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Information technology — Multimedia application format (MPEG-A) —

Part 13: Augmented reality application format

Technologies de l'information — Format des applications multimedias —

Partie 13: Format pour les Applications de Realité Augmentée

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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. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 23000-13 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

ISO/IEC 23000 consists of the following parts, under the general title *Information technology — Multimedia application format (MPEG-A)*:

— *Part 1: Purpose for multimedia application formats* [Technical Report]

— *Part 2: MPEG music player application format*

— *Part 3: MPEG photo player application format*

— *Part 4: Musical slide show application format*

— *Part 5: Media streaming application format*

— *Part 6: Professional archival application format*

— *Part 7: Open access application format*

— *Part 8: Portable video application format*

— *Part 9: Digital Multimedia Broadcasting application format*

— *Part 10: Surveillance application format*

— *Part 11: Stereoscopic video application format*

— *Part 12: Interactive music application format*

— *Part 13: Augmented reality application format*

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Introduction

Augmented Reality (AR) applications refer to a view of a real-world environment (RWE) whose elements are augmented by content, such as graphics or sound, in a computer driven process. Augmented Reality Application Format (ARAF) is a collection of a subset of the ISO/IEC 14496-11 (MPEG-4 part 11) Scene Description and Application Engine standard, combined with other relevant MPEG standards (e.g. ISO/IEC 23005 - MPEG-V), designed to enable the consumption of 2D/3D multimedia content. Consequently, ISO/IEC 23000-13 focuses not on client or server procedures but on the data formats used to provide an augmented reality presentation.

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Information technology — Multimedia application format (MPEG-A) —

Part 13: Augmented reality application format

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1 Scope

This part of ISO/IEC 23000 specifies:

- Scene description elements for representing AR content
- Mechanisms to connect to local and remote sensors and actuators
- Mechanisms to integrated compressed medias (image, audio, video, graphics)
- Mechanisms to connect to remote resources such as maps and compressed medias

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 14496-1, *Information technology — Coding of audio-visual objects — Part 1: Systems*

ISO/IEC 14496-3:2009, *Information technology — Coding of audio-visual objects — Part 3: Audio*

ISO/IEC 14496-11:2005, *Information technology — Coding of audio-visual objects — Part 11: Scene description and application engine*

ISO/IEC 14496-16:2011, *Information technology — Coding of audio-visual objects — Part 16: Animation Framework eXtension (AFX)*

ISO/IEC 23005-5:2013, *Information technology — Media context and control — Part 5: Data formats for interaction devices*

ISO/IEC 14772-1:1997, *Information technology — Computer graphics and image processing — The Virtual Reality Modeling Language — Part 1: Functional specification and UTF-8 encoding*

ISO/IEC 10646:2012, *Information technology — Universal Coded Character Set (UCS)*

ISO/IEC 8859-1:1998, *Information technology — 8-bit single-byte coded graphic character sets — Part 1: Latin alphabet No.1*

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