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**Information technology — Coding of  
audio-visual objects —**

**Part 4:  
Conformance testing**

**AMENDMENT 42: Conformance testing  
of Multi-Resolution Frame Compatible  
Stereo Coding extension of AVC**

*Technologies de l'information — Codage des objets audiovisuels —*  
*Partie 4: Essai de conformité*  
*AMENDEMENT 42: Essai de conformité de cadre multi-résolution  
stéréo compatible avec le codage extension de l'AVC*

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## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 14496-4 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology, Subcommittee SC 29, Coding of audio, picture, multimedia and hypermedia information*.

This Amendment establishes conformance test requirements for conformance to ITU-T Rec. H.264 | ISO/IEC 14496-10.

In this Amendment, additional text to ITU-T Rec. H.264 | ISO/IEC 14496-4 is specified for testing the conformance of ITU-T Rec. H.264.1 | ISO/IEC 14496-10 video decoders including in particular the MFC High Profiles.

The following subclauses specify the normative tests for verifying conformance of ITU-T Rec. H.264 | ISO/IEC 14496-10 video bitstreams and decoders. These normative tests make use of test data (bitstream test suites) provided as an electronic annex to this document, and of the reference software decoder specified in ITU-T Rec. H.264.2 | ISO/IEC 14496-5 with source code available in electronic format.

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# Information technology — Coding of audio-visual objects —

## Part 4: Conformance testing

### AMENDMENT 42: Conformance testing of Multi-Resolution Frame Compatible Stereo Coding extension of AVC

*In 10.6.5.7, add the following text at the end of the subclause:*

A decoder that conforms to the MFC High profile at a specific level shall be capable of decoding all bitstreams in which all active MVC sequence parameter sets have any of the following:

- profile\_idc equal to 134
- profile\_idc equal to 128
- profile\_idc is equal to 118 and constraint\_set5\_flag is equal to 1
- profile\_idc equal to 100 or 77
- profile\_idc equal to 88 and constraint\_set1\_flag equal to 1
- profile\_idc equal to 66 and constraint\_set1\_flag equal to 1

and in which level\_idc or the combination of level\_idc and constraint\_set3\_flag for all active MVC sequence parameter sets represent a level less than or equal to the specific level. In addition to the bitstreams defined in Table AMD42.1, a decoder that conforms to the MFC High profile shall be capable of decoding the Main profile bitstreams specified in Table AMD6-1 and the High profile bitstreams specified in Table AMD 9-2.

*After 10.6.6.35.11, add the following text:*

#### 10.6.6.36 Test bitstreams — MFC High Profile

##### 10.6.6.36.1 Test bitstream #MFCRFT-1

**Specification:** All slices are coded as I, P, or B slices. Only the first picture is coded as an IDR access unit. Each view component contains only one slice. num\_views\_minus1 is equal to 1. mfc\_format\_idc is equal to 0. default\_grid\_position\_flag is equal to 1. rpu\_filter\_enabled\_flag is equal to 1. rpu\_field\_processing\_flag is equal to 0. All NAL units are encapsulated into the byte stream format specified in Annex B in ITU-T Rec. H.264 | ISO/IEC 14496-10.

**Functional stage:** Decoding of the base and enhancement view components and reconstruction of the enhanced resolution stereo views with RPU Filter mode, using SbS base layer and default grid position.

**Purpose:** Check that the decoder can properly decode the base and enhancement view components and reconstruct the enhanced resolution stereo views with RPU filter mode.

##### 10.6.6.36.2 Test bitstream #MFCRFT-2

**Specification:** All slices are coded as I, P, or B slices. Only the first picture is coded as an IDR access unit. Each view component contains only one slice. num\_views\_minus1 is equal to 1. mfc\_format\_idc is equal to 0. default\_grid\_position\_flag is equal to 1. rpu\_filter\_enabled\_flag is equal to 0. rpu\_field\_processing\_

flag is equal to 0. All NAL units are encapsulated into the byte stream format specified in Annex B in ITU-T Rec. H.264 | ISO/IEC 14496-10.

**Functional stage:** Decoding of the base and enhancement view components and reconstruction of the enhanced resolution stereo views with RPU DC mode, using SbS base layer and default grid position.

**Purpose:** Check that the decoder can properly decode the base and enhancement view components and reconstruct the enhanced resolution stereo views with RPU DC mode.

#### 10.6.6.36.3 Test bitstream #MFCFLD-1

**Specification:** All slices are coded as I, P or B slices. Only the first picture is coded as an IDR access unit. Each view component contains only one slice. num\_views\_minus1 is equal to 1. field\_pic\_flag is equal to 1. mfc\_format\_idc is equal to 0. default\_grid\_position\_flag is equal to 1. rpu\_filter\_enabled\_flag is equal to 1. rpu\_field\_processing\_flag is equal to 1. All NAL units are encapsulated into the byte stream format specified in Annex B in ITU-T Rec. H.264 | ISO/IEC 14496-10.

**Functional stage:** Decoding of the base and enhancement view components and reconstruction of the enhanced resolution stereo views with RPU field processing, using SbS base layer, default grid position, RPU filter mode, and each view component is coded as a field picture.

**Purpose:** Check that the decoder can properly decode the base and enhancement view components and reconstruct the enhanced resolution stereo views with RPU field processing for field pictures.

#### 10.6.6.36.4 Test bitstream #MFCFLD-2

**Specification:** All slices are coded as I, P, or B slices. Only the first picture is coded as an IDR access unit. Each view component contains only one slice. num\_views\_minus1 is equal to 1. mb\_adaptive\_frame\_field\_flag is equal to 1. field\_pic\_flag is equal to 0. mfc\_format\_idc is equal to 0. default\_grid\_position\_flag is equal to 1. rpu\_filter\_enabled\_flag is equal to 1. rpu\_field\_processing\_flag is equal to 1. All NAL units are encapsulated into the byte stream format specified in Annex B in ITU-T Rec. H.264 | ISO/IEC 14496-10.

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**Functional stage:** Decoding of the base and enhancement view components and reconstruction of the enhanced resolution stereo views with RPU field processing, using SbS base layer, default grid position, RPU filter mode, and each view component is coded as an mbaff frame picture.

**Purpose:** Check that the decoder can properly decode the base and enhancement view components and reconstruct the enhanced resolution stereo views with RPU field processing for mbaff frame pictures.

#### 10.6.6.36.5 Test bitstream #MFCFLD-3

**Specification:** All slices are coded as I, P, or B slices. Only the first picture is coded as an IDR access unit. Each view component contains only one slice. num\_views\_minus1 is equal to 1. mb\_adaptive\_frame\_field\_flag is equal to 1. mfc\_format\_idc is equal to 0. default\_grid\_position\_flag is equal to 1. rpu\_filter\_enabled\_flag is equal to 1. rpu\_field\_processing\_flag is equal to 1. All NAL units are encapsulated into the byte stream format specified in Annex B in ITU-T Rec. H.264 | ISO/IEC 14496-10.

**Functional stage:** Decoding of the base and enhancement view components and reconstruction of the enhanced resolution stereo views with RPU field processing, using SbS base layer, default grid position, RPU filter mode, and each view component is coded as an mbaff frame or a field picture.

**Purpose:** Check that the decoder can properly decode the base and enhancement view components and reconstruct the enhanced resolution stereo views with RPU field processing for mbaff frame or a field picture.

#### 10.6.6.36.6 Test bitstream #MFCMFM-1

**Specification:** All slices are coded as I, P, or B slices. Only the first picture is coded as an IDR access unit. Each view component contains only one slice. num\_views\_minus1 is equal to 1. mfc\_format\_idc is equal to 1. default\_grid\_position\_flag is equal to 1. rpu\_filter\_enabled\_flag is equal to 1. rpu\_field\_processing\_

flag is equal to 0. All NAL units are encapsulated into the byte stream format specified in Annex B in ITU-T Rec. H.264 | ISO/IEC 14496-10.

**Functional stage:** Decoding of the base and enhancement view components and reconstruction of the enhanced resolution stereo views with TaB base layer MFC format configuration, using default grid position and RPU filter mode.

**Purpose:** Check that the decoder can properly decode the base and enhancement view components and reconstruct the enhanced resolution stereo views with TaB MFC format configuration.

**10.6.6.36.7 Test bitstream #MFCGRD-1**

**Specification:** All slices are coded as I, P, or B slices. Only the first picture is coded as an IDR access unit. Each view component contains only one slice. num\_views\_minus1 is equal to 1. mfc\_format\_idc is equal to 0. default\_grid\_position\_flag is equal to 0. rpu\_filter\_enabled\_flag is equal to 1. rpu\_field\_processing\_flag is equal to 0. All NAL units are encapsulated into the byte stream format specified in Annex B in ITU-T Rec. H.264 | ISO/IEC 14496-10.

**Functional stage:** Decoding of the base and enhancement view components and reconstruction of the enhanced resolution stereo views with non-default grid position configuration, using SbS base layer and RPU filter mode.

**Purpose:** Check that the decoder can properly decode the base and enhancement view components and reconstruct the enhanced resolution stereo views with non-default grid positions.

Add the following after Table AMD41.1:

**Table AMD42.1 — Bitstreams for the MFC High profile**  
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Categories	Bitstream	Donated by	File Name	MFC High	Level	Frame Rate (Frame/Sec)
RPU Operational Modes	MFCRFT-1	Dolby	MFCRFT-1	X	4,1	24p
	MFCRFT-2	Dolby	MFCRFT-2	X	4,1	24p
RPU Interlaced Coding Tools	MFCFLD-1	Dolby	MFCFLD-1	X	4,1	50i
	MFCFLD-2	Dolby	MFCFLD-2	X	4,1	50i
	MFCFLD-3	Dolby	MFCFLD-3	X	4,1	50i
MFC Format	MFCMFM-1	Dolby	MFCMFM-1	X	4,1	24p
Grid Position	MFCGRD-1	Dolby	MFCGRD-1	X	4,1	24p

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