AS ISO/IEC 15444.12—2004

Australian Standard™

Information technology— JPEG 2000 image coding system

Part 12: ISO base media file format

STANDARDS AUSTRALIA

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 27 October 2004.
This Standard was published on 3 December 2004.

The following are represented on Committee IT-029:

Australian Broadcasting Authority
Australian Broadcasting Corporation
Australian Consumer Association
Australian Subscription Television
CSIRO Information and Communication Technology Centre
DSTC
Department of Defence (Australia)
Free TV Australia
Special Broadcasting Service
The University of New South Wales
University of Sydney
University of Wollongong
Victoria University of Technology

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 04411.

Australian Standard™

Information technology—JPEG 2000 image coding system

Part 12: ISO base media file format

First published as AS ISO/IEC 15444.12-2004.

Published by Standards Australia International Ltd GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 6395 2

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 15444-12:2004, *Information technology—JPEG 2000 image coding system*—Part 12: *ISO base media file format*.

The objective of this Standard is to provide necessary information to the multimedia/graphical developer regarding the implementation and use, local or via a network or other stream delivery mechanism, of the image coding system. It describes the ISO base media file format of the still image coding systems (JPEG 2000).

This Standard is Part 12 of AS ISO/IEC 15444, *Information technology—JPEG 2000 image coding system*, which when published will be available in parts as follows:

Part 1: Core coding system
Part 2: Extensions
Part 4: Conformance testing
Part 6: Compound image file format
Part 12: ISO base media file format (this Standard)

Part 8, 18 and 19 are under development and have not been published by ISO/IEC.

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 International Standard' 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 or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian Standard/New Zealand*	
ISO/IEC		AS/NZS	
14496	Information technology—Coding of audio-visual objects	14496	Information technology—Coding of audio-visual objects
14496-1	Part 1: Systems	14496.1	Part 1: Systems
ISO/IEC		AS	
15444-1	Information technology—JPEG 2000 image coding system—Core coding system	15444.1	Information technology—JPEG 2000 image coding system—Core coding system

Only referenced documents that have been adopted as Australian or Australian/New Zealand Standards have been listed.

CONTENTS

Page

Page

INTRODUCTION

The ISO Base Media File Format is designed to contain timed media information for a presentation in a flexible, extensible format that facilitates interchange, management, editing, and presentation of the media. This presentation may be 'local' to the system containing the presentation, or may be via a network or other stream delivery mechanism.

The file structure is object-oriented; a file can be decomposed into constituent objects very simply, and the structure of the objects inferred directly from their type.

The file format is designed to be independent of any particular network protocol while enabling efficient support for them in general.

The ISO Base Media File Format is a base format for media file formats.

It is intended that the ISO Base Media File Format shall be jointly maintained by WG1 and WG11. Consequently, a subdivision of work created ISO/IEC 15444-12 and ISO/IEC 14496-12 in order to document the ISO Base Media File Format and to facilitate the joint maintenance.

Note well that the ISO Base Media File Format is a superset of the MJ2 File Format and includes tools that are not used in a MJ2 implementation. For example, "hinting" is not a normative part of the MJ2 file format. Please reference 15444-3 for the details of what constitutes a compliant implementation of Motion JPEG 2000.

This technically identical text is published as ISO/IEC 14496-12 for MPEG-4, and as ISO/IEC 15444-12 for JPEG 2000, and reference to this specification should be made accordingly. The recommendation is to reference one, for example ISO/IEC 15444-12, and append to the reference a parenthetical comment identifying the other, for example "(technically identical to ISO/IEC 14496-12)".

NOTES

AUSTRALIAN STANDARD

Information technology — JPEG 2000 image coding system —

Part 12:
ISO base media file format

1 Scope

This International Standard specifies the ISO base media file format, which is a general format forming the basis for a number of other more specific file formats. This format contains the timing, structure, and media information for timed sequences of media data, such as audio/visual presentations.

This part of ISO/IEC 15444 is applicable to JPEG 2000, but its technical content is identical to that of ISO/IEC 14496-12, which is applicable to MPEG-4.

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 639-2:1998, *Codes for the representation of names of languages — Part 2: Alpha-3 code*

ISO/IEC 11578:1996, *Information technology — Open Systems Interconnection — Remote Procedure Call (RPC)*

ISO/IEC 14496-1:2001, *Information technology — Coding of audio-visual objects — Part 1: Systems*[1)]

ITU-T Rec.T.800 | ISO/IEC 15444-1, *Information technology — JPEG 2000 image coding system: Core coding system*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
Box
An object-oriented building block defined by a unique type identifier and length (called 'atom' in some specifications, including the first definition of MP4).

3.2
Chunk
A contiguous set of samples for one track.

3.3
Container Box
A box whose sole purpose is to contain and group a set of related boxes.

1) Refer, in particular, to Clause 14, Syntactic Description Language (SDL).