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**INTERNATIONAL ORGANISATION FOR STANDARDISATION
ORGANISATION INTERNATIONALE DE NORMALISATION
ISO/IEC JTC 1/SC 29/WG 11
CODING OF MOVING PICTURES AND AUDIO**

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Abstract

Core experiment 13.30 intends to evaluate and track proposed minor optimisations of the G-PCC design.

Mandate

The mandate of the core experiment is to evaluate proposed optimisations to —

- examine the coding efficiency of each proposed method,
- examine the complexity of each proposed method,
- examine the combined effects of all proposed methods.

Participants

Company	Contact	E-mail	Status
Apple	David Flynn	davidflynn@apple.com	Proponent
Sony	Alexandre Zaghetto	Alexandre.Zaghetto@sony.com	Cross-checker

Timeline

2019-11-01 Expected release of TMC13v8
2019-11-15 Distribution of CE software and results for verification
2019-12-01 CE verification feedback
2020-01-08 MPEG 129 document upload deadline
2020-01-13 MPEG 129, Brussels

Evaluation

All CTC [1] test conditions for TMC13 will be evaluated using category one and three content.

Description of proposals

m51011 – Use of L1 instead of L2 distance for neighbour search

This contribution [2] proposes to use the L1 (Manhattan) distance between points for the purpose of level-of-detail construction in attribute coding. This contrasts to the current G-PCC design that uses L2-squared (Euclidean) distances.

References

- [1] 3DG, “Common Test Conditions for PCC,” ISO/IEC JTC1/SC29/WG11, 128th meeting, Geneva, Tech. Rep. w18883, Oct. 2019.
- [2] Z. Gao, D. Flynn, A. Tourapis, and K. Mammou, “[G-PCC][New proposal] Using L1 norm for nearest neighbour search in Prediction and Lifting schemes,” ISO/IEC JTC1/SC29/WG11, 128th meeting, Geneva, Tech. Rep. m51011, Oct. 2019.