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**ISO/IEC JTC 1/SC 29/WG 11**

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# Abstract

This document provides a description of Core Experiment 13.37 on planar coding improvement.

# 1 Mandates

The mandates of the experiment are:

* to reduce the complexity of the proposed method.
* to evaluate the performance of the proposed tool on the latest version of the test model.

# 2 Participants

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| --- | --- | --- | --- |
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# 3 Description of the tool

In contribution m53522[1], we proposed an improvement of the planar coding mode by further considering available neighbour information. The method and its corresponding coding performance were reported in the exploration experiment activity [2]. The proposed method aims at simplifying the contexts design for coding the two planar flags while improving the coding efficiency. To do so, information of the parent neighbours and already-coded neighbours at the same octree level is considered. This information is then used as contexts when coding the *isPlanar* flag and *planePosition* flag.

# 4 Evaluation

## 4.1 Test condition

Tests will be performed following the G-PCC test conditions specified in CTC [3]. Following test conditions will be evaluated in the core experiment:

* C2 AI, lossy geometry – (lossy attribute)
* CW AI, lossless geometry – (lossless attribute)

## 4.2 Test model, datasets

The proposed tool shall be implemented on top of TMC13v11 [4]. All tests are to be performed on categories 1 and 3 datasets. Objective results will be provided using the result spreadsheet template.

# 5 Timeline

* 2020-07-28: Expected date for release of cross-verified TMC13v11 software and anchors
* 2020-09-11: CE Software and results are released to cross-checkers
* 2020-09-25: Preliminary feedback from cross-checkers to proponents
* 2020-10-07: MPEG document upload deadline

# References

1. “[G-PCC] [New] Planar coding improvement”, ISO/IEC JTC1/SC29/WG11 MPEG2020 Doc. m53522, Alpbach, AT,April, 2020.
2. “[G-PCC] EE13.37 Report on planar coding improvement”, ISO/IEC JTC1/SC29/WG11 MPEG2020 Doc. m54605, Online, June 2020.
3. “Common Test Conditions for G-PCC” ISO/IEC JTC1/SC29 WG11 MPEG2020 Doc, w19584, Online, June 2020.
4. “G-PCC Test Model v11”, ISO/IEC JTC1/SC29/WG11 MPEG2020 Doc. w19517, Online, June 2020.