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# Abstract

This document describes the goals and mandates of PCC Validation Experiment VE 2.3 on single pass boundary identification.

# Introduction

The goal of VE 2.3 is to verify the implementation and the results of single pass boundary identification, as proposed in [1]. It has two parts. The first one is a bugfix to more accurately identify boundary points for patches at the edge of the 2D canvas. The second part is to perform the boundary identification in a single pass. Once the implementation and results are verified, the method will be integrated into the reference software TMC2 v7.0. The results of this VE will be reported to the 3DG/PCC AhG via its email reflector.

# Mandates

The mandate for VE 2.3 is as follows:

* Verify the implementation and the results of single pass boundary identification [1].

# Participants

|  |  |  |  |  |
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(P=proponent, C=cross checker)

# Test Model, anchors and CTC

The initial implementation will be on top of TMC2 v6.0 [2] and the simulation results will be reported against the TMC2 v6.0 using the test conditions specified in the Common Test Conditions document [3]. Only lossy conditions will be tested. The objective results will be provided using the result spreadsheet template.

The following two tests will be conducted:

* Test 1: Accurate identification of boundary points for patches at the edge of 2D canvas. The anchor for this test will be TMC2 v6.0.
* Test 2: Single pass boundary identification. The anchor for this test will be Test 1. The test is expected to show that the modification to use single pass boundary identification instead of two passes produces bit-exact results.

# Timeline

2019/07/12 Patch available in the uploaded document [1].

2019/07/19 Share full-frame results with the cross checkers

2019/07/29 Confirmation of the full-frame results by the cross checkers

2019/07/31 Integration of the method into the integration branch for TMC2 v7.0 (subject to confirmation from the cross checkers)

2019/07/31 Release of the results to the 3DG/PCC AhG via its email reflector

2019/09/30 Integration of the method into the VPCC text specification

# Document and software references

1. Hossein Najaf-Zadeh, Madhukar Budagavi, Rajan Joshi, Esmaeil Faramarzi, “[V-PCC][New Proposal] Single-pass Boundary Points Identification,” ISO/IEC JTC1/SC29 WG11 Doc. m49592, July 2019, Gothenburg, SE.
2. PCC Test Model Category 2 v6, ISO/IEC JTC1/SC29 WG11 Doc. N18475, March 2019, Geneva, CH.
3. Common test conditions for PCC, ISO/IEC JTC1/SC29 WG11 Doc. N18474, March 2019, Geneva, CH.