

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

**Coding of moving pictures and audio**

**Convenorship: UNI (Italy)**

**ISO/IEC JTC 1/SC 29/WG 11 N19097**

**Document type: Approved WG 11 document**

**Title:**

**Status: Approved**

**Date of document: 2020-03-31**

**Source: 3DG**

**Expected action:**

**No. of pages: 2**

**Email of convenor: leonardo@chiariglione.org**

**Committee URL: mpeg.chiariglione.org**

**INTERNATIONAL ORGANISATION FOR STANDARDISATION**

**ORGANISATION INTERNATIONALE DE NORMALISATION**

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

**CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC 1/SC 29/WG 11 N19097**

**Brussels – January 2020**

|  |  |
| --- | --- |
| **Source:** | **3DG** |
| **Title:** | **EE4FE 2.6 mesh coding with V-PCC** |
| **Authors:** | **Rajan Joshi** |

# 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

|  |  |  |  |
| --- | --- | --- | --- |
| ***Participant*** | ***Contact*** | ***Email*** | ***Type*** |
| Samsung | Rajan Joshi  Madhukar Budagavi | [r.joshi@samsung.com](mailto:r.joshi@samsung.com)  [m.budagavi@samsung.com](mailto:m.budagavi@samsung.com) | Participant |
| Apple | Khaled Mammou | kmammou@apple.com | Participant |
| Sony | Danillo.Graziosi | Danillo.Graziosi@sony.com | Participant |
| IMT | Chao Cao | cao\_chao@telecom-sudparis.eu | Participant |

# Description

Previously, extension of V-PCC to mesh coding on top of TMC2 v8.0 was presented in [1]. The triangle fan (TFAN) mesh coding algorithm from the MPEG SC3DMC software [2] was used to encode the mesh connectivity and the results presented were presented for lossless conditions.

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

1. Develop and document steps for the generation of meshes from point cloud data.
2. Implement alternate methods for mesh coding such as edge-breaker on top of TMC2 v8.0 and compare the results with the TFAN approach presented in [1]. The comparison will be based on simulations based on V-PCC lossless common test conditions [3].

# Timeline

* 2020-01-17 MPEG #129 meeting ends.
* 2020-01-31 V-PCC: Expected date for release of finalized EE description and CTC.
* 2020-04-09 Upload EE4FE 2.6 report
* 2020-04-20 MPEG #130 meeting starts.

# References

1. Esmaeil Faramarzi, Rajan Joshi, and Madhukar Budagavi, “[V-PCC] EE2.6 mesh coding with V-PCC”, ISO/IEC JTC1/SC29 WG11 (MPEG) m52481, Jan. 2020.
2. ISO/IEC JTC 1/SC 29/WG 11, Information technology — Coding of audio-visual objects — Part 16: Animation Framework eXtension (AFX).
3. ISO/IEC JTC1/SC29 WG11 (MPEG) w19084, “Common Test Conditions for PCC,” Jan. 2020.