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Information technology — Coding of audio-visual objects —

Part 4: Conformance testing

AMENDMENT 31: Conformance testing for SVC profiles

Technologies de l'information — Codage des objets audiovisuels —

Partie 4: Essai de conformité

AMENDEMENT 31: Essai de conformité pour profils SVC

Reference number
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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.

Amendment 31 to ISO/IEC 14496-4:2004 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 14496-10 is specified for testing the conformance of ITU-T Rec. H.264 | ISO/IEC 14496-10 video decoders including in particular the SVC Profiles, which consist of the Scalable Baseline, Scalable High, and Scalable High Intra 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 ISO/IEC 14496-5 with source code available in electronic format.

The numbering in this Amendment is relative to the text of ISO/IEC 14496-4. When a numbered item (i.e., a clause, subclause, figure, table, or equation) or associated content is being replaced or modified, the same number is used for the modified numbered item. When a numbered item is inserted between prior numbered items, the number of the corresponding numbered item immediately preceding it is used and the letter 'a' is appended to this number. When, after this one such inserted numbered item, another numbered item is inserted, the letter “a” is replaced by the letter “b” to indicate their relative order, and so on, following ordinary English alphabetical order. If text integrating this Amendment with ISO/IEC 14496-4 is produced, the inserted numbered items with appended letters are to be assigned to corresponding numbers in their numerical order without any such letters, and any subsequent numbered items are to be assigned later numbers to avoid conflicts. The purpose of the numbering convention in this Amendment text is to avoid the renumbering of existing numbered items in ISO/IEC 14496-4 while drafting this Amendment. Therefore, if the addition of a numbered item does not require renumbering of numbered items in ISO/IEC 14496-4, the final number is assigned to the numbered item herein.

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Information technology — Coding of audio-visual objects —

Part 4:
Conformance testing

AMENDMENT 31: Conformance testing for SVC profiles

Replace 10.3.1 with the following:

10.3.1 bitstream: An ITU-T Rec. H.264 | ISO/IEC 14496-10 video bitstream. A bitstream may contain IDR, I, P, B, SI, SP, EI, EP and EB slices.

Add the following text after 10.3.3:

10.3.4 TemporalIdMax: Maximum value of temporal_id in the NAL unit header extension for SVC of the coded slice NAL units or prefix NAL units of an ITU-T Rec. H.264 | ISO/IEC 14496-10 video bitstream.

Replace 10.6.5.7 with the following:

10.6.5.7 Decoder conformance test of a particular profile-and-level

In order for a decoder of a particular profile-and-level to claim output order conformance to ITU-T Rec. H.264 | ISO/IEC 14496-10 as described by this Recommendation | International Standard, the decoder shall successfully pass the static test defined in subclause 10.6.5.5 with all the bitstreams of the normative test suite specified for testing decoders of this particular profile-and-level.

In order for a decoder of a particular profile and level to claim output timing conformance to ITU-T Rec. H.264 | ISO/IEC 14496-10 as described by this Recommendation | International Standard, the decoder shall successfully pass both the static test defined in subclause 10.6.5.5 and the dynamic test defined in subclause 10.6.5.6 with all the bitstreams of the normative test suite specified for testing decoders of this particular profile-and-level. Tables 1 and 2 define the normative test suites for each profile-and-level combination. The test suite for a particular profile-and-level combination is the list of bitstreams that are marked with an “X” in the column corresponding to that profile-and-level combination.

“X” indicates that the bitstream is designed to test both the dynamic and static conformance of the decoder.

The bitstream column specifies the bitstream used for each test.

A decoder that conforms to the Scalable Baseline profile at a specific level shall be capable of decoding the Scalable Baseline profile bitstreams specified in Table AMD31-1.

A decoder that conforms to the Scalable High profile at a specific level shall be capable of decoding the Scalable High profile bitstreams specified in Table AMD31-1.

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A decoder that conforms to the Scalable High Intra profile at a specific level shall be capable of decoding the Scalable High Intra profile bitstreams specified in Table AMD31-1.

Add the following sentence before 10.6.6.1:

In Table AMD31-1, the value “59.94” shall be interpreted as an approximation of an exact value of 60000 ÷ 1001.

Add the following text after 10.6.6.29.7:

10.6.6.30 Test bitstreams – SVC Profiles: Scalable Baseline Profile 4:2:0 8 bit

10.6.6.30.1 Test bitstream #SVCBC-1

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0 for layer representations with dependency_id equal to 0, specifying the CAVLC parsing process, and entropy_coding_mode_flag is equal to 1 for layer representations with dependency_id equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. gaps_in_frame_num_value_allowed_flag is equal to 1. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1 for layer representations with dependency_id equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 1, TemporalIdMax is equal to 4 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. use_ref_base_pic_flag is equal to 0, specifying that reference base pictures are not used as reference pictures for the inter prediction process. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 0 and store_ref_base_pic_flag is equal to 0, specifying that the reference base picture are not stored. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying that inter-layer motion and inter-layer intra prediction are enabled. adaptive_motion_prediction_flag is equal to 1, specifying that inter-layer motion prediction is enabled. adaptive_residual_prediction_flag is equal to 1, specifying that inter-layer residual prediction is enabled. inter_layer_deblocking_filter_control_present_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: Gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of a quality enhancement layer, 8x8 transform size with inter-layer motion, intra and residual prediction and CABAC parsing.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations and EI, EP and EB coded slices of a quality enhancement layer, 8x8 transform size with inter-layer motion, intra and residual prediction and CABAC parsing.

10.6.6.30.2 Test bitstream #SVCBM-1

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. DependencyIdMax is equal to 0, TemporalIdMax is equal to 0, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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 EI and EP coded slices of a quality enhancement layer.

Purpose: Check that the decoder can properly handle EI and EP coded slices of a quality enhancement layer.

10.6.6.30.3 Test bitstream #SVCBM-2

Specification: All slices are coded as I, P, EI or EP slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. DependencyIdMax is equal to 0, TemporalIdMax is equal to 0 and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. adaptive_tcoeff_level_prediction_flag is equal to 0, specifying that an alternative inter-layer prediction process is applied for the whole sequence. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. default_base_mode_flag is equal to 1, specifying inter-layer motion and intra prediction. default_residual_prediction_flag is equal to 0. inter_layer_deblocking_filter_control_present_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 EI and EP coded slices of a quality enhancement layer, using an alternative inter-layer prediction process for translation to an AVC bitstream.

Purpose: Check that the decoder can properly handle EI and EP coded slices of a quality enhancement layer, using an alternative inter-layer prediction process for translation to an AVC bitstream.

10.6.6.30.4 Test bitstream #SVCBM-3

Specification: All slices are coded as I, P or EP slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. DependencyIdMax is equal to 0, TemporalIdMax is equal to 0 and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. tcoeff_level_prediction_flag is equal to 1, specifying that an alternative inter-layer prediction process is applied on a macroblock basis. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. default_base_mode_flag is equal to 1, specifying inter-layer motion and intra prediction. default_residual_prediction_flag is equal to 0. inter_layer_deblocking_filter_control_present_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 EI and EP coded slices of a quality enhancement layer, enabling an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream.

Purpose: Check that the decoder can properly handle EI and EP coded slices of a quality enhancement layer, enabling an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream.

10.6.6.30.5 Test bitstream #SVCBM-4

Specification: All slices are coded as I, P, EI or EP slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. DependencyIdMax is equal to 0, TemporalIdMax is equal to 0 and DQIdMax is equal to 2. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. tcoeff_level_prediction_flag is equal to 1 for the layer representation with quality_id equal to 1, specifying that an alternative inter-layer prediction process is applied on a macroblock basis. For the layer representation with quality_id equal to 2 seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. default_base_mode_flag is equal to 1, specifying inter-layer motion and intra prediction. default_residual_prediction_flag is equal to 0. inter_layer_deblocking_filter_control_present_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.

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Functional stage: Decoding of EI and EP coded slices of a quality enhancement layer and of a quality enhancement layer enabling an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream.

Purpose: Check that the decoder can properly handle EI and EP coded slices of a quality enhancement layer and of a quality enhancement layer enabling an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream.

10.6.6.30.6 Test bitstream #SVCBM-5

Specification: All slices are coded as I, P, EI, or EP slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0 for layer representations with quality_id equal to 0, specifying the CAVLC parsing process. entropy_coding_mode_flag is equal to 1 for layer representations with quality_id greater than 0, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. gaps_in_frame_num_value_allowed_flag is equal to 1. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1 for layer representation with quality_id greater than 0, specifying that 8x8 transform decoding process may be in use. mb_qp_delta is equal to 0. DependencyIdMax is equal to 0, TemporalIdMax is equal to 4 and DQIdMax is equal to 3. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. use_ref_base_pic_flag is equal to 1 for access units with temporal_id equal to 0, specifying that reference base pictures may be used as reference pictures for the inter prediction process. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 0 and store_ref_base_pic_flag is equal to 1 for access units with temporal_id equal to 0, specifying that reference base pictures are stored for these access units. slice_skip_flag is equal to 0. default_base_mode_flag is equal to 1 for layer representations with quality_id greater than 1, specifying inter-layer motion and intra prediction. default_residual_prediction_flag is equal to 1 for layer representations with quality_id greater than 1. inter_layer_deblocking_filter_control_present_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: Gaps in frame_num, Reference picture list reordering, memory management control operations and decoding of EI and EP slices of quality enhancement layers, using key pictures and transform coefficient fragmentation, 8x8 transform size with inter-layer motion and intra prediction.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations and EI and EP coded slices of quality enhancement layers, using key pictures and transform coefficient fragmentation, 8x8 transform size with inter-layer motion and intra prediction.

10.6.6.30.7 Test bitstream #SVCBCT-1

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 0 for layer representation with dependency_id equal to 0, specifying the CAVLC parsing process, and entropy_coding_mode_flag is equal to 1 for layer representation with dependency_id equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. gaps_in_frame_num_value_allowed_flag is equal to 1. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1 for layer representation with dependency_id equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 1, TemporalIdMax is equal to 4 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. use_ref_base_pic_flag is equal to 1, specifying that reference base pictures are not used as reference pictures for the inter prediction process. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 0 and store_ref_base_pic_flag is equal to 0, specifying that reference base picture are not stored. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying that inter-layer motion and inter-layer intra prediction is enabled. adaptive_motion_prediction_flag is equal to 1, specifying that inter-layer motion prediction is enabled. adaptive_residual_prediction_flag is equal to 1, specifying that inter-layer residual prediction is enabled. inter_layer_deblocking_filter_control_present_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.

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Functional stage: Gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of a quality and temporal enhancement layer, 8x8 transform size with inter-layer motion, intra and residual prediction and CABAC parsing.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations and EI, EP and EB coded slices of a quality and temporal enhancement layer, 8x8 transform size with inter-layer motion, intra and residual prediction and CABAC parsing.

10.6.6.30.8 Test bitstream #SVCBMT-1

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering is used. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering and decoding of EI and EP coded slices of a quality enhancement layer.

Purpose: Check that the decoder can properly handle reference picture list reordering and EI and EP coded slices of a quality enhancement layer.

10.6.6.30.9 Test bitstream #SVCBMT-2

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of a quality enhancement layer.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of a quality enhancement layer.

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10.6.6.30.10 Test bitstream #SVCBMT-3

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta.

10.6.6.30.11 Test bitstream #SVCBMT-4

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of deblocking filter process (without slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter.

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10.6.6.30.12 Test bitstream #SVCBMT-5

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice and slice groups greater than 1. disable_deblocking_filter_idc is equal to 2, specifying enabling of deblocking filter process (without slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering is used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter and slice groups.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter and slice groups.

10.6.6.30.13 Test bitstream #SVCBMT-6

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of deblocking filter process (without slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering is used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 1 (with adaptive_tcoeff_level_prediction_flag equal to 0). slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of a quality enhancement layer, using an alternative inter-layer prediction process for translation to an AVC bitstream, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of a quality enhancement layer, using an alternative inter-layer prediction process for translation to an AVC bitstream, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter.

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10.6.6.30.14 Test bitstream #SVCBMT-7

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of deblocking filter process (without slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering is used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 1 (with adaptive_tcoeff_level_prediction_flag equal to 1). slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of a quality enhancement layer, enabling an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of a quality enhancement layer, enabling an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter.

10.6.6.30.15 Test bitstream #SVCBMT-8

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of deblocking filter process (without slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. chroma_qp_index_offset is not equal to 0. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter, and non-zero chroma_qp_index_offset.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter, and non-zero chroma_qp_index_offset.

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10.6.6.30.16 Test bitstream #SVCBMT-9

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of deblocking filter process (without slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter with CABAC parsing.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter with CABAC parsing.

10.6.6.30.17 Test bitstream #SVCBMT-10

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of deblocking filter process (without slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP skipped slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP skipped slices of a quality enhancement layer with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter.

10.6.6.30.18 Test bitstream #SVCBMT-11

Specification: All slices are coded as I, P, EI or EP slices. The first frame and some other frames are coded as IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of deblocking filter process (without slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0.

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entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter and more than one IDR.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter and more than one IDR.

10.6.6.30.19 Test bitstream #SVCBMT-12

Specification: All slices are coded as I, P, EI or EP slices. The first frame and some other frames are coded as IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of deblocking filter process (without slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. use_ref_base_pic_flag is equal to 1 and store_ref_base_pic_flag is equal to 1. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter, more than one IDR and key pictures.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of a quality enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter, more than one IDR and key pictures.

10.6.6.30.20 Test bitstream #SVCBMT-13

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering is used. DependencyIdMax is equal to 0, TemporalIdMax is equal to 3, and DQIdMax is equal to 2. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 0,

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chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 0 (with default_base_mode_flag equal to 1), adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of two quality enhancement layers.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, and EI and EP coded slices of two quality enhancement layers.

10.6.6.30.21 Test bitstream #SVCBS-1

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. DependencyIdMax is equal to 1, TemporalIdMax is equal to 0, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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 EI and EP coded slices of a spatial enhancement layer.

Purpose: Check that the decoder can properly handle EI and EP coded slices of a spatial enhancement layer.

10.6.6.30.22 Test bitstream #SVCBS-2

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. DependencyIdMax is equal to 1, TemporalIdMax is equal to 0, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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 EI and EP coded slices of a spatial enhancement layer.

Purpose: Check that the decoder can properly handle EI and EP coded slices of a spatial enhancement layer.

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10.6.6.30.23 Test bitstream #SVCBS-3

Specification: All slices are coded as I, P, EI or EP slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. num_ref_frames is equal to 1. DependencyIdMax is equal to 1, TemporalIdMax is equal to 0 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_motion_prediction_flag is equal to 1, specifying enabling an alternative motion vectors prediction process. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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 EI and EP coded slices of a spatial enhancement layer, using inter-layer motion, intra and residual prediction.

Purpose: Check that the decoder can properly handle EI and EP coded slices of a spatial enhancement layer in the bitstream, using inter-layer motion, intra and residual prediction.

10.6.6.30.24 Test bitstream #SVCBS-4

Specification: All slices are coded as I, P, EI or EP slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. num_ref_frames is equal to 1. DependencyIdMax is equal to 1, TemporalIdMax is equal to 0 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_motion_prediction_flag is equal to 1, specifying enabling an alternative motion vectors prediction process. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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 EI and EP coded slices of a spatial enhancement layer, using inter-layer motion, intra and residual prediction.

Purpose: Check that the decoder can properly handle EI and EP coded slices of a spatial enhancement layer in the bitstream, using inter-layer motion, intra and residual prediction.

10.6.6.30.25 Test bitstream #SVCBS-5

Specification: All slices are coded as I, P, EI or EP slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. num_ref_frames is equal to 1. DependencyIdMax is equal to 1, TemporalIdMax is equal to 0 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_motion_prediction_flag is equal to 1, specifying enabling an alternative motion vectors prediction process. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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 EI and EP coded slices of a spatial enhancement layer, using inter-layer motion, intra and residual prediction.

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Purpose: Check that the decoder can properly handle EI and EP coded slices of a spatial enhancement layer in the bitstream, using inter-layer motion, intra and residual prediction.

10.6.6.30.26 Test bitstream #SVCBS-6

Specification: All slices are coded as I, P, EI or EP slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. num_ref_frames is equal to 1. DependencyIdMax is equal to 2, TemporalIdMax is equal to 0 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_motion_prediction_flag is equal to 1, specifying enabling an alternative motion vectors prediction process. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. 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 EI and EP coded slices of two spatial enhancement layers, using inter-layer motion, intra and residual prediction.

Purpose: Check that the decoder can properly handle EI and EP coded slices of two spatial enhancement layers in the bitstream, using inter-layer motion, intra and residual prediction.

10.6.6.30.27 Test bitstream #SVCBS-7

Specification: All slices are coded as I, P, EI or EP slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. pic_order_cnt_type is equal to 0. num_ref_frames is equal to 1. DependencyIdMax is equal to 1, TemporalIdMax is equal to 0 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 1, specifying disabling inter-layer prediction. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. inter_layer_deblocking_filter_control_present_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 EI and EP coded slices of a spatial enhancement layer without inter-layer prediction.

Purpose: Check that the decoder can properly handle EI and EP coded slices of a spatial enhancement layer without inter-layer prediction.

10.6.6.30.28 Test bitstream #SVCBS-8

Specification: All slices are coded as I, P, EI, EP or EB slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 0 for dependency layer with dependency_id equal to 0, specifying the CAVLC parsing process, and entropy_coding_mode_flag is equal to 1 for dependency layer with dependency_id equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. gaps_in_frame_num_value_allowed_flag is equal to 1. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1 for dependency layer with dependency _id equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 1, TemporalIdMax is equal to 4 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 1. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 0. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying that inter-layer motion and inter-layer intra prediction are enabled. adaptive_motion_prediction_flag is equal to 1, specifying that inter-layer motion prediction is enabled. adaptive_residual_prediction_flag is equal to 1, specifying that inter-layer residual prediction is enabled. inter_layer_deblocking_filter_control_present_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.

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Functional stage: Gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of a spatial enhancement layer, using 8x8 transform size with inter-layer motion, intra and residual prediction and CABAC parsing.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations and EI, EP and EB coded slices of a spatial enhancement layer, using 8x8 transform size with inter-layer motion, intra and residual prediction and CABAC parsing.

10.6.6.30.29 Test bitstream #SVCBST-1

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta.

10.6.6.30.30 Test bitstream #SVCBST-2

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 1, and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using adaptive inter-layer motion prediction.

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Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using adaptive inter-layer motion prediction.

10.6.6.30.31 Test bitstream #SVCBST-3

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 1, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, and constrained_intra_resampling_flag equal to 1.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, and constrained_intra_resampling_flag equal to 1.

10.6.6.30.32 Test bitstream #SVCBST-4

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 1, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, and constrained_intra_resampling_flag equal to 1.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, and constrained_intra_resampling_flag equal to 1.

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10.6.6.30.33 Test bitstream #SVCBST-5

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 1, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP skipped slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, and constrained_intra_resampling_flag equal to 1.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP skipped slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, and constrained_intra_resampling_flag equal to 1.

10.6.6.30.34 Test bitstream #SVCBST-6

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of the deblocking filter process (without slice boundary deblocking). entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 1, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc is equal to 2. 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter and constrained_intra_resampling_flag equal to 1.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter and constrained_intra_resampling_flag equal to 1.

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10.6.6.30.35 Test bitstream #SVCBST-7

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process (with slice boundary deblocking). entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, and use of deblocking filter.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter.

10.6.6.30.36 Test bitstream #SVCBST-8

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 3, specifying enabling of the deblocking filter process (with second pass slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 1, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 2. disable_inter_layer_deblocking_filter_idc is equal to 2. 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, using two pass deblocking filter and constrained_intra_resampling_flag equal to 1.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, using two pass deblocking filter and constrained_intra_resampling_flag equal to 1.

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10.6.6.30.37 Test bitstream #SVCBST-9

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 6, specifying enabling of the deblocking filter process for the luma samples (with second pass slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 1, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 2. disable_inter_layer_deblocking_filter_idc is equal to 2. 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, using two pass deblocking filter for luma samples and constrained_intra_resampling_flag equal to 1.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, using two pass deblocking filter for luma samples and constrained_intra_resampling_flag equal to 1.

10.6.6.30.38 Test bitstream #SVCBST-10

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of the deblocking filter process (without slice boundary deblocking). entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 1, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc is equal to 2. 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer, using 8x8 transform size, with non-zero values of slice_qp_delta and mb_qp_delta, and also using deblocking filter and constrained_intra_resampling_flag equal to 1.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, using 8x8

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transform size, with non-zero values of slice_qp_delta and mb_qp_delta, and also using deblocking filter and constrained_intra_resampling_flag equal to 1.

10.6.6.30.39 Test bitstream #SVCBST-11

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 2, specifying enabling of the deblocking filter process (without slice boundary deblocking). entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. weighted_pred_flag is equal to 1. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 1, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc is equal to 2. 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: Weighted sample prediction process for EP slices, reference picture list reordering, memory management control operations, and decoding of SEI message, EI and EP coded slices of a spatial enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter and constrained_intra_resampling_flag equal to 1.

Purpose: Check that the decoder can properly handle weighted sample prediction process for EP slices, reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter and constrained_intra_resampling_flag equal to 1.

10.6.6.30.40 Test bitstream #SVCBST-12

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice and slice groups greater than 1. disable_deblocking_filter_idc is equal to 3, specifying enabling of the deblocking filter process (with second pass slice boundary deblocking). Additionally, slice_alpha_c0_offset_div2 and slice_beta_offset_div2 are not equal to 0. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering is used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 1, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 2. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter, constrained_intra_resampling_flag equal to 1, and slice groups.

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Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer, with non-zero values of slice_qp_delta and mb_qp_delta, using deblocking filter, constrained_intra_resampling_flag equal to 1, and slice groups.

10.6.6.30.41 Test bitstream #SVCBST-13

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering is used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 1, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 1, and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a spatial enhancement layer with SpatialResolutionChangeFlag equal to 3, CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, and constrained_intra_resampling_flag equal to 1.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a spatial enhancement layer with SpatialResolutionChangeFlag equal to 3, CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, and constrained_intra_resampling_flag equal to 1.

10.6.6.30.42 Test bitstream #SVCBST-14

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering is used. DependencyIdMax is equal to 2, TemporalIdMax is equal to 3, and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1 for the dependency layer with dependency_id equal to 1, and SpatialResolutionChangeFlag is equal to 1 for the dependency layer with dependency_id equal to 2. chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations, and decoding of EI and EP coded slices of spatial enhancement layers with SpatialResolutionChangeFlag equal to 1 and 3.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, EI and EP coded slices of spatial enhancement layers with SpatialResolutionChangeFlag equal to 1 and 3.

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10.6.6.30.43 Test bitstream #SVCBST-15

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 2, TemporalIdMax is equal to 3, and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1 for the enhancement layers, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 1 for the dependency layer with dependency_id equal to 1, adaptive_motion_predictin_flag is equal to 0 (with default_motion_prediction_flag is equal to 1) for the dependency layer with dependency_id equal to 2, and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc 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: Reference picture list reordering, memory management control operations and decoding of SEI messages, EI and EP coded slices of spatial enhancement layers, with non-zero values of slice_qp_delta and mb_qp_delta, using adaptive inter-layer motion prediction for layer 1.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of spatial enhancement layers, with non-zero values of slice_qp_delta and mb_qp_delta, using adaptive inter-layer motion prediction for layer 1.

10.6.6.30.44 Test bitstream #SVCBST-16

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 3, specifying enabling of the deblocking filter process (with second pass slice boundary deblocking). entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 2, TemporalIdMax is equal to 3, and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1 for the enhancement layers, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 1, and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc is equal to 2. 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of spatial enhancement layers, with non-zero values of slice_qp_delta and mb_qp_delta, using two pass deblocking filter and adaptive inter-layer motion prediction.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of spatial enhancement layers, with non-zero values of slice_qp_delta and mb_qp_delta, using two pass deblocking filter and adaptive inter-layer motion prediction.

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10.6.6.30.45 Test bitstream #SVCBST-17

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 3, specifying enabling of the deblocking filter process (with second pass slice boundary deblocking). entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. SEI messages are included in the bitstream. DependencyIdMax is equal to 2, TemporalIdMax is equal to 3, and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1 for the enhancement layers, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1) for the dependency layer with dependency_id equal to 1, adaptive_motion_predictin_flag is equal to 1 for the dependency layer with dependency_id equal to 2, and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc is equal to 2. 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of spatial enhancement layers, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, using two pass deblocking filter and adaptive inter-layer motion prediction for layer 2.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of spatial enhancement layers, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, two pass deblocking filter and adaptive inter-layer motion prediction for layer 2.

10.6.6.30.46 Test bitstream #SVCBST-18

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 3, specifying enabling of the deblocking filter process (with second pass slice boundary deblocking). entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice and mb_qp_delta is equal to a non-zero value to change the quantizer scale at some macroblocks. weighted_pred_flag is equal to 1 and base_pred_weight_table_flag is equal to 1. SEI messages are included in the bitstream. DependencyIdMax is equal to 2, TemporalIdMax is equal to 3, and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1 for the enhancement layers, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1) for the dependency layer with dependency_id equal to 1, adaptive_motion_predictin_flag is equal to 1 for the dependency layer with dependency_id equal to 2, and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc is equal to 2. 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: Weighted sample prediction process for EP slices, inference of weighted prediction variables for EP slices, reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and E coded slices of spatial enhancement layers, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, using two pass deblocking filter and adaptive inter-layer motion prediction for layer 2.

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Purpose: Check that the decoder can properly handle weighted sample prediction process for EP slices, inference of weighted prediction variables for EP slices, reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of spatial enhancement layers, with CABAC parsing, non-zero values of slice_qp_delta and mb_qp_delta, using two pass deblocking filter and adaptive inter-layer motion prediction for layer 2.

10.6.6.30.47 Test bitstream #SVCBST-19

Specification: All slices are coded as I, P, EI, EP or EB slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 0 for dependency layer with dependency_id equal to 0, specifying the CAVLC parsing process, and entropy_coding_mode_flag is equal to 1 for dependency layer with dependency_id equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. gaps_in_frame_num_value_allowed_flag is equal to 1. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1 for dependency layer with dependency _id equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 1, TemporalIdMax is equal to 4 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 1. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 0. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying that inter-layer motion and inter-layer intra prediction are enabled. adaptive_motion_prediction_flag is equal to 1, specifying that inter-layer motion prediction is enabled. adaptive_residual_prediction_flag is equal to 1, specifying that inter-layer residual prediction is enabled. inter_layer_deblocking_filter_control_present_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: Gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of a spatial and temporal enhancement layer, using 8x8 transform size with inter-layer motion, intra and residual prediction and CABAC parsing.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations and EI, EP and EB coded slices of a spatial and temporal enhancement layer, using 8x8 transform size with inter-layer motion, intra and residual prediction and CABAC parsing.

10.6.6.30.48 Test bitstream #SVCBST-20

Specification: All slices are coded as I, P, EI, EP or EB slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice. DependencyIdMax is equal to 1, TemporalIdMax is equal to 1 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 1, specifying sending geometrical parameters in the sequence parameter set. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_motion_prediction_flag is equal to 1, specifying enabling an alternative motion vectors prediction process. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. disable_inter_layer_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process for inter-layer intra prediction. 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 EI, EP and EB coded slices of a spatial enhancement layer, using inter-layer motion, intra and residual prediction, sequence level geometrical parameters, deblocking filter for inter-layer intra prediction, non-zero values of slice_qp_delta.

Purpose: Check that the decoder can properly handle decoding of EI, EP and EB coded slices of a spatial enhancement layer, using inter-layer motion, intra and residual prediction, sequence level geometrical parameters, deblocking filter for inter-layer intra prediction, non-zero values of slice_qp_delta.

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10.6.6.30.49 Test bitstream #SVCBMST-1

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 3. entropy_coding_mode_flag is equal to 0. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1), and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc is equal to 2. 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of quality and spatial enhancement layers, using deblocking filter.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of quality and spatial enhancement layers, using deblocking filter.

10.6.6.30.50 Test bitstream #SVCBMST-2

Specification: All slices are coded as I, P, EI or EP slices. Only the first frame is coded as an IDR access unit and each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 3. entropy_coding_mode_flag is equal to 1. pic_order_cnt_type is equal to 2. Reference picture list reordering and memory management control operations are used. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3, and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0, SpatialResolutionChangeFlag is equal to 1, chroma_phase_x_plus1_flag is equal to 1, and chroma_phase_y_plus1 is equal to 1. constrained_intra_resampling_flag is equal to 0, no_inter_layer_pred_flag is equal to 0, slice_header_restriction_flag is equal to 0, scan_idx_start is equal to 0, and scan_idx_end is equal to 15. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0, adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 0 (with default_motion_prediction_flag is equal to 1) for the DQ layer with dq_id equal to 1, adaptive_motion_prediction_flag is equal to 1 for the DQ layer with dq_id equal to 16, and adaptive_residual_prediction_flag is equal to 1. disable_inter_layer_deblocking_filter_idc is equal to 2. 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: Reference picture list reordering, memory management control operations, and decoding of SEI messages, EI and EP coded slices of a quality enhancement layer and a spatial enhancement layer, using CABAC parsing, deblocking filter, and adaptive inter-layer motion prediction for the spatial enhancement layer.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations, SEI messages, EI and EP coded slices of a quality enhancement layer and a spatial enhancement layer, using CABAC parsing, deblocking filter, and adaptive inter-layer motion prediction for the spatial enhancement layer.

10.6.6.30.51 Test bitstream #SVCBMST-3

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 0 for layer representation with DQId equal to 0, specifying the CAVLC parsing process. entropy_coding_mode_flag is equal to 1 for layer representation with DQId equal to 1 and 16, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. transform_8x8_mode_flag is equal to 1 for layer representation with DQId

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equal to 1 and 16, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 1, TemporalIdMax is equal to 4 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 1. SpatialResolutionChangeFlag is equal to 1 for dependency representation with dependency_id equal to 1. no_inter_layer_pred_flag is equal to 0. use_ref_base_pic_flag is equal to 1 for layer representation with dependency_id equal to 0 in access units with temporal_id equal to 0, specifying that reference base pictures may be used as reference pictures for the inter prediction process. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 0. store_ref_base_pic_flag is equal to 1 for layer representation with dependency_id equal to 0 in access units with temporal_id equal to 0, specifying that the reference base pictures are stored. slice_skip_flag is equal to 0. slice_header_restriction_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying that inter-layer motion and inter-layer intra prediction are enabled. adaptive_motion_prediction_flag is equal to 1, specifying that inter-layer motion prediction is enabled. adaptive_residual_prediction_flag is equal to 1, specifying that inter-layer residual prediction is enabled. inter_layer_deblocking_filter_control_present_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 EI, EP and EB coded slices of a quality enhancement layer using key pictures and a spatial enhancement layer, with inter-layer motion, intra and residual prediction, using CABAC parsing.

Purpose: Check that the decoder can properly handle EI, EP and EB coded slices of a quality enhancement layer using key pictures and a spatial enhancement layer, with inter-layer motion, intra and residual prediction, using CABAC parsing.

10.6.6.30.52 Test bitstream #SVCBCTS-1

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 0 for dependency representation with dependency_id equal to 0 and 1, specifying the CAVLC parsing process. entropy_coding_mode_flag is equal to 1 for dependency representation with dependency_id equal to 2, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. transform_8x8_mode_flag is equal to 1 for dependency representation with dependency_id equal to 2, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 2, TemporalIdMax is equal to 1 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0 for dependency representation with dependency_id equal to 1. extended_spatial_scalability is equal to 1 for dependency representation with dependency_id equal to 2. SpatialResolutionChangeFlag is equal to 0 for dependency representation with dependency_id equal to 1. SpatialResolutionChangeFlag is equal to 1 for dependency representation with dependency_id equal to 2. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 1 and adaptive_residual_prediction_flag is equal to 1 for dependency representation with dependency_id equal to 1 and 2, specifying enabling inter-layer motion, intra and residual prediction. inter_layer_deblocking_filter_control_present_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 EI, EP and EB coded slices of spatial enhancement layers, with inter-layer motion, residual and intra prediction, using CAVLC and CABAC parsing, 8x8 transform size.

Purpose: Check that the decoder can properly handle EI, EP and EB coded slices of spatial enhancement layers, with inter-layer motion, residual and intra prediction, using CAVLC and CABAC parsing, 8x8 transform size.

10.6.6.30.53 Test bitstream #SVCBCTS-2

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 0 for dependency representation with dependency_id equal to 0 and 1, specifying the CAVLC parsing process. entropy_coding_mode_flag is equal to 1 for dependency representation with dependency_id equal to 2, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. transform_8x8_mode_flag is equal to 1 for dependency representation with dependency_id equal to 2, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 2, TemporalIdMax is equal to 1 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0 for dependency representation with dependency_id equal to 1.

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extended_spatial_scalability is equal to 1 for dependency representation with dependency_id equal to 2. SpatialResolutionChangeFlag is equal to 0 for dependency representation with dependency_id equal to 1. SpatialResolutionChangeFlag is equal to 1 for dependency representation with dependency_id equal to 2. no_inter_layer_pred_flag is equal to 0. discardable_flag is equal to 1 for dependency representation with dependency_id equal to 1. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, adaptive_motion_prediction_flag is equal to 1 and adaptive_residual_prediction_flag is equal to 1 for dependency representation with dependency_id equal to 1 and 2, specifying enabling inter-layer motion, intra and residual prediction. inter_layer_deblocking_filter_control_present_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 EI, EP and EB coded slices of spatial enhancement layers, with inter-layer motion, residual and intra prediction, using CAVLC and CABAC parsing, 8x8 transform size, with discardable_flag equal to 1.

Purpose: Check that the decoder can properly handle EI, EP and EB coded slices of spatial enhancement layers, with inter-layer motion, residual and intra prediction, using CAVLC and CABAC parsing, 8x8 transform size, with discardable_flag equal to 1.

10.6.6.30.54 Test bitstream #SVCBCTS-3

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. DependencyIdMax is equal to 2, TemporalIdMax is equal to 3 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0 for dependency representation with dependency_id equal to 1. SpatialResolutionChangeFlag is equal to 1 for dependency representation with dependency_id equal to 2. no_inter_layer_pred_flag is equal to 0. tcoeff_level_prediction_flag is equal to 1 for dependency representation with dependency_id equal to 1, specifying that an alternative inter-layer prediction process is applied on a macroblock basis. seq_tcoeff_level_prediction_flag is equal to 0 for dependency representation with dependency_id equal to 2. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. slice_header_restriction_flag is equal to 1. default_base_mode_flag is equal to 1, specifying inter-layer motion and intra prediction. default_residual_prediction_flag is equal to 0. inter_layer_deblocking_filter_control_present_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 EI, EP and EB coded slices of spatial enhancement layers, enabling either an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream or inter-layer motion and intra prediction and.

Purpose: Check that the decoder can properly handle EI, EP and EB coded slices of spatial enhancement layers, enabling either an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream or inter-layer motion and intra prediction.

10.6.6.30.55 Test bitstream #SVCBSTC-1

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. pic_order_cnt_type is equal to 0. DependencyIdMax is equal to 2, TemporalIdMax is equal to 3 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 1 for dependency representation with dependency_id equal to 1. SpatialResolutionChangeFlag is equal to 0 for dependency representation with dependency_id equal to 2. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. slice_header_restriction_flag is equal to 1. default_base_mode_flag is equal to 1, specifying inter-layer motion and intra prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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.

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Functional stage: Decoding of EI, EP and EB coded slices of spatial enhancement layers, using inter-layer motion and intra prediction and inter-layer residual prediction in transform and spatial domain.

Purpose: Check that the decoder can properly handle EI, EP and EB coded slices of spatial enhancement layers, using inter-layer motion and intra prediction and inter residual prediction in transform and spatial domain.

10.6.6.31 Test bitstreams – SVC Profiles: Scalable High Profile 4:2:0 8 bit

10.6.6.31.1 Test bitstream #SVCHM-1

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. gaps_in_frame_num_value_allowed_flag is equal to 1. Reference picture list reordering and memory management control operations are used. mb_qp_delta is equal to 0. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 0, TemporalIdMax is equal to 4 and DQIdMax is equal to 3. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 0. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1 for layer representations with quality_id equal to 1, specifying that inter-layer motion and inter-layer intra prediction are enabled. adaptive_motion_prediction_flag is equal to 1 for layer representation with quality_id equal to 1, specifying that an alternative motion vectors prediction process is enabled. default_base_mode_flag is equal to 1 for layer representations with quality_id equal to 2 and 3, specifying inter-layer motion and intra prediction. adaptive_residual_prediction_flag is equal to 1 for layer representation with quality_id equal to 1, specifying enabling inter-layer residual prediction. default_residual_prediction_flag is equal to 1 for layer representations with quality_id equal to 2 and 3. inter_layer_deblocking_filter_control_present_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: Gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of quality enhancement layers, using key pictures, transform coefficient fragmentation and either an alternative motion vectors prediction process with inter-layer residual prediction or inter-layer motion and intra prediction, with non-zero values of mb_qp_delta, using 8x8 transform size CABAC parsing.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations, EI, EP and EB coded slices of quality enhancement layers, using key pictures, transform coefficient fragmentation and either an alternative motion vectors prediction process with inter-layer residual prediction or inter-layer motion and intra prediction, with non-zero values of mb_qp_delta, using 8x8 transform size and CABAC parsing.

10.6.6.31.2 Test bitstream #SVCHM-2

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 0, TemporalIdMax is equal to 2 and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. adaptive_tcoeff_level_prediction_flag is equal to 0, specifying that an alternative inter-layer prediction process is applied for the whole sequence. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. default_base_mode_flag is equal to 1, specifying inter-layer motion and intra prediction. default_residual_prediction_flag is equal to 0. inter_layer_deblocking_filter_control_present_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.

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Functional stage: Reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of a quality enhancement layer, using an alternative inter-layer prediction process for translation to an AVC bitstream, with 8x8 transform size CABAC parsing.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of a quality enhancement layer, using an alternative inter-layer prediction process for translation to an AVC bitstream, with 8x8 transform size CABAC parsing.

10.6.6.31.3 Test bitstream #SVCHM-3

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 0, TemporalIdMax is equal to 2 and DQIdMax is equal to 1. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. tcoeff_level_prediction_flag is equal to 1, specifying that an alternative inter-layer prediction process is applied on a macroblock basis. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. default_base_mode_flag is equal to 1, specifying inter-layer motion and intra prediction. default_residual_prediction_flag is equal to 0. inter_layer_deblocking_filter_control_present_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: Reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of a quality enhancement layer, enabling an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream, with 8x8 transform size CABAC parsing.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of a quality enhancement layer, enabling an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream, with 8x8 transform size CABAC parsing.

10.6.6.31.4 Test bitstream #SVCHM-4

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 0, TemporalIdMax is equal to 2 and DQIdMax is equal to 2. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. tcoeff_level_prediction_flag is equal to 1 for layer representation with quality_id equal to 1, specifying that an alternative inter-layer prediction process is applied on a macroblock basis. seq_tcoeff_level_prediction_flag is equal to 0 for layer representation with quality_id equal to 2. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. default_base_mode_flag is equal to 1, specifying inter-layer motion and intra prediction. default_residual_prediction_flag is equal to 0. inter_layer_deblocking_filter_control_present_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: Reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of quality enhancement layers, either enabling an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream or using inter-layer motion and intra prediction, with 8x8 transform size CABAC parsing.

Purpose: Check that the decoder can properly handle reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of quality enhancement layers, either enabling

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an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream or using inter-layer motion and intra prediction, with 8x8 transform size CABAC parsing.

10.6.6.31.5 Test bitstream #SVCHS-1

Specification: All slices are coded as I, P, EI, EP or EB slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process. entropy_coding_mode_flag is equal to 0 for the dependency representation with dependency_id equal to 0, specifying the CAVLC parsing process. entropy_coding_mode_flag is equal to 1 for the dependency representation with dependency_id equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1 for the dependency representation with dependency_id equal to 1, specifying that 8x8 transform decoding process may be in use. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 2, specifying sending geometrical parameters in slice headers. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling of inter-layer residual prediction. disable_inter_layer_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process for inter-layer intra prediction. 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: Reference picture list reordering, memory management control operations, decoding of EI, EP and EB coded slices of a spatial enhancement layer, using inter-layer motion, intra and residual prediction, picture level geometrical parameters, deblocking filter for inter-layer intra prediction, with CABAC parsing, 8x8 transform size and non-zero values of slice_qp_delta.

Purpose: Check that the decoder can properly handle decoding of reference picture list reordering, memory management control operations, EI, EP and EB coded slices of a spatial enhancement layer, using inter-layer motion, intra and residual prediction, picture level geometrical parameters, deblocking filter for inter-layer intra prediction, with CABAC parsing, 8x8 transform size and non-zero values of slice_qp_delta.

10.6.6.31.6 Test bitstream #SVCHS-2

Specification: All slices are coded as I, P, B, EI, EP or EB slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice. mb_adaptive_frame_field_coding is equal to 1 for dependency representation with dependency_id equal to 1. DependencyIdMax is equal to 1, TemporalIdMax is equal to 3 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 1, specifying sending geometrical parameters in the sequence parameter set. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling of inter-layer residual prediction. disable_inter_layer_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process for inter-layer intra prediction. 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: Progressive-to-interlace inter-layer prediction with mb_adaptive_frame_field_coding=1, reference picture list reordering, memory management control operations, decoding of EI, EP and EB coded slices of a spatial enhancement layer, using inter-layer motion, intra and residual prediction, sequence level geometrical parameters, deblocking filter for inter-layer intra prediction, with CABAC parsing, 8x8 transform size and non-zero values of slice_qp_delta.

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Purpose: Check that the decoder can properly handle decoding of progressive-to-interlace inter-layer prediction with mb_adaptive_frame_field_coding=1, reference picture list reordering, memory management control operations, EI, EP and EB coded slices of a spatial enhancement layer, using inter-layer motion, intra and residual prediction, sequence level geometrical parameters, deblocking filter for inter-layer intra prediction, with CABAC parsing, 8x8 transform size and non-zero values of slice_qp_delta.

10.6.6.31.7 Test bitstream #SVCHST-1

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. gaps_in_frame_num_value_allowed_flag is equal to 1. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 2, TemporalIdMax is equal to 2 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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: Gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of spatial and temporal enhancement layers, enabling inter-layer motion, intra and residual prediction, using 8x8 transform size with CABAC parsing.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of spatial and temporal enhancement layers, enabling inter-layer motion, intra and residual prediction, using 8x8 transform size with CABAC parsing.

10.6.6.31.8 Test bitstream #SVCHST-2

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. gaps_in_frame_num_value_allowed_flag is equal to 1. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 2, TemporalIdMax is equal to 2 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0. no_inter_layer_pred_flag is equal to 0. discardable_flag is equal to 1 for dependency representation with dependency_id equal to 1. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1 for dependency representation with dependency_id equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_residual_prediction_flag is equal to 1 for dependency representation with dependency_id equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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: Gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of spatial enhancement layers, enabling inter-layer motion, intra and residual prediction, using 8x8 transform size with CABAC parsing, with discardable_flag equal to 1.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of spatial enhancement layers, enabling inter-layer motion, intra and residual prediction, using 8x8 transform size with CABAC parsing, with discardable_flag equal to 1.

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10.6.6.31.9 Test bitstream #SVCHST-3

Specification: All slices are coded as I, P, B, EI, EP or EB slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice. mb_adaptive_frame_field_coding is equal to 1 for dependency representation with dependency_id equal to 0. DependencyIdMax is equal to 2, TemporalIdMax is equal to 4 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 1. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. discardable_flag is equal to 1 for dependency representation with dependency_id equal to 1. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_motion_prediction_flag is equal to 1, specifying enabling inter-layer motion prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process for inter-layer intra prediction. 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: Interlace-to-progressive inter-layer prediction with mb_adaptive_frame_field_coding=1, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of spatial enhancement layers, enabling inter-layer motion, intra and residual prediction, sequence level geometrical parameters, deblocking filter for inter-layer intra prediction, using 8x8 transform size with CABAC parsing and non-zero values of slice_qp_delta.

Purpose: Check that the decoder can properly handle interlace-to-progressive inter-layer prediction with mb_adaptive_frame_field_coding=1, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of spatial enhancement layers, enabling inter-layer motion, intra and residual prediction, sequence level geometrical parameters, deblocking filter for inter-layer intra prediction, using 8x8 transform size with CABAC parsing and non-zero values of slice_qp_delta.

10.6.6.31.10 Test bitstream #SVCHST-4

Specification: All slices are coded as I, P, B, EI, EP or EB slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. slice_qp_delta is equal to a non-zero value to change the quantizer scale at each slice. mb_adaptive_frame_field_coding is equal to 1 for dependency representation with dependency_id equal to 0. DependencyIdMax is equal to 2, TemporalIdMax is equal to 2 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 1. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. discardable_flag is equal to 1 for dependency representation with dependency_id equal to 1. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_motion_prediction_flag is equal to 1, specifying enabling inter-layer motion prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_idc is equal to 0, specifying enabling of the deblocking filter process for inter-layer intra prediction. 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: Interlace-to-progressive inter-layer prediction with mb_adaptive_frame_field_coding=1, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of spatial enhancement layers, enabling inter-layer motion, intra and residual prediction, sequence level geometrical parameters, deblocking filter for inter-layer intra prediction, using 8x8 transform size with CABAC parsing and non-zero values of slice_qp_delta.

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Purpose: Check that the decoder can properly handle interlace-to-progressive inter-layer prediction with mb_adaptive_frame_field_coding=1, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of spatial enhancement layers, enabling inter-layer motion, intra and residual prediction, sequence level geometrical parameters, deblocking filter for inter-layer intra prediction, using 8x8 transform size with CABAC parsing and non-zero values of slice_qp_delta.

10.6.6.31.11 Test bitstream #SVCHMTS-1

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. gaps_in_frame_num_value_allowed_flag is equal to 1. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. SEI messages are included in the bitstream. DependencyIdMax is equal to 1, TemporalIdMax is equal to 2 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0 for layer representations with dependency_id equal to 0 and quality_id equal to 1 and 2, and for layer representation with dependency_id equal to 1 and quality_id equal to 1. SpatialResolutionChangeFlag is equal to 1 for layer representations with dependency_id equal to 1 and quality_id equal to 0. no_inter_layer_pred_flag is equal to 0. use_ref_base_pic_flag may be equal to 1, specifying that reference base pictures may be used as reference pictures for the inter prediction process. discardable_flag is equal to 1 for layer representations with dependency_id equal to 1 and quality_id equal to 1 and for layer representations with dependency_id equal to 0 and quality_id equal to 2. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 0 and store_ref_base_pic_flag may be equal to 1, specifying that the reference base picture may be used for inter prediction of following pictures in decoding order. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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: Gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of quality, spatial and temporal enhancement layers, with quality layer information SEI messages and key pictures, enabling inter-layer motion, intra and residual prediction, using 8x8 transform size with CABAC parsing, with discardable_flag equal to 1.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of quality, spatial and temporal enhancement layers, with quality layer information SEI messages and key pictures, enabling inter-layer motion, intra and residual prediction, using 8x8 transform size with CABAC parsing, with discardable_flag equal to 1.

10.6.6.31.12 Test bitstream #SVCHMTS-2

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 1, TemporalIdMax is equal to 2 and DQIdMax is equal to 16. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0 for layer representation with dependency_id equal to 0 and quality_id equal to 1. SpatialResolutionChangeFlag is equal to 1 for layer representation with dependency_id equal to 1 and quality_id equal to 0. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. tcoeff_level_prediction_flag is equal to 1, specifying that an alternative inter-layer prediction process is applied on a macroblock basis. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 0. default_base_mode_flag is equal to 1, specifying inter-layer motion and intra prediction. default_residual_prediction_flag is equal to 0. inter_layer_deblocking_filter_control_present_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.

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Functional stage: Reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of quality and spatial enhancement layers, using either an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream or inter-layer motion and intra prediction, using 8x8 transform size with CABAC parsing.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of quality and spatial enhancement layers, using either an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream or inter-layer motion and intra prediction, using 8x8 transform size with CABAC parsing.

10.6.6.31.13 Test bitstream #SVCHCTS-1

Specification: All slices are coded as I, P, EI, EP or EB slices. Each dependency representation contains only one slice. disable_deblocking_filter_idc is equal to 0. entropy_coding_mode_flag is equal to 1 for dependency_id representations with dependency_id greater than 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. Reference picture list reordering and memory management control operations are used. transform_8x8_mode_flag is equal to 1 for dependency_id representations with dependency_id greater than 1, specifying that 8x8 transform decoding process may be in use. DependencyIdMax is equal to 5, TemporalIdMax is equal to 2 and DQIdMax is equal to 80. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0 for dependency_id representations with dependency_id equal to 1, 2,and 4 . SpatialResolutionChangeFlag is equal to 1 for dependency representations with dependency_id equal to 5. no_inter_layer_pred_flag is equal to 1 for dependency representations with dependency_id equal to 3. discardable_flag is equal to 1 for dependency representations with dependency_id equal to 2, 4 and 5. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 1. slice_skip_flag is equal to 1 for dependency_id representations with dependency_id equal to 1. Adaptive_base_mode_flag is equal to 1, enabling inter-layer motion and intra prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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: Reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of spatial enhancement layers, using inter-layer motion, intra and residual prediction, using 8x8 transform size with CABAC parsing, no_inter_layer_pred_flag and discardable_flag equal to 1.

Purpose: Check that the decoder can properly handle gaps in frame_num, reference picture list reordering, memory management control operations and decoding of EI, EP and EB coded slices of spatial enhancement layers, using inter-layer motion, intra and residual prediction, using 8x8 transform size with CABAC parsing, no_inter_layer_pred_flag and discardable_flag equal to 1.

10.6.6.31.14 Test bitstream #SVCHSTC-1

Specification: All slices are coded as I, P, EI, EP or EB slices. Each layer representation contains only one slice. deblocking_filter_control_present_flag is equal to 0. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. DependencyIdMax is equal to 2, TemporalIdMax is equal to 3 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 1 for dependency representation with dependency_id equal to 1. SpatialResolutionChangeFlag is equal to 0 for dependency representation with dependency_id equal to 2. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_header_restriction_flag is equal to 0. slice_skip_flag is equal to 0. default_base_mode_flag is equal to 1, specifying inter-layer motion and intra prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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 EI, EP and EB coded slices of spatial enhancement layers, using inter-layer motion and intra prediction and inter-layer residual prediction in transform and spatial domain, with 8x8 transform size and CABAC parsing.

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Purpose: Check that the decoder can properly handle EI, EP and EB coded slices of spatial enhancement layers, using inter-layer motion and intra prediction and inter residual prediction in transform and spatial domain, with 8x8 transform size and CABAC parsing.

10.6.6.32 Test bitstreams — SVC Profiles: Scalable High Intra Profile 4:2:0 8 bit

10.6.6.32.1 Test bitstream #SVCHIS-1

Specification: All slices are coded as IDR, or EIDR slices. Each dependency representation can contain more than one slice. disable_deblocking_filter_idc is equal to 1, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. pic_order_cnt_type is equal to 0. DependencyIdMax is equal to 2, TemporalIdMax is equal to 0 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 1. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_motion_prediction_flag is equal to 1, specifying enabling inter-layer motion prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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 EIDR coded slices of spatial enhancement layers, 8x8 transform size with inter-layer intra prediction, using CABAC parsing.

Purpose: Check that the decoder can properly handle EIDR coded slices of spatial enhancement layers, 8x8 transform size with inter-layer intra prediction, using CABAC parsing.

10.6.6.32.2 Test bitstream #SVCHIS-2

Specification: All slices are coded as IDR, or EIDR slices. Each dependency representation can contain more than one slice. deblocking_filter_control_present_flag is equal to 0. entropy_coding_mode_flag is equal to 0, specifying the CAVLC parsing process. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. pic_order_cnt_type is equal to 0. DependencyIdMax is equal to 2, TemporalIdMax is equal to 0 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 1, specifying sending geometrical parameters in the sequence parameter set. SpatialResolutionChangeFlag is equal to 1 for the dependency representation with dependency_id equal to 1. SpatialResolutionChangeFlag is equal to 1 for the dependency representation with dependency_id equal to 2. no_inter_layer_pred_flag is equal to 0. seq_tcoeff_level_prediction_flag is equal to 0. slice_skip_flag is equal to 0. adaptive_base_mode_flag is equal to 1, specifying enabling inter-layer motion and intra prediction. adaptive_motion_prediction_flag is equal to 1, specifying enabling inter-layer motion prediction. adaptive_residual_prediction_flag is equal to 1, specifying enabling inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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 EIDR coded slices of spatial enhancement layers, 8x8 transform size with inter-layer intra and residual prediction, sequence level geometrical parameters, with CAVLC parsing.

Purpose: Check that the decoder can properly handle EIDR coded slices of spatial enhancement layers, 8x8 transform size with inter-layer intra, sequence level geometrical parameters, with CAVLC parsing.

10.6.6.32.3 Test bitstream #SVCHIS-3

Specification: All slices are coded as IDR, or EIDR slices. Each dependency representation can contain more than one slice. deblocking_filter_control_present_flag is equal to 0, specifying disabling of the deblocking filter process. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. transform_8x8_mode_flag is equal to 1, specifying that 8x8 transform decoding process may be in use. pic_order_cnt_type is equal to 0. DependencyIdMax is equal to 2, TemporalIdMax is equal to 0 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 1, specifying sending geometrical parameters in the

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sequence parameter set. SpatialResolutionChangeFlag is equal to 1 for the dependency representation with dependency_id equal to 1. SpatialResolutionChangeFlag is equal to 1 for the dependency representation with dependency_id equal to 2. no_inter_layer_pred_flag is equal to 1, specifying disabling inter-layer prediction. seq_tcoeff_level_prediction_flag is equal to 0. inter_layer_deblocking_filter_control_present_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 EIDR coded slices of spatial enhancement layers, without inter-layer prediction, sequence level geometrical parameters using 8x8 transform size with CABAC parsing.

Purpose: Check that the decoder can properly handle EIDR coded slices of spatial enhancement layers, without inter-layer prediction, sequence level geometrical parameters using 8x8 transform size with CABAC parsing.

10.6.6.32.4 Test bitstream #SVCHICS-1

Specification: All slices are coded as IDR, or EIDR slices. Each dependency representation contains only one slice. deblocking_filter_control_present_flag is equal to 0. entropy_coding_mode_flag is equal to 1, specifying the CABAC parsing process. pic_order_cnt_type is equal to 0. DependencyIdMax is equal to 2, TemporalIdMax is equal to 0 and DQIdMax is equal to 32. extended_spatial_scalability is equal to 0. SpatialResolutionChangeFlag is equal to 0 for dependency representations with dependency_id equal to 1 and 3. SpatialResolutionChangeFlag is equal to 1 for the dependency representation with dependency_id equal to 2. no_inter_layer_pred_flag is equal to 0. tcoeff_level_prediction_flag is equal to 1 for dependency representation with dependency_id equal to 1, specifying that an alternative inter-layer prediction process is applied on a macroblock basis. seq_tcoeff_level_prediction_flag is equal to 1 for dependency representation with dependency_id equal to 2 and 3. slice_header_restriction_flag is equal to 0. slice_skip_flag is equal to 0. default_base_mode_flag is equal to 1, specifying inter-layer intra prediction. adaptive_residual_prediction_flag is equal to 1, specifying inter-layer residual prediction. inter_layer_deblocking_filter_control_present_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 EIDR coded slices of quality enhancement layers, using an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream, and spatial enhancement layers, using inter-layer intra and residual prediction, with deblocking filter for inter-layer intra prediction and CABAC parsing.

Purpose: Check that the decoder can properly handle EIDR coded slices of quality enhancement layers, using an alternative inter-layer prediction process by macroblock for translation to an AVC bitstream, and spatial enhancement layers, using inter-layer intra and residual prediction, with deblocking filter for inter-layer intra prediction and CABAC parsing.

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Add the following table after Table AMD30-1:

Table AMD31.1 — Bitstreams for Scalable Baseline, Scalable High, and Scalable High Intra profiles

Categories	Bitstream	Donated by	File name	Baseline	Main	High	Scalable Baseline	Scalable High	Scalable High Intra	Level	Frame rate (Frames/sec)
CGS	SVCBC-1	HHI	SVCBC-1-L0	X						13	29.97
	SVCBC-1	HHI	SVCBC-1-L1				X			21	29.97
MGS	SVCBM-1	Vidyo	SVCBM-1-L0	X						13	29.97
	SVCBM-1	Vidyo	SVCBM-1-L1				X			13	29.97
	SVCBM-2	Sharp	SVCBM-2-L0	X						13	29.97
	SVCBM-2	Sharp	SVCBM-2-L1				X			13	29.97
	SVCBM-3	Sharp	SVCBM-3-L0	X						13	29.97
	SVCBM-3	Sharp	SVCBM-3-L1				X			13	29.97
	SVCBM-4	Sharp	SVCBM-4-L0	X						13	29.97
	SVCBM-4	Sharp	SVCBM-4-L1				X			13	29.97
	SVCBM-4	Sharp	SVCBM-4-L2				X			21	29.97
	SVCBM-5	HHI	SVCBM-5-L0	X						13	29.97
	SVCBM-5	HHI	SVCBM-5-L1				X			21	29.97
	SVCBM-5	HHI	SVCBM-5-L2				X			30	29.97
	SVCBM-5	HHI	SVCBM-5-L3				X			30	29.97
	SVCBCT-1	HHI	SVCBCT-1-L0	X						13	29.97
CGS/ Temporal	SVCBCT-1	HHI	SVCBCT-1-L1				X			21	29.97
MGS/ Temporal	SVCBMT-1	Vidyo	SVCBMT-1-L0	X						13	29.97
	SVCBMT-1	Vidyo	SVCBMT-1-L1				X			13	29.97
	SVCBMT-2	Vidyo	SVCBMT-2-L0	X						13	29.97
	SVCBMT-2	Vidyo	SVCBMT-2-L1				X			13	29.97
	SVCBMT-3	Vidyo	SVCBMT-3-L0	X						13	29.97
	SVCBMT-3	Vidyo	SVCBMT-3-L1				X			13	29.97
	SVCBMT-4	Vidyo	SVCBMT-4-L0	X						13	29.97
	SVCBMT-4	Vidyo	SVCBMT-4-L1				X			13	29.97
	SVCBMT-5	Vidyo	SVCBMT-5-L0	X						13	29.97
	SVCBMT-5	Vidyo	SVCBMT-5-L1				X			13	29.97
	SVCBMT-6	Vidyo	SVCBMT-6-L0	X						13	29.97
	SVCBMT-6	Vidyo	SVCBMT-6-L1				X			13	29.97
	SVCBMT-7	Vidyo	SVCBMT-7-L0	X						13	29.97
	SVCBMT-7	Vidyo	SVCBMT-7-L1				X			13	29.97

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Categories	Bitstream	Donated by	File name	Baseline	Main	High	Scalable Baseline	Scalable High	Scalable High Intra	Level	Frame rate (Frames/sec)
	SVCBMT-8	Vidyo	SVCBMT-8-L0	X						13	29.97
	SVCBMT-8	Vidyo	SVCBMT-8-L1				X			13	29.97
	SVCBMT-9	Vidyo	SVCBMT-9-L0	X						13	29.97
	SVCBMT-9	Vidyo	SVCBMT-9-L1				X			22	29.97
	SVCBMT-10	Vidyo	SVCBMT-10-L0	X						13	29.97
	SVCBMT-10	Vidyo	SVCBMT-10-L1				X			13	29.97
	SVCBMT-11	Vidyo	SVCBMT-11-L0	X						13	29.97
	SVCBMT-11	Vidyo	SVCBMT-11-L1				X			13	29.97
	SVCBMT-12	Vidyo	SVCBMT-12-L0	X						13	29.97
	SVCBMT-12	Vidyo	SVCBMT-12-L1				X			13	29.97
	SVCBMT-13	Vidyo	SVCBMT-13-L0	X						13	29.97
	SVCBMT-13	Vidyo	SVCBMT-13-L1				X			13	29.97
	SVCBMT-13	Vidyo	SVCBMT-13-L2				X			21	29.97
Spatial	SVCBS-1	Vidyo	SVCBS-1-L0	X						13	29.97
	SVCBS-1	Vidyo	SVCBS-1-L1				X			13	29.97
	SVCBS-2	Vidyo	SVCBS-2-L0	X						13	29.97
	SVCBS-2	Vidyo	SVCBS-2-L1				X			30	29.97
	SVCBS-3	ETRI	SVCBS-3-L0	X						13	29.97
	SVCBS-3	ETRI	SVCBS-3-L1				X			30	29.97
	SVCBS-4	ETRI	SVCBS-4-L0	X						13	29.97
	SVCBS-4	ETRI	SVCBS-4-L1				X			30	29.97
	SVCBS-5	ETRI	SVCBS-5-L0	X						13	29.97
	SVCBS-5	ETRI	SVCBS-5-L1				X			30	29.97
	SVCBS-6	ETRI	SVCBS-6-L0	X						11	29.97
	SVCBS-6	ETRI	SVCBS-6-L1				X			13	29.97
	SVCBS-6	ETRI	SVCBS-6-L2				X			30	29.97
	SVCBS-7	ETRI	SVCBS-7-L0	X						11	29.97
	SVCBS-7	ETRI	SVCBS-7-L1				X			13	29.97
	SVCBS-8	HHI	SVCBS-13-L0	X						13	29.97
	SVCBS-8	HHI	SVCBS-13-L1				X			30	29.97
Spatial/ Temporal	SVCBST-1	Vidyo	SVCBST-1-L0	X						13	29.97
	SVCBST-1	Vidyo	SVCBST-1-L1				X			40	29.97
	SVCBST-2	Vidyo	SVCBST-2-L0	X						13	29.97
	SVCBST-2	Vidyo	SVCBST-2-L1				X			40	29.97

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Categories	Bitstream	Donated by	File name	Baseline	Main	High	Scalable Baseline	Scalable High	Scalable High Intra	Level	Frame rate (Frames/sec)
	SVCBST-3	Vidyo	SVCBST-3-L0	X						13	29.97
	SVCBST-3	Vidyo	SVCBST-3-L1				X			40	29.97
	SVCBST-4	Vidyo	SVCBST-4-L0	X						13	29.97
	SVCBST-4	Vidyo	SVCBST-4-L1				X			40	29.97
	SVCBST-5	Vidyo	SVCBST-5-L0	X						13	29.97
	SVCBST-5	Vidyo	SVCBST-5-L1				X			40	29.97
	SVCBST-6	Vidyo	SVCBST-6-L0	X						13	29.97
	SVCBST-6	Vidyo	SVCBST-6-L1				X			40	29.97
	SVCBST-7	Vidyo	SVCBST-7-L0	X						13	29.97
	SVCBST-7	Vidyo	SVCBST-7-L1				X			40	29.97
	SVCBST-8	Vidyo	SVCBST-8-L0	X						13	29.97
	SVCBST-8	Vidyo	SVCBST-8-L1				X			40	29.97
	SVCBST-9	Vidyo	SVCBST-9-L0	X						13	29.97
	SVCBST-9	Vidyo	SVCBST-9-L1				X			40	29.97
	SVCBST-10	Vidyo	SVCBST-10-L0	X						13	29.97
	SVCBST-10	Vidyo	SVCBST-10-L1				X			40	29.97
	SVCBST-11	Vidyo	SVCBST-11-L0	X						13	29.97
	SVCBST-11	Vidyo	SVCBST-11-L1				X			40	29.97
	SVCBST-12	Vidyo	SVCBST-12-L0	X						13	29.97
	SVCBST-12	Vidyo	SVCBST-12-L1				X			40	29.97
	SVCBST-13	Vidyo	SVCBST-13-L0	X						40	29.97
	SVCBST-13	Vidyo	SVCBST-13-L1				X			50	29.97
	SVCBST-14	Vidyo	SVCBST-14-L0	X						30	29.97
	SVCBST-14	Vidyo	SVCBST-14-L1				X			40	29.97
	SVCBST-14	Vidyo	SVCBST-14-L2				X			50	29.97
	SVCBST-15	Vidyo	SVCBST-15-L0	X						13	29.97
	SVCBST-15	Vidyo	SVCBST-15-L1				X			30	29.97
	SVCBST-15	Vidyo	SVCBST-15-L2				X			40	29.97
	SVCBST-16	Vidyo	SVCBST-16-L0	X						13	29.97
	SVCBST-16	Vidyo	SVCBST-16-L1				X			30	29.97
	SVCBST-16	Vidyo	SVCBST-16-L2				X			40	29.97
	SVCBST-17	Vidyo	SVCBST-17-L0	X						13	29.97
	SVCBST-17	Vidyo	SVCBST-17-L1				X			30	29.97
	SVCBST-17	Vidyo	SVCBST-17-L2				X			40	29.97
	SVCBST-18	Vidyo	SVCBST-18-L0	X						13	29.97

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Categories	Bitstream	Donated by	File name	Baseline	Main	High	Scalable Baseline	Scalable High	Scalable High Intra	Level	Frame rate (Frames/sec)
	SVCBST-18	Vidyo	SVCBST-18-L1				X			30	29.97
	SVCBST-18	Vidyo	SVCBST-18-L2				X			40	29.97
	SVCBST-19	HHI	SVCBST-19-L0	X						13	29.97
	SVCBST-19	HHI	SVCBST-19-L1				X			30	29.97
	SVCBST-20	Thomson	SVCBST-20-L0	X						11	14.98
	SVCBST-20	Thomson	SVCBST-20-L1				X			30	29.97
MGS/Spatial/ Temporal	SVCBMST-1	Vidyo	SVCBMST-1-L0	X						13	29.97
	SVCBMST-1	Vidyo	SVCBMST-1-L1				X			13	29.97
	SVCBMST-1	Vidyo	SVCBMST-1-L2				X			40	29.97
	SVCBMST-2	Vidyo	SVCBMST-2-L0	X						13	29.97
	SVCBMST-2	Vidyo	SVCBMST-2-L1				X			13	29.97
	SVCBMST-2	Vidyo	SVCBMST-2-L2				X			40	29.97
	SVCBMST-3	HHI	SVCBMST-3-L0	X						13	29.97
	SVCBMST-3	HHI	SVCBMST-3-L1				X			21	29.97
	SVCBMST-3	HHI	SVCBMST-3-L2				X			31	29.97
	SVCBCTS-1	Orange	SVCBCTS-1-L0	X						12	12.5
	SVCBCTS-1	Orange	SVCBCTS-1-L1				X			13	25
	SVCBCTS-1	Orange	SVCBCTS-1-L2				X			30	25
	SVCBCTS-2	Orange	SVCBCTS-2-L0	X						12	12.5
	SVCBCTS-2	Orange	SVCBCTS-2-L1				X			13	25
	SVCBCTS-2	Orange	SVCBCTS-2-L2				X			30	25
	SVCBCTS-3	Sharp	SVCBCTS-3-L0	X						13	25
	SVCBCTS-3	Sharp	SVCBCTS-3-L1				X			13	25
	SVCBCTS-3	Sharp	SVCBCTS-3-L2				X			30	25
	SVCBSTC-1	Sharp	SVCBSTC-1-L0	X						13	25
	SVCBSTC-1	Sharp	SVCBSTC-1-L1				X			30	25
	SVCBSTC-1	Sharp	SVCBSTC-1-L2				X			31	25
MGS	SVCHM-1	HHI	SVCHM-1-L0			X				13	29.97
	SVCHM-1	HHI	SVCHM-1-L1					X		13	29.97
	SVCHM-1	HHI	SVCHM-1-L2					X		30	29.97
	SVCHM-1	HHI	SVCHM-1-L3					X		30	29.97
	SVCHM-2	Sharp	SVCHM-2-L0			X				30	25
	SVCHM-2	Sharp	SVCHM-2-L1					X		30	25
	SVCHM-3	Sharp	SVCHM-3-L0			X				30	25

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Categories	Bitstream	Donated by	File name	Baseline	Main	High	Scalable Baseline	Scalable High	Scalable High Intra	Level	Frame rate (Frames/sec)
	SVCHM-3	Sharp	SVCHM-3-L1					X		30	25
	SVCHM-4	Sharp	SVCHM-4-L0			X				30	25
	SVCHM-4	Sharp	SVCHM-4-L1					X		30	25
	SVCHM-4	Sharp	SVCHM-4-L2					X		31	25
Spatial	SVCHS-1	Thomson	SVCHS-1-L0	X						21	25
	SVCHS-1	Thomson	SVCHS-1-L1					X		31	25
	SVCHS-2	Thomson	SVCHS-2-L0			X				13	25
	SVCHS-2	Thomson	SVCHS-2-L1					X		31	25
Spatial/ Temporal	SVCHST-1	Orange	SVCHST-1-L0			X				30	25
	SVCHST-1	Orange	SVCHST-1-L1					X		32	50
	SVCHST-1	Orange	SVCHST-1-L2					X		50	50
	SVCHST-2	Orange	SVCHST-2-L0			X				30	25
	SVCHST-2	Orange	SVCHST-2-L1					X		32	50
	SVCHST-2	Orange	SVCHST-2-L2					X		42	50
	SVCHST-3	Thomson	SVCHST-3-L0			X				31	25
	SVCHST-3	Thomson	SVCHST-3-L1					X		50	50
	SVCHST-4	Thomson	SVCHST-4-L0			X				30	25
	SVCHST-4	Thomson	SVCHST-4-L1					X		31	50
MGS/ Temporal/ Spatial	SVCHMTS-1	Orange	SVCHMTS-1-L0			X				30	25
	SVCHMTS-1	Orange	SVCHMTS-1-L1					X		30	25
	SVCHMTS-1	Orange	SVCHMTS-1-L2					X		31	25
	SVCHMTS-1	Orange	SVCHMTS-1-L3					X		31	50
	SVCHMTS-1	Orange	SVCHMTS-1-L4					X		31	50
	SVCHMTS-1	Orange	SVCHMTS-1-L5					X		42	25
	SVCHMTS-2	Sharp	SVCHMTS-2-L0			X				13	29.97
	SVCHMTS-2	Sharp	SVCHMTS-2-L1					X		13	29.97
	SVCHMTS-2	Sharp	SVCHMTS-2-L2					X		31	29.97
CGS/ Temporal/ Spatial	SVCHCTS-1	Orange	SVCHCTS-1-L0			X				12	12.5
	SVCHCTS-1	Orange	SVCHCTS-1-L1					X		13	25
	SVCHCTS-1	Orange	SVCHCTS-1-L2					X		30	25
	SVCHCTS-1	Orange	SVCHCTS-1-L3					X		30	25
	SVCHCTS-1	Orange	SVCHCTS-1-L4					X		31	50

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Categories	Bitstream	Donated by	File name	Baseline	Main	High	Scalable Baseline	Scalable High	Scalable High Intra	Level	Frame rate (Frames/sec)
	SVCHCTS-1	Orange	SVCHCTS-1-L5					X		31	50
	SVCHCTS-1	Orange	SVCHCTS-1-L6					X		40	50
	SVCHCTS-1	Orange	SVCHCTS-1-L7					X		40	50
Spatial/ Temporal/ CGS	SVCHSTC-1	Sharp	SVCHSTC-1-L0			X				13	30
	SVCHSTC-1	Sharp	SVCHSTC-1-L1					X		13	30
	SVCHSTC-1	Sharp	SVCHSTC-1-L2					X		31	30
Spatial	SVCHIS-1	Thomson	SVCHIS-1-L0			X				21	25
	SVCHIS-1	Thomson	SVCHIS-1-L1						X	31	25
	SVCHIS-1	Thomson	SVCHIS-1-L2						X	40	25
	SVCHIS-2	Thomson	SVCHIS-2-L0			X				30	25
	SVCHIS-2	Thomson	SVCHIS-2-L1						X	31	25
	SVCHIS-2	Thomson	SVCHIS-2-L2						X	42	25
	SVCHIS-3	Thomson	SVCHIS-3-L0			X				30	25
	SVCHIS-3	Thomson	SVCHIS-3-L1						X	31	25
	SVCHIS-3	Thomson	SVCHIS-3-L2						X	40	25
CGS/Spatial	SVCHICS-1	Sharp	SVCHICS-1-L0			X				13	30
	SVCHICS-1	Sharp	SVCHICS-1-L1						X	13	30
	SVCHICS-1	Sharp	SVCHICS-1-L2						X	31	30
	SVCHICS-1	Sharp	SVCHICS-1-L3						X	31	30

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