Australian Standard®

Information technology—Multimedia framework (MPEG-21)

Part 4: Intellectual Property Management and Protection Components

This Australian Standard® was prepared by Committee IT-029, Coded Representation of Picture, Audio and Multimedia/Hypermedia Information. It was approved on behalf of the Council of Standards Australia on 8 August 2006.
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The following are represented on Committee IT-029:

- Australian Broadcasting Authority (ABA)
- Australian Broadcasting Corporation (ABC)
- Australian Consumers Association
- Australian Subscription Television
- CSIRO Mathematical & Information Services
- Department of Defence (Australia)
- Free TV Australia
- School of Computer Science and Mathematics
- Victoria University of Technology
- Special Broadcasting Service (SBS)
- The University of New South Wales
- University of Wollongong

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through public comment period.

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PREFACE

This Standard was prepared by the Standards Australia Committee IT-029, Coded Representation of Picture, Audio and Multimedia/Hypermedia Information.

This Standard is identical with, and has been reproduced from ISO/IEC 21000-4:2006, *Information technology—Multimedia framework (MPEG-21),* Part 4: *Intellectual Property Management and Protection Components (IPMP)*.

The objective of this Standard is to provide the Australian multimedia industry with tools enabling users to provide suggested interactions with digital items to enable the inclusion of a dynamic aspect to static declarations of digital items.

Standards Australia is in the process of adopting most of ISO/IEC 21000 series Standards. Refer to the website for current list.

The terms 'normative' and 'informative' are used to define the application of the annex to which they apply. A normative annex is an integral part of a standard, whereas an informative annex is only for information and guidance.

As this Standard is reproduced from an international standard, the following applies:

(a) Its number appears on the cover and title page while the international standard number appears only on the cover.

(b) In the source text 'this part of ISO/IEC 21000' should read 'this Australian Standard'.

(c) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian Standards, as follows:

Reference to International Standard		*Australian Standard*	
ISO/IEC		AS ISO/IEC	
21000	Information technology—Multimedia framework (MPEG-21)	21000	Information technology—Multimedia framework (MPEG-21)
21000-2	Part 2: Digital Item Declaration	21000.2	Part 2: Digital Item Declaration
21000-3	Part 3: Digital Item Identification	21000.3	Part 3: Digital Item Identification
21000-5	Part 5: Rights Expression Language	21000.5	Part 5: Rights Expression Language
21000-6	Part 6: Rights Data Dictionary	21000.6	Part 6: Rights Data Dictionary
21000-7	Part 7: Digital Item Adaptation	21000.7	Part 7: Digital Item Adaptation
21000-8	Part 8: Reference Software	21000.8	Part 8: Reference Software
21000-9	Part 9: File Format	21000.9	Part 9: File Format
21000-10	Part 10: Digital Item Processing	21000.10	Part 10: Digital Item Processing
21000-16	Part 16: Binary Format	21000.16	Part 16: Binary Format

Only international references that have been adopted as Australian Standards have been listed.

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INTRODUCTION

The appetite of end users for content and the accessibility of information is growing at an incredible pace. Access devices with a wide range of terminal and network capabilities are becoming an integral part of end users' lives; furthermore, these devices are used in different locations and environments. As yet, users are not sufficiently empowered with the necessary tools to deal efficiently with the intricacies of this new multimedia usage environment.

The enabling of "ease of use" is becoming increasingly important as individuals produce more and more digital media for personal use and for sharing among family and friends (as is evidenced by the large number of amateur music, photo and media sharing web sites). These amateur "content providers" have many of the same concerns as commercial content providers, including management of content, re-purposing of content based on consumer/device capabilities, protection of rights, protection from unauthorized access/modification, privacy protection for providers and consumers, etc.

Such developments provide new models for distributing and trading digital content electronically in addition to existing business models for trading physical goods. Such new business models see that the boundaries between the delivery of audio sound (music and spoken word), accompanying artwork (graphics), text (lyrics), video (visual) and synthetic spaces will become increasingly blurred. Indeed, it is becoming more and more difficult to identify the different intellectual property rights that are associated with multimedia content. New solutions are required to manage the access and delivery process of these different content types in an integrated and harmonized way, entirely transparent to the user of multimedia services.

With this motivation, the ISO/IEC 21000 MPEG-21 Multimedia Framework aims to enable the transparent and augmented use of multimedia resources across a wide range of networks and devices. This fourth part of ISO/IEC 21000 aims to address the need for effective management and protection of intellectual property in the Multimedia Framework over heterogeneous access and delivery infrastructures. It specifies components for Intellectual Property Management and Protection (IPMP) applied to Digital Items (see ISO/IEC 21000-2) to facilitate the exchange of governed content between peers.

AUSTRALIAN STANDARD

Information technology — Multimedia framework (MPEG-21) —

Part 4:
Intellectual Property Management and Protection Components

1 Scope

This part of ISO/IEC 21000 specifies how to include IPMP information and protected parts of Digital Items in a DIDL document. It purposely does not specify protection measures, keys, key management, trust management, encryption algorithms, certification infrastructures or other components that would also be needed as part of a complete IPMP solution.

The IPMP DIDL encapsulates and protects a part of the hierarchy of a Digital Item, and associates appropriate identification and protection information with it. The description of IPMP governance and tools is required to satisfy IPMP for a Digital Item or its parts to be accessed.

2 Normative references

The following referenced documents are indispensable for the application 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 21000 (all parts), *Information technology — Multimedia framework (MPEG-21)*

W3C REC-xml-20040204, *Extensible Markup Language (XML) 1.0 (Third Edition)*, W3C Recommendation 4 February 2004, available at <http://www.w3.org/TR/2004/REC-xml-20040204>.

W3C REC-xmlschema-1-20041028, *XML Schema Part 1: Structures Second Edition*, W3C Recommendation 28 October 2004

W3C REC-xmlschema-2-20041028, *XML Schema Part 2: Datatypes Second Edition*, W3C Recommendation 28 October 2004

Canonical XML Version 1.0, W3C Recommendation, 15 March 2001

IETF RFC 3986, Uniform Resource Identifiers (URI): Generic Syntax, January 2005

IETF RFC 2616, *Hypertext Transfer Protocol — HTTP/1.1*, IETF Request for Comments: 2616, June 1999

XMLDSIG, XML-Signature Syntax and Processing, W3C Recommendation, 12 February 2002, available at <http://www.w3.org/TR/2002/REC-xmldsig-core-20020212>.