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**INTERNATIONAL ORGANISATION FOR STANDARDISATION**

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

**CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC 1/SC 29/WG 11 N18918**

**Geneva, CH – October 2019**

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| **Source** | **3DG** |
| **Title** | **Description of Exploration Experiment 13.14 for G-PCC: Geometry sub-nodes weighting for intra-prediction** |

**Abstract**

This document provides a description of the Exploration Experiments 13.14 on geometry sub-nodes weighting for intra-prediction.

1. **Introduction**

The goal of EE 13.14 is to further study and evaluate the sub-level occupancy information incorporation in geometry intra prediction as proposed in [1]. The experimental results of the EE will be evaluated by the 3DG/PCC AhG.

1. **EE 13.14: Geometry sub-nodes weighting for intra-prediction**
   1. ***Mandates***

Mandates for EE13.14 are as follows:

1. Study methods for obtaining weights invloved in geometry intra prediction
2. Study methods for exploring spatial correlation among neigbouring nodes
3. Study and report the changes to the G-PCC Working Draft
   1. ***Participants***

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* 1. ***Test Model, anchors and Test Conditions***
     1. ***Anchors***

The proposed tools shall be implemented on top of TMC13v8.

* + 1. ***Test Conditions***

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

1. C2 AI, lossy geometry – (lossy attribute)
2. CW AI lossless geometry – (lossless attribute)

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

* 1. ***Information about Proposed Tools***

In [1], the sub-level occupancy information of neighbouring nodes is considered in predicting the occupancy information of current node. Corresponding weights for sub-nodes of coded neighbours are determined and incorporated in calculating the occupancy scores of nodes to be encoded.

1. **Timeline**

2019/11/01 Expected date for release of cross-verified G-PCCv8.0 software and anchors

2019/11/15 Distribution of EE SW and results for verification

2020/12/01 EE verification feedback from cross-checkers to the proponents

2020/01/08 MPEG #129 document upload deadline

1. **References**
2. On geometry intra prediction, ISO/IEC JTC1/SC29 WG11 m50759, Geneva, CH, Octorber 2019.
3. “Common test conditions for point cloud compression,” ISO/IEC JTC1/SC29/WG11 MPEG N18665, Gothenburg, SE, July 2019.