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Information technology — Coded representation of immersive media —

Part 22: Conformance for G-PCC

Technologies de l'information — Représentation codée de média immersifs —

Partie 22: Conformité pour G-PCC

Reference number
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Foreword

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology* Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

A list of all parts in the ISO/IEC 23090 series series can be found on the ISO and IEC websites.

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Introduction

Advance in 3D capturing and rendering technologies is enabling new applications and services in the field of assisted and autonomous driving, maps, cultural heritage, industrial processes, immersive real-time communication, and Virtual/Augmented/Mixed reality (VR/AR/MR) content creation, transmission and communication. Point clouds have arisen as one of the main representations for such applications. A point cloud frame consists of a set of 3D points. Each point, in addition to having a 3D position may also be associated with numerous other attributes such as colour, transparency, reflectance, timestamp, surface normal, and classification. Such representations require a large amount of data, which can be costly in terms of storage and transmission. Therefore, ISO/IEC 23090-9 specifies Geometry-based Point Cloud Compression (G-PCC), which aims at efficiently compressing point cloud representations.

This document is the conformance testing specification for ISO/IEC 23090-9.

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Information technology — Coded representation of immersive media —

Part 22: Conformance for G-PCC

1 Scope

This document specifies a set of tests and procedures designed to indicate whether encoders or decoders meet the normative requirements specified in ISO/IEC 23090-9.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 23090-9, *Information technology — Coded representation of immersive media — Part 9: Geometry-based point cloud compression*

ISO/IEC 23090-21, *Information technology — Coded representation of immersive media — Part 21: Reference software for Geometry-based Point Cloud Compression (G-PCC)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 23090-9 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
bitstream
sequence of bits

Note 1 to entry: An ISO/IEC 23090-9 G-PCC bitstream.

3.2
decoding process
process that restores information from a coded representation to the original form according to a given code

Note 1 to entry: An embodiment of the decoding process specified by ISO/IEC 23090-9.

3.3
decoder
embodiment of a *decoding process* (3.2)

Note 1 to entry: An ISO/IEC 23090-9 G-PCC decoder. The decoder does not include the rendering and display process, which is outside the scope of this document.

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