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**ISO/IEC JTC1/SC29/WG11**

**CODING OF MOVING PICTURES AND AUDIO**

**ISO/IEC JTC1/SC29/WG11 MPEG2019/N18676**

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# Introduction

This document provides a description of activities regarding V-PCC profiles, tiers, and levels.

Codec profiles commonly deal with the availability of tools while levels of a tier deal with specific constraints on usage, including aspects such as resolution, buffer size, frame rate, tiling limitations, etc. Different tiers may be defined for different use case scenarios, e.g. for consumer and professional/production applications, that may have different complexity constraints.

The starting point of this activity is the proposed text on conformance and profiles in [2] and the report on the previous CE P.0 iteration [3], the study on feasible tools for V-PCC implementation on current mobile clients in [4,5,6], as well as contributions related to a further profiles [7,8,9].

# The mandates for CE P.0 are:

1. Refine minimum video decoder requirements, video codec profiles, and V-PCC codec functionalities, as derived in R1 of the previous profile activity iteration [3].
2. Provide specification text for a “base” profile based on R1-R4 defined in the previous CE P.0 iteration [3] and integrate in the text of ISO/IEC DIS 23090-5 Video-based Point Cloud Compression [10].
3. Evaluate coding performance of said profile.
4. Analyze and define video decoder requirements, video codec profiles, and V-PCC codec functionalities, which would represent point clouds up to lossless, as requested in [7].
5. Propose evaluation principles for the establishment of V-PCC profiles, including coding performance (objective metrics, subjective quality), complexity (e.g. runtimes, spec text, buffers requirements, etc.), and use cases, e.g. as done in [8].

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## Timeline

2019-07-12 MPEG #127 (Gothenburg) meeting ends.

2019-07-19 Initial draft text for R2 provided to the group

2019-08-02 Revised draft text for R2 provided to ISO/IEC CD 23090-5 editors

2019-08-02 Release of cross-verified V-PCCv7.0 software

2018-08-23 Evaluation results for recommended profiles in V-PCCv7.0 provided to 3DG group

2018-08-30 Finalised draft text for R2 provided to ISO/IEC CD 23090-5 editors

2018-10-06 PCC AhG meeting starts.

2019-10-07 MPEG #128 (Geneva) meeting starts.

# References

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3. "[V-PCC] CE P.0 report," Sebastian Schwarz, m48267, Gothenburg, July 2019.
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