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

**CODING OF MOVING PICTURES AND AUDIO**

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# Introduction

This document provides a description of Exploratory Experiment EE4FE 2.6 on mesh coding with V-PCC.

# Mandates

The mandates for EE4FE 2.6 are as follows:

1. Collect dynamic mesh content.
2. Study mesh coding extension to V-PCC.
3. Work towards eventual development of test model, anchors, and CTC.

# Participants

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# Description

Previously, extension of V-PCC to mesh coding on top of TMC2 v8.0 using the Edgebreaker method implemented in the Google Draco codec was presented in [1]. The results were presented for framework 2 [2] in which the mesh connectivity information is coded first, followed by coding of all the points as RAW patches using the mesh traversal order.

During this meeting cycle, the following two activities are planned:

1. Extend the Edgebreaker + V-PCC method to framework 1. In this case, the point cloud is encoded first using V-PCC. Then, the mesh connectivity is coded using the Edgebreaker method along with the reordering information. The results will be compared to Framework 2 and Draco.
2. Generate 32-frame results for framework 1 and 2 using V-PCC lossless common test conditions [3] and compare with Draco.

# Timeline

* 2020-04-24 MPEG #130 meeting ends.
* 2020-05-08 V-PCC: Expected date for release of finalized EE description and CTC.
* 2020-06-24 Upload EE4FE 2.6 report
* 2020-06-29 MPEG #131 meeting starts.

# References

1. Esmaeil Faramarzi, Rajan Joshi, and Madhukar Budagavi, “[V-PCC] Report on EE4FE 2.6 mesh coding with V-PCC”, ISO/IEC JTC1/SC29 WG11 (MPEG) m53369, April 2020.
2. Esmaeil Faramarzi, Keming Cao, Rajan Joshi, Madhukar Budagavi, m51002, “[V-PCC] EE2.6 Update on mesh coding with V-PCC,” ISO/IEC JTC1/SC29 WG11 (MPEG) m51002, October 2019.
3. ISO/IEC JTC1/SC29 WG11 (MPEG) w19324, “Common Test Conditions for PCC,” April 2020.