INTERNATIONAL STANDARD

ISO/IEC 29199-4

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AMENDMENT 1
2014-08-15

Information technology — JPEG XR image coding system —

Part 4: Conformance testing

AMENDMENT 1: Additional JPEG XR conformance test streams

Technologies de l'information — Système de codage d'image JPEG XR —

Partie 4: Essai de conformité

AMENDEMENT 1: Flux d'essai de conformité JPEG XR supplémentaires

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

Summary

This minor enhancement of Rec. ITU.T T.834 | ISO/IEC 29199-4 extends and enhances the set of test streams for Rec. ITU.T T.832 | ISO/IEC 29199-2 in two ways: First, additional test streams cover features than had either not yet been tested in earlier revisions or did not exist in earlier versions in the standard. Second, extensions made to Rec. ITU.T T.802 | ISO/IEC 15444-2 allow the wrapping of JPEG XR codestreams in the JPEG 2000 file format, for which new reference streams are included.

Three new test streams cover the "red-blue not swapped" flag recently introduced in Rec. ITU.T T.832 | ISO/IEC 29199-2, and the DCLP-QP flag, which was not covered in earlier tests. The "trim-flexbits" feature was only partially tested in earlier revisions of this Recommendation | International Standard, and test streams for this have been added. An additional set of test streams covers the spatial rotation feature of JPEG XR known as "SPATIAL_XFRM_SUBORDINATE".

The second block of tests cover the new boxed-based file format introduced in AMD.3 of Rec. ITU-T T.802 | ISO/IEC 15444-2.

The new set of test streams is not included as an electronic attachment to this text due to size constraints, but is available at the following URL:

http://wftp3.itu.int/av-arch/video-site/jpegxr/JXR_ConformanceSuite_2013.zip

Information technology — JPEG XR image coding system —

Part 4:
Conformance testing

AMENDMENT 1: Additional JPEG XR conformance test streams

Add the following subclauses at the end of Clause 7:

7.9 Output_Bitdepth_16

— CarHandle_Spat_Ov0_1x1_YUV444.jxr

7.10 Special_QP

— Seattle_Ov0_QPIndex0.jxr

— Seattle_Ov0_ScaleFlag0_QP31.jxr

— Seattle_Ov0_ScaleFlag0_QP32.jxr

— Seattle_Ov0_ScaleFlag0_QP47.jxr

— Seattle_Ov0_ScaleFlag0_QP48.jxr

— Seattle_Ov0_ScaleFlag1_QP15.jxr

— Seattle_Ov0_ScaleFlag1_QP16.jxr

— Seattle_Ov1_QPIndex0.jxr

— Seattle_Ov1_ScaleFlag0_QP31.jxr

— Seattle_Ov1_ScaleFlag0_QP32.jxr

— Seattle_Ov1_ScaleFlag0_QP47.jxr

— Seattle_Ov1_ScaleFlag0_QP48.jxr

— Seattle_Ov1_ScaleFlag1_QP15.jxr

— Seattle_Ov1_ScaleFlag1_QP16.jxr

7.11 Flags_And_Tiles

— Seattle_Ov0_1x1_IndexTable0.jxr

— Seattle_Ov1_1x1_IndexTable0.jxr

7.15 Output_Colour_Format_Baseline

— Maui_Spat_16bppGray.jxr

— Maui_Spat_32bppBGR.jxr

7.16 Output_Colour_Format_Main

— 3channel16_noprof_noalpha_Spat.jxr

— 3channel_noprof_noalpha_Spat.jxr

— 4channel16_noprof_noalpha_Spat.jxr

— 4channel_noprof_noalpha_Spat.jxr

7.21 Levels

— Level255_cols_Spat_1x1.jxr

— Level255_raws_Spat_1x1.jxr

— Level16_cols_Spat_1x1.jxr

— Level16_rows_Spat_1x1.jxr

— Level4_cols_Spat_1x1.jxr

— Level4_rows_Spat_1x1.jxr

— Level8_cols_Spat_1x1.jxr

— Level8_rows_Spat_1x1.jxr

7.25 Tag_Based_Container

— Boats1_IFD_Tags_ByteCount0.jxr

— Boats2_IFD_Tags_ByteCount0.jxr

— Seattle_IFD_Tags_ByteCount0.jxr

7.27 Reference file set Red-Blue-Not-Swapped

This collection of 6 .jxr files contains images in the BGR555, BGR565 and BGR101010 colour format that make use of the RED_BLUE_SWAPPED_FLAG of the codestream, indicating a component order in which red is in the first and blue in the last channel. The set consists of the files

— Maui_555_RBns_Flg_Off.jxr

— Maui_555_RBns_Flg_On.jxr

— Maui_565_RBns_Flg_Off.jxr

— Maui_565_RBns_Flg_On.jxr

— Maui_101010_RBns_Flg_Off.jxr

— Maui_101010_RBns_Flg_On.jxr

7.28 Reference file set Use-DCLP-QP-Flag

In this collection of 7 .jxr files, the variable quantization options of JPEG XR “USE_DC/LP_QP_FLAG” are tested and the number of quantizer for the three bands (DC,LP,HP) are varied between one, four, eight and 16. The set consists of the files:

— Seattle_L01n_H12u.jxr

— Seattle_L01u_H12n.jxr

— Seattle_L08n_H04u.jxr

— Seattle_L08u_H04n.jxr

— Seattle_L08u_H04u.jxr

— Seattle_L16n_H01u.jxr

— Seattle_L16u_H01n.jxr

7.29 Reference file set Trim-Flexbits

This set of 16 .jxr files tests the TRIM-FLEXBITS option of the decoder by varying the number of flexbits to trim off between zero and 15. It consists of the following files:

— Random_Trim0.jxr

— Random_Trim1.jxr

— Random_Trim2.jxr

— Random_Trim3.jxr

— Random_Trim4.jxr

— Random_Trim5.jxr

— Random_Trim6.jxr

— Random_Trim7.jxr

— Random_Trim8.jxr

— Random_Trim9.jxr

— Random_Trim10.jxr

— Random_Trim11.jxr

— Random_Trim12.jxr

— Random_Trim13.jxr

— Random_Trim14.jxr

— Random_Trim15.jxr

7.30 Reference file set Spatial_XFRM

This set of 8 .jxr files varies the spatial transformation in the image header between all eight possible values. It consists of the following files:

— Seattle_Subordinate0.jxr

— Seattle_Subordinate1.jxr

— Seattle_Subordinate2.jxr

— Seattle_Subordinate3.jxr

— Seattle_Subordinate4.jxr

— Seattle_Subordinate5.jxr

— Seattle_Subordinate6.jxr

— Seattle_Subordinate7.jxr

7.31 Reference file set BoxBased-Format

The directory BoxBased-Format contains 159 .jxr files that use the alternative box-based file format representation defined in Rec. ITU-T T.801 | ISO/IEC 15444-2. They are alternative representations of files found in the directories Varied_Internal_Colour_Format, Output_Colour_Format_Baseline, Output_Colour_Format_Main and Output_Colour_Format_Advanced:

— 3channel16_noprof_alpha_Interleaved.jpx

— 3channel16_noprof_alpha.jpx

— 3channel16_noprof_noalpha.jpx

— 3channel16_prof_alpha_Interleaved.jpx

— 3channel16_prof_alpha.jpx

— 3channel16_prof_noalpha.jpx

— 3channel_noprof_alpha_Interleaved.jpx

— 3channel_noprof_alpha.jpx

— 3channel_noprof_noalpha.jpx

— 3channel_prof_alpha_Interleaved.jpx

— 3channel_prof_alpha.jpx

— 3channel_prof_noalpha.jpx

— 4channel16_noprof_alpha_Interleaved.jpx

— 4channel16_noprof_alpha.jpx

— 4channel16_noprof_noalpha.jpx

— 4channel16_prof_alpha_Interleaved.jpx

— 4channel16_prof_alpha.jpx

— 4channel16_prof_noalpha.jpx

— 4channel_noprof_alpha_Interleaved.jpx

— 4channel_noprof_alpha.jpx

— 4channel_noprof_noalpha.jpx

— 4channel_prof_alpha_Interleaved.jpx

— 4channel_prof_alpha.jpx

— 4channel_prof_noalpha.jpx

— 5channel16_noprof_alpha_Interleaved.jpx

— 5channel16_noprof_alpha.jpx

— 5channel16_noprof_noalpha.jpx
— 5channel16_prof_alpha_Interleaved.jpx
— 5channel16_prof_alpha.jpx
— 5channel16_prof_noalpha.jpx
— 5channel_noprof_alpha_Interleaved.jpx
— 5channel_noprof_alpha.jpx
— 5channel_noprof_noalpha.jpx
— 5channel_prof_alpha_Interleaved.jpx
— 5channel_prof_alpha.jpx
— 5channel_prof_noalpha.jpx
— 6channel16_noprof_alpha_Interleaved.jpx
— 6channel16_noprof_alpha.jpx
— 6channel16_noprof_noalpha.jpx
— 6channel16_prof_alpha_Interleaved.jpx
— 6channel16_prof_alpha.jpx
— 6channel16_prof_noalpha.jpx
— 6channel_noprof_alpha_Interleaved.jpx
— 6channel_noprof_alpha.jpx
— 6channel_noprof_noalpha.jpx
— 6channel_prof_alpha_Interleaved.jpx
— 6channel_prof_alpha.jpx
— 6channel_prof_noalpha.jpx
— 7channel16_noprof_alpha_Interleaved.jpx
— 7channel16_noprof_alpha.jpx
— 7channel16_noprof_noalpha.jpx
— 7channel16_prof_alpha_Interleaved.jpx
— 7channel16_prof_alpha.jpx
— 7channel16_prof_noalpha.jpx
— 7channel_noprof_alpha_Interleaved.jpx
— 7channel_noprof_alpha.jpx
— 7channel_noprof_noalpha.jpx
— 7channel_prof_alpha_Interleaved.jpx
— 7channel_prof_alpha.jpx

— 7channel_prof_noalpha.jpx
— 8channel16_noprof_alpha_Interleaved.jpx
— 8channel16_noprof_alpha.jpx
— 8channel16_noprof_noalpha.jpx
— 8channel16_prof_alpha_Interleaved.jpx
— 8channel16_prof_alpha.jpx
— 8channel16_prof_noalpha.jpx
— 8channel_noprof_alpha_Interleaved.jpx
— 8channel_noprof_alpha.jpx
— 8channel_noprof_noalpha.jpx
— 8channel_prof_alpha_Interleaved.jpx
— 8channel_prof_alpha.jpx
— 8channel_prof_noalpha.jpx
— Maui-128bppRGBAFixedPoint_64x64_Interleaved.jpx
— Maui-128bppRGBAFixedPoint_64x64.jpx
— Maui-128bppRGBAFloat_64x64_Interleaved.jpx
— Maui-128bppRGBAFloat_64x64.jpx
— Maui-128bppRGBFixedPoint.jpx
— Maui-128bppRGBFloat_64x64.jpx
— Maui-12bppYCC420.jpx
— Maui-16bppBGR555_64x64.jpx
— Maui-16bppBGR565_64x64.jpx
— Maui-16bppGrayFixedPoint_64x64.jpx
— Maui-16bppGrayHalf_64x64.jpx
— Maui-16bppGray.jpx
— Maui-16bppYCC422.jpx
— Maui-20bppYCC420Alpha_Interleaved.jpx
— Maui-20bppYCC420Alpha.jpx
— Maui-20bppYCC422.jpx
— Maui-24bppBGR_64x64.jpx
— Maui-24bppRGB_64x64.jpx
— Maui-24bppYCC422Alpha_Interleaved.jpx
— Maui-24bppYCC422Alpha.jpx

— Maui-24bppYCC444.jpx
— Maui-30bppYCC422Alpha_Interleaved.jpx
— Maui-30bppYCC422Alpha.jpx
— Maui-30bppYCC444.jpx
— Maui-32bppBGR101010_64x64.jpx
— Maui-32bppBGRA_64x64_Interleaved.jpx
— Maui-32bppBGRA_64x64.jpx
— Maui-32bppBGR.jpx
— Maui-32bppCMYK_64x64.jpx
— Maui-32bppCMYKDIRECT.jpx
— Maui-32bppGrayFixedPoint_64x64.jpx
— Maui-32bppGrayFloat_2_64x64.jpx
— Maui-32bppGrayFloat_64x64.jpx
— Maui-32bppYCC422.jpx
— Maui-32bppYCC444Alpha_Interleaved.jpx
— Maui-32bppYCC444Alpha.jpx
— Maui-40bppCMYKA_64x64_Interleaved.jpx
— Maui-40bppCMYKA_64x64.jpx
— Maui-40bppCMYKDIRECTAlpha_Interleaved.jpx
— Maui-40bppCMYKDIRECTAlpha.jpx
— Maui-40bppYCC444Alpha_Interleaved.jpx
— Maui-40bppYCC444Alpha.jpx
— Maui-48bppRGB_64x64.jpx
— Maui-48bppRGBFixedPoint_64x64.jpx
— Maui-48bppRGBHalf_64x64.jpx
— Maui-48bppYCC422Alpha_Interleaved.jpx
— Maui-48bppYCC422Alpha.jpx
— Maui-48bppYCC444FixedPoint.jpx
— Maui-48bppYCC444.jpx
— Maui-64bppCMYK_64x64.jpx
— Maui-64bppCMYKDIRECT.jpx
— Maui-64bppRGBA_64x64_Interleaved.jpx
— Maui-64bppRGBA_64x64.jpx