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**CODING OF MOVING PICTURES AND AUDIO**

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**Geneva, CH – October 2019**

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# Abstract

This document provides a description of Core Experiment 13.25 on Trisoup decoding.

# Introduction

The goal of Core Experiment is to evaluate the Trisoup decoding method in m50757.

# Mandates

The mandates for CE are as follows:

1. To study the controllability for the number of the decoded points by the proposed method
2. To study the coding performance compared with the CTC anchor
3. To study the complexity (e.g. decoding time) of the proposed method

# Participants

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(P=proponent, C=crosss checker)

# Methods to be evaluated

## m50757 [G-PCC] On Trisoup decoding

In the trisoup decoding process, G-PCC decoder calculates the intersection point between the trisoup mesh plane and the voxelized grid as shown in Figure 1.

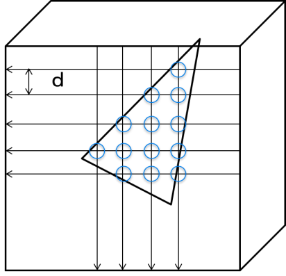


Figure 1 decode point derivation on trisoup

The number of the created points in the decoder is determined by the voxel grid distance (shown as ‘d’) which is currently fixed value 1.

The proposed method controls the variable “d” by the syntax signalling.

# Evaluation method

## Test condition

Following conditions will be studied under CTC.

1. Slice level control the sampling distance by 1 syntax element that is for all axis (i.e. x, y, and z)
2. Slice level control the sampling distance by 3 syntax element that are for each axis (i.e. x, y, or z)

Noted that 1 is a subset of 2.

A different setting from CTC for the syntax log2\_trisoup\_node\_size is also studied.

# Timeline

* 2019-11-01 Expected release of TMC13v8
* 2019-12-06 Distribution of CE software and results for verification
* 2019-12-20 CE verification feedback
* 2020-01-08 MPEG 129 document upload deadline
* 2020-01-13 MPEG 129, Brussels

# References

1. “G-PCC Test Model 8”, ISO/IEC JTC1/SC29/WG11 MPEG2019 Doc. w18882, Geneva, Switzerland, October 2019
2. “Common Test Conditions for PCC” ISO/IEC JTC1/SC29 WG11 MPEG2019”, ISO/IEC JTC1/SC29/WG11 MPEG2019 Doc. w18883, Geneva, Switzerland, October 2019
3. “[G-PCC] On Trisoup decoding”, ISO/IEC JTC1/SC29 WG11 (MPEG) input document m50757, Geneva, Switzerland, October 2019