
**Information technology — Coded
representation of immersive media —
Part 9:
Geometry-based point cloud
compression**

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

Partie 9: Compression des nuages de points basée sur la géométrie





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Foreword

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Introduction

Advancements in 3D capturing and rendering technologies are enabling new applications and services in the fields of assisted and autonomous driving, cartography, 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. Every 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. This document provides the method for efficiently compressing point cloud representations.

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Information technology — Coded representation of immersive media —

Part 9: Geometry-based point cloud compression

1 Scope

This document specifies geometry-based point cloud compression.

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.

Rec. ITU-T X.690 | ISO/IEC 8825-1, *Information technology — ASN.1 encoding rules — Part 1: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)*

Rec. ITU-T X.660 | ISO/IEC 9834-1, *Information technology — Procedures for the operation of object identifier registration authorities: General procedures and top arcs of the international object identifier tree — Part 1:*

Rec. ITU-T X.667 | ISO/IEC 9834-8, *Information technology — Procedures for the operation of object identifier registration authorities — Part 8: Generation of universally unique identifiers (UUIDs) and their use in object identifiers*

ISO/IEC 23091-2, *Information technology — Coding-independent code points — Part 2: Video*

Rec. ITU-T T.35, *Procedure for the allocation of ITU T defined codes for non-standard facilities*