

Title: **VUI color description set for XYZ**

Status: Input Document to JCT-VC

Purpose: Proposal

Author(s) or Contact(s): Chad Fogg
4300 N. 1st Street
San Jose, CA 95134
USA

Tel:
Email: chadfogg@gmail.com

Source: Harmonic Inc.

Abstract

Transfer functions, color primaries, and a XYZ color difference space (Y'DzDx) being documented by studios in ITU-R and SMPTE et al could be signalled through a new set of `vui_parameters()` metadata indicators contained within the `colour_description_present_flag=1` set. Tests so far show that very wide color volume (gamut) and high dynamic range content can be efficiently coded with HEVC Main 12 and other operating points without changes to the video coding layer.

1 Proposal

In a manner similar to the Rec. 2020 request [1], it is suggested to reserve a code value for `colour_primaries`, `transfer_characteristics`, and `matrix_coeffs` equal to 10 to signal this pending new color descriptor set being registered through ITU-R and SMPTE.

Should an Intercomponent Color Prediction tool [2] be included in HEVC, an additional indicator may be necessary to signal direct coding of XYZ separate from the YDzDx indicator.

2 References

[1] T. Suzuki, "Proposal to support UHD TV colorimetry", [JCTVC-J0577](#), July 2012.

[2] A. Khairat, T. Nguyen, M. Siekmann, D. Marpe, "Non-RCE1: Extended Adaptive Inter-Component Prediction", [JCTVC-O0150](#), October 2013

3 Patent rights declaration(s)

Harmonic does not have any current or pending patent rights relating to the technology described in this contribution.