

About This Standard

Current Status *Mandated*

Standard Identifier ISO/IEC 13818-2:2000

Title of Standard

Information technology - Generic coding of moving pictures and associated audio information, Part 2: Video, 2000 (also known as MPEG-2 Video)

Standards History

Introduced to Registry	Date Emerging	Date Mandated	Last Status Update	Last Status Review	Inactive/Retired
2003-04-04	n/a	2003-04-04	2003-04-04	2009-03-26	n/a

Replaced

[ISO/IEC 13818-2](#)

Standards Body

[ISO](#)

[Broken Link?](#)

URL to Access or Acquire

<http://www.ansi.org>

Working Group

Primary Owner

Geospatial Intelligence (GWG)

Secondary Interest

No Secondary Interest

Service Area

GEOINT: Motion Imagery

KIPs

No KIP Found

Standard Applicability

2009-03-27

The Motion Imagery (Video) standard specifies the structure and data formats for the production, exchange, transmission, or use of digital video data. MPEG-2 Main Profile @ Main Level (MP@ML) 4:2:0 systems are fully backward compatible with the MPEG-1 standard. MPEG-2 MP@ML can be used with all video support systems (i.e., storage, broadcast, and network) at bit rates from 3 to 10 Mbps, where limited additional processing is anticipated, operating in either progressive- or interlaced-scan mode, optimally handling the resolution of the ITU-R 601 (International Telecommunication Union) recommendation (i.e., 720 x 480 pixels for the luminance signal and 360 x 480 pixels for the color space). Application areas for MPEG-2 include: - Internet - DVD - Satellite video - airborne video - surveillance - reconnaissance - intelligence - targeting - Scientific and Industrial - Digital Cinema - Image archives and databases There are a number of standards competing with MPEG-2, but MPEG-2 is by far the most widely used. See <http://www.gwg.nga.mil/misb/>

2006-02-21

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2003-10-03

Video support services specifies the structure and data formats for the production, exchange, transmission, or use of digital video data. MPEG-2 Main Profile @ Main Level (MP@ML) 4:2:0 systems are fully backward compatible with the MPEG-1 standard. MPEG-2 MP@ML can be used with all video support systems (i.e., storage, broadcast, and network) at bit rates from 3 to 10 Mbps, where limited additional processing is anticipated, operating in either progressive- or interlaced-scan mode, optimally handling the resolution of the ITU-R 601 (International Telecommunication Union) recommendation (i.e., 720 x 480 pixels for the luminance signal and 360 x 480 pixels for the color space). This video support standard for compressed video is mandated.

Standard Abstract

2009-03-27

ISO/IEC 13818-2 defines the video standards for the MPEG-2 system. It allows the compression of the large video stream to an amount manageable over many communications systems. ISO/IEC 13818-2 - Specifies extended decoding processes for converting compressed image data to reconstructed image data; - Specifies an extended code stream syntax containing information for interpreting the compressed image data; - Provides guidance on extended encoding processes for converting source image data to compressed image data; - Provides guidance on how to implement these processes in practice.

2006-02-21

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2003-04-04

MPEG-2 is an open international standard currently in 9 parts. Part 1 addresses the combining of one or more elementary streams of video and audio as well as other data into single or multiple streams suitable for storage or transmission; each is optimized for a different set of applications. Part 2 builds on the video compression capabilities of the MPEG-1 standard to offer a wide range of coding tools, including pictures with a color resolution of 4:2:2 and a higher bitrate. Part 3 is a backward-compatible multichannel extension of the MPEG-1 Audio standard. Part 4 specifies how tests can be designed to verify whether bitstreams and decoders meet the requirements specified in parts 1, 2, and 3. Part 5, technically not a standard but a technical report, gives a full software implementation of the first three parts of the MPEG-1 standard. Part 6, Digital Storage Media Command and Control (DSM-CC) specifies a set of protocols which provides the control functions and operations specific to managing MPEG-1 and MPEG-2 bitstreams. Part 7 specifies a

multichannel audio coding algorithm not constrained to be backward-compatible with MPEG-2 Audio. Part 8 was discontinued for lack of industry interest. Part 9 specifies the real-time interface (RTI) to transport stream decoders which may be used to adapt to all appropriate networks carrying transport streams. And, finally, Part 10 will address the conformance testing of DSM-CC.

Profiling Questions

GEOINT: Motion Imagery

- Does your system require support for compressed video?

Products Incorporating This Standard

Companies with commercially available implementations/products include: Adobe, Analog Devices, Avid, Aware, BAE, Intel, ITT Industries, HP, Kodak, Leitch, Matrox Imaging, Motorola, NEC, PAR Government Systems, Panasonic, Pinnacle, Quantel, Ricoh, Scientific Atlanta, Siemens, Sony, Snell & Wilcox, Telestream, Tales, Texas Instruments, Thomson, Yahoo, and many others. Non-native (plug-in) software is also available for Internet Explorer, Netscape and Windows Media 9 Series.

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Relevant Information

This citation authored by the GWG Motion Imagery Standards Board (MISB).

Implementation Guidance

None

Standard Selection Criteria

Interoperability/Supportability

MPEG-2 is still the most widely-used video compression today. DVDs, satellite delivered services such as DirecTV and DISH, cable delivered services and the new over-the-air digital broadcast services use MPEG-2. MPEG-2 decoders are provided with all computer systems that have DVD readers. The DoD has many systems that employ MPEG-2 and they will continue using MPEG-2 in the distant future. MPEG-2 video compression has provided the reduction in data to allow motion imagery to be widely used in military and civilian applications.

Technical Maturity

The international standard MPEG-2, completed in 1995, is the most widely implemented video technology standard in the history of ISO/IEC. DVDs, satellite delivered services such as DirecTV and DISH, cable delivered services and the new over-the-air digital broadcast services use MPEG-2. MPEG-2 decoders are provided with all computer systems that have DVD readers. MPEG-4, Part 10/ H.264 is the new standard, which will be used in many new systems. The MPEG-2 standard is so widely deployed that it will be many years before it will be significantly replaced.

Public Availability

Available for purchase from the ISO Store (online): <http://www.iso.org/iso/en/prods-services/ISOstore/store.html>

Implementability

MPEG-2 is used by almost all DOD and Intelligence organizations who have video requirements. DVDs, satellite delivered services such as DirecTV and DISH, cable delivered services and the new over-the-air digital broadcast services use MPEG-2. MPEG-2 decoders are provided with all computer systems that have DVD readers.

Authority

ISO/IEC JTC 1/SC 29, Coding of audio, picture, multimedia and hypermedia information, developed and maintains this standard. This standard has been adopted by the DoD/IC Motion Imagery Standards Board (MISB) since 1996 and the MISB is the DOD/IC focal point for the open process of maintaining and future development for this standard at ISO/IEC. <http://www.gwg.nga.mil/misb/>

Standard Type Non-Military

Standard Classification Unclassified

Keywords for Search IR, ISO/IEC 13818-2, J2K, JPEG, JPEG2000, NITF, NITFS, Video, compression, hyperspectral, interchange, motion imagery, multispectral, raster