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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

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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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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.

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_

