and small-screen devices . This profile is supported in personal video players, <i>cellular phones</i> , PDAs, and PCs
WMVSPML_ BASE	Low resolution video (simple profile at medium level) with baseline WMA audio	video/x-ms-wmv	CIF15	A profile used in the context of Internet-based video and small-screen devices . This profile is supported in personal video players, <i>cellular phones</i> , PDAs, and PCs
WMVSPML_ MP3	Low resolution video (simple profile at medium level) with MP3 audio	video/x-ms-wmv	CIF15	A profile used in the context of DLNA small-screen devices . This profile is supported by PCs and will be supported by some DLNA mobile devices