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Information technology — Media context and control —

Part 3: Sensory information

Technologies de l'information — Contrôle et contexte de supports — Partie 3: Information sensorielle

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Contents

Page

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.

ISO/IEC 23005-3 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 23005 consists of the following parts, under the general title *Information technology — Media context and control*:

— *Part 1: Architecture*

— *Part 2: Control information*

— *Part 3: Sensory information*

— *Part 4: Virtual world object characteristics*

— *Part 5: Data formats for interaction devices*

— *Part 6: Common types and tools*

— *Part 7: Conformance and reference software*

Introduction

The usage of multimedia content is becoming omnipresent in our everyday life, in terms of both consumption and production. On the one hand, professional content is provided to the end user in high-definition quality, streamed over heterogeneous networks, and consumed on a variety of different devices. On the other hand, user-generated content overwhelms the Internet with multimedia assets being uploaded to a wide range of available Web sites. That is, the transparent access to multimedia content, which is also referred to as Universal Multimedia Access (UMA), seems to be technically feasible. However, UMA mainly focuses on the end-user devices and network connectivity issues, but it is the user who ultimately consumes the content. Hence, the concept of UMA has been extended to take the user into account, which is generally referred to as Universal Multimedia Experience (UME).

However, the consumption of multimedia assets can also stimulate senses other than vision or hearing, e.g., olfaction, mechanoreception, equilibrioception, or thermoception. That is, in addition to the audio-visual content of, e.g., a movie, other senses shall also be stimulated giving her/him the sensation of being part of the particular media which shall result in a worthwhile, informative user experience.

This motivates the annotation of the media resources with metadata as defined in this part of ISO/IEC 23005, which steers appropriate devices capable of stimulating these other senses.

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

ISO and the IEC take no position concerning the evidence, validity and scope of those patent rights.

The holders of these patent rights have assured ISO and the IEC that they are willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statements of the holders of these patent rights are registered with ISO and the IEC. Information may be obtained from the companies listed in Annex C.

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Information technology — Media context and control —

Part 3:
Sensory information

1 Scope

This part of ISO/IEC 23005 specifies the syntax and semantics of description schemes and descriptors that represent sensory information. Its purpose is to enhance the experience of users while consuming media resources.

The system architecture is depicted in Figure 1 and the scope of this part of ISO/IEC 23005 is highlighted. That is, only the information representation that acts as an input to the possible Adaptation VR, as defined in ISO/IEC 23005-1, is specified in this part of ISO/IEC 23005.

NOTE 1 The actual Adaptation VR is deliberately informative and left open for industry competition.

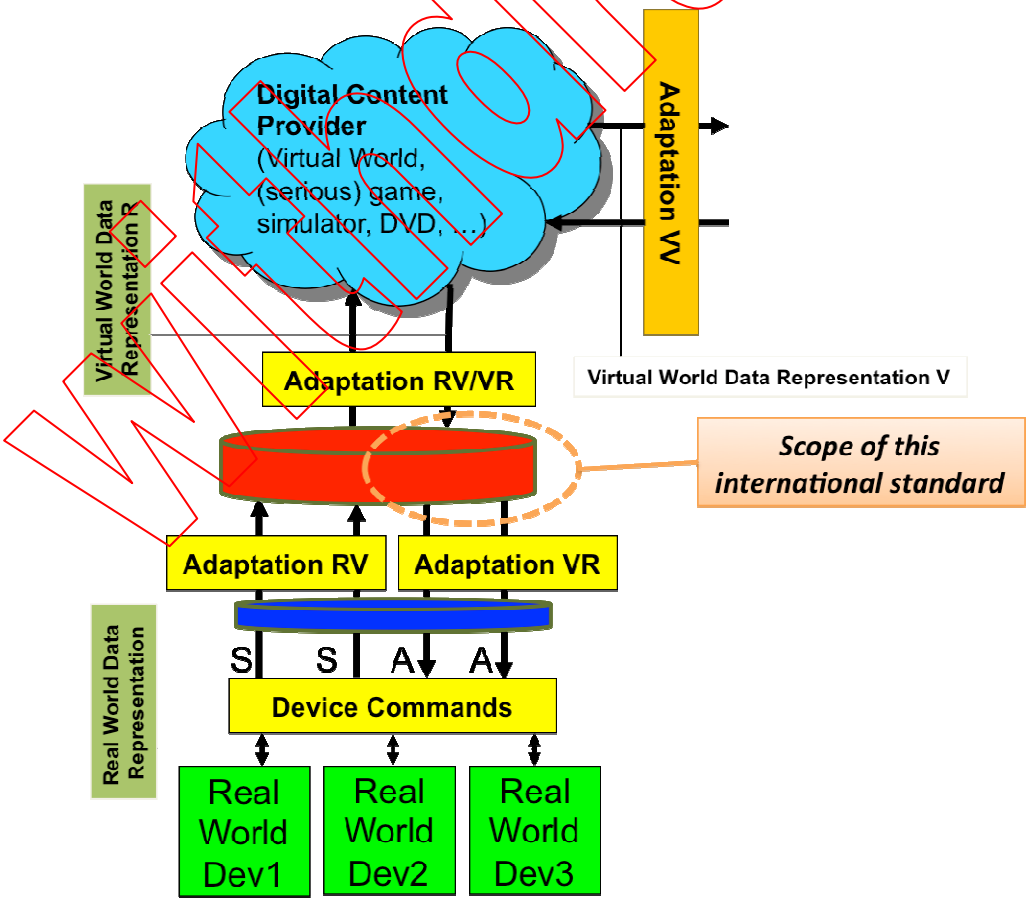

Figure 1 — System Architecture

NOTE 2 Additional informative information can be found in Annex A.

2 Normative references

The following referenced documents are indispensable for the specification 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 15938-5, *Information technology — Multimedia content description interface — Part 5: Multimedia description schemes*

ISO/IEC 21000-7:2007, *Information technology — Multimedia framework (MPEG-21) — Part 7: Digital Item Adaptation*

ISO/IEC 23005 (all parts), *Information technology — Media context and control*

IETF RFC 2045, *Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies*, IETF Request for Comments: 2045, November 1996

IETF RFC 3986, *Uniform Resource Identifier (URI): Generic Syntax*, IETF Request For Comments: 3986, January 2005

W3C XML, *Extensible Markup Language (XML) 1.1, Second Edition*, W3C Recommendation 16 August 2006, edited in place 29 September 2006

W3C XMLSCHEMA, *XML Schema Part 1: Structures and XML Schema*, Second Edition W3C Recommendation, 28 October 2004

W3C XMLSCHEMA, *XML Schema Part 2: Datatypes*, Second Edition W3C Recommendation, 28 October 2004