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**CODING OF MOVING PICTURES AND AUDIO**

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| **Source:** | **3DG** |
| **Title:** | **Description of Core Experiment 13.11 for G-PCC: On Intra occupancy prediction** |

# Abstract

In this document we provide description of the core experiment 13.11 on Intra occupancy prediction.

The goal of this Core Experiment is to study and evaluate the geometry intra occupancy prediction as proposed in [1]. The experimental results of the CE will be evaluated by the 3DG/PCC AhG.

# CE 13.11 on Intra occupancy prediction

## Mandates

Mandates for CE13.11 are as follows:

1. Study methods for geometry intra occupancy prediction
2. Evaluate the related performance on the test model.
3. Study and report the changes to the G-PCC Working Draft

## Participants

The following people are participating in this CE.

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## Information about Proposed Tools

Seven (7) neighbours that share a face, and edge or vertex with the current sub-node are considered in intra occupancy prediction. The setting of LUT, weights and thresholds is simpler in comparison to the tool in current test model. In addition, it brings performance gain in geometry coding, as well as significant reduction of encoding/decoding time. Please refer to document [1] for details.

## Information for conducting tests

### Software

The proposed tools shall be implemented on top of TMC13v9.

### Evaluation Method

The point cloud test material will be tested for the test sequences of category

* (1) Static Objects and Scenes
* (3) Dynamic Acquisition

as defined by the CTC [2]. The following test conditions will be under evaluation

* C2\_ai — lossy geometry, lossy attributes
* CW\_ai — lossless geometry, lossless attributes

Note that the tested technology should only have an impact on geometry compression, therefore results under condition C2 and CW will be reported.

## CE 13.11 Coordinators

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# Timeline:

* **2020-01-31**: Expected date for release of cross-verified G-PCCv9.0 software and anchors;
* **2020-03-20**: Deliver source code and results for cross check;
* **2020-04-03**: Crosscheck feedback to the proponents;
* **2020-04-15**: MPEG #130 document upload deadline.

# References

1. On geometry occupancy intra prediction, ISO/IEC JTC1/SC29 WG11 m52327, Brussels, BE, January 2020.
2. Common test conditions for point cloud compression, ISO/IEC JTC1/SC29/WG11 N18883, Geneva, CH, October 2019.