
**Information technology — Coded
representation of immersive media —**

**Part 7:
Immersive media metadata**

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

Partie 7: Métadonnées de media immersifs

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Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms, definitions and symbols	1
3.1 Terms and definitions	1
3.2 Symbols	4
4 Overview	5
4.1 General	5
4.2 Variables	5
4.3 Processes	5
4.4 Syntax structures	5
5 Common metadata	6
5.1 Reference coordinate system	6
5.2 Coordinate system rotation	6
5.3 Common metadata data structures	8
5.3.1 Rotation structure	8
5.3.2 Content coverage structure	8
5.3.3 Viewpoint information structures	8
5.3.4 Sphere region structure	9
5.3.5 Spherical region-wise quality ranking - Syntax	11
5.3.6 2D region-wise quality ranking structure- Syntax	12
5.4 Common metadata semantics	12
5.4.1 Rotation structure - Semantics	12
5.4.2 Content coverage structure - Semantics	12
5.4.3 Viewpoint information structures - Semantics	13
5.4.4 Sphere region structure - Semantics	14
5.4.5 Spherical region-wise quality ranking - Semantics	14
5.4.6 2D region-wise quality ranking structure - Semantics	15
6 Video and image metadata	16
6.1 Projection formats	16
6.1.1 List of projection formats	16
6.1.2 Equirectangular projection process	17
6.1.3 Cubemap projection process	17
6.2 Region-wise packing formats	20
6.2.1 List of packing formats	20
6.2.2 Rectangular region-wise packing process	20
6.3 Sample location mapping process	21
6.3.1 Relation of decoded pictures to global coordinate axes	21
6.3.2 Mapping of luma sample locations within a decoded picture to sphere coordinates relative to the global coordinate axes	23
6.3.3 Conversion from a sample location in a projected picture to sphere coordinates relative to the global coordinate axes	24
6.3.4 Conversion from a sample location of an active area in a fisheye decoded picture to sphere coordinates relative to the global coordinate axes	25
6.4 Fisheye omnidirectional video	27
6.5 Video and image metadata data structures	27
6.5.1 Projection format structure - Syntax	27
6.5.2 Region-wise packing structure	27
6.5.3 Fisheye omnidirectional video structure	30
6.6 Video and image metadata semantics	32
6.6.1 Projection format structure - Semantics	32

6.6.2	Region-wise packing structure	32
6.6.3	Fisheye omnidirectional video structure	36
Bibliography		44

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html. In the IEC, see www.iec.ch/understanding-standards.

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 can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

Introduction

This document is organized as follows.

- [Clauses 5](#) describes common metadata applicable to immersive media. This includes reference coordinate system related metadata and other common metadata syntax and semantics.
- [Clauses 6](#) describes metadata that applies to video and images. This includes projection formats and packing region-wise formats metadata which applies to video and images.

The goal of this document is to allow reuse of the commonly defined metadata to be referenced by other standards.

The International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) draw attention to the fact that it is claimed that compliance with this document may involve the use of a patent.

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Information technology — Coded representation of immersive media —

Part 7: Immersive media metadata

1 Scope

This document specifies common immersive media metadata focusing on immersive videos (including 360° videos) and images.

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 14496-12, *Information technology — Coding of audio-visual objects — Part 12: ISO base media file format*

ISO/IEC 23008-12, *Information technology — High efficiency coding and media delivery in heterogeneous environments — Part 12: Image file format*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 14496-12 and ISO/IEC 23008-12 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/>

3.1.1

azimuth

first of the two *sphere coordinates* (3.1.22) describing the location of a point on the sphere

3.1.2

azimuth circle

circle on the sphere connecting all points with the same *azimuth* (3.1.1) value

Note 1 to entry: An azimuth circle is always a *great circle* (3.1.12).

3.1.3

circular image

image captured with a *fish-eye lens* (3.1.9)