

ISO/IEC JTC 1/SC 29 N 9422

DATE: 2008-05-14

ISO/IEC JTC 1/SC 29
Coding of Audio, Picture, Multimedia and Hypermedia
Information
Secretariat: [Japan \(JISC\)](#)

DOC. TYPE	Outgoing Liaison Statement	
TITLE	Liaison Statement from SC 29/WG 11 to JTC 1/SC 34/WG 2 on ISO/IEC 14496-4:2004/FPDAM 26: Information technology -- Coding of audio-visual objects -- Part 4: Conformance testing, AMENDMENT 26: Conformance levels and bitstreams for Open Font Format [SC 29/WG 11 N 9867, Attachment: SC 29 N 9459]	
SOURCE	ISO/IEC JTC 1/SC 29/WG 11	
PROJECT		
STATUS	In accordance with Resolution 13.1.1 taken at the 84th SC 29/WG 11 meeting, 2008-04-28/05-02, Archamps, France, the SC 29 Secretariat forwarded this liaison statement to SC 34/WG 2. [Requested action: For SC 29's information]	
ACTION ID	FYI	
DUE DATE		
DISTRIBUTION	P, O and L Members of ISO/IEC JTC 1/SC 29 ; ISO/IEC JTC 1 Secretariat; ISO/IEC ITTF	
ACCESS LEVEL	Def	
ISSUE NO.	951	
FILE	NAME	29n9422c.htm 29n94221.doc
	SIZE (KB)	28.2
	PAGES	2

Secretariat, ISO/IEC JTC 1/SC 29

IPSJ/ITSCJ (Information Processing Society of Japan/Information Technology Standards Commission of Japan)*

Room 308-3, Kikai-Shinko-Kaikan Bldg., 3-5-8, Shiba-Koen, Minato-ku, Tokyo 105-0011 Japan

Telephone: +81-3-3431-2808; Facsimile: +81-3-3431-6493; E-mail: ogura@itscj.ipsj.or.jp

*Standard Organization Accredited by JISC

Liaison Statement from WG 11 to SC 34/WG 2

See the file below:

- File Name: [29n94221.doc](#)
- File format: MS Word 2002
- File size: 28,160 bytes
- Pages: 2

Attachment:

[SC 29 N 9459 \(WG 11 N 9815\)](#): ISO/IEC 14496-4:2004/FDAM 26

**INTERNATIONAL ORGANISATION FOR STANDARDISATION
ORGANISATION INTERNATIONALE DE NORMALISATION
ISO/IEC JTC1/SC29/WG11
CODING OF MOVING PICTURES AND AUDIO**

ISO/IEC JTC 1/SC 29/WG 11 **N9867**

April - May 2008, Archamps, France

Source: **Convenor**
Title: **Liaison Statement to ISO/IEC JTC1/SC 34/WG 2**

WG 11 (MPEG) would like to thank SC 34/WG 2 for reviewing the text of second edition of ISO/IEC 14496-22/CD "Open Font Format" specification and providing us with valuable comments. We will implement the proposed editorial changes as part of the text of second edition of the ISO/IEC FCD 14496-22.

WG 11 would also like to thank SC 34/WG 2 for reviewing the text of ISO/IEC 14496-4:2004/FPDAM 26 "Conformance levels and bitstreams for Open Font Format" specification and providing us with your comments and suggestions.

1. WG 11 would like to clarify that according to our established practices, the conformance requirements are defined only for terminals that claim compliance with the particular standard, and are able to decode and process a properly formatted conformant bitstream. In the context of ISO/IEC 14496-22 standard, only OFF font data object that is properly formatted according to the syntax and semantic requirements of the standard can be considered a conformant bitstream. Any modifications or post-processing of a font object that have been applied (e.g. for the purpose of embedding that font object as part of electronic document, such as embedded TrueType data in PDF and/or PCL, etc.) would no longer result in a compliant OFF font object, and, therefore, are not considered to be in scope of ISO/IEC 14496-22 and related conformance requirements. A terminal that is only capable of supporting a limited subset of OFF tables (for example, a standalone CFF rasterizer) is also considered to be out of scope of ISO/IEC 14496-22 and cannot be treated as a compliant implementation of the standard.

2. We would like to point out that due to the complex and extremely flexible nature of OFF data structures it would be impractical and, in some cases, even impossible to strictly define multiple different levels for each variation of data structures or information encoded in OFF tables. Our intention is to ensure the flexibility of OFF to support various configurations of different optional tables and features on multiple different host platforms. For this reason, we intentionally defined OFF conformance levels without explicitly specifying or mandating support for particular host platforms. It is our intention to insure that compliant devices supporting the same functional levels can be built on multiple host platforms. It is also our intention to allow open source implementations be compliant with OFF standard – this was the main reason for separation of OFF conformance levels 1 and 2.

3. WG 11 clarified the conformance requirements related to OFF font data that may be compressed using the technology defined by ISO/IEC 14496-18 specification. We extended the document by separating compressed font conformance requirements in dedicated subclause. Please note that bit 11 in 'head' table flags' entry does not indicate that a font is compressed – it only indicates that a font has been compressed and then decompressed using ISO/IEC 14496-18 compression, which usually results in producing a functionally equivalent font that will not always be identical to original binary font data.

Enclosed:

WG 11 N 9815: Text of ISO/IEC 14496-4:2004/FDAM 26 "Conformance levels and bitstreams for Open Font Format"

ISO/IEC JTC 1/SC 29 N 9459

DATE: 2008-05-14

ISO/IEC JTC 1/SC 29
Coding of Audio, Picture, Multimedia and Hypermedia
Information
Secretariat: [Japan \(JISC\)](#)

DOC. TYPE	Text of FDAM ballot	
TITLE	Text of ISO/IEC 14496-4:2004/FDAM 26: Information technology -- Coding of audio-visual objects -- Part 4: Conformance testing, AMENDMENT 26: Conformance levels and bitstreams for Open Font Format [SC 29/WG 11 N 9815]	
SOURCE	ISO/IEC JTC 1/SC 29/WG 11	
PROJECT	JTC 1.29.13.14.026 (14496-4/AMD26)	
STATUS	In accordance with Resolution 3.4.1 taken at the 84th SC 29/WG 11 meeting, 2008-04-28/05-02, Archamps, France, the SC 29 Secretariat submitted this text to the ITTF for FDAM ballot. [Requested action: For SC 29's information]	
ACTION ID	FYI	
DUE DATE		
DISTRIBUTION	P, O and L Members of ISO/IEC JTC 1/SC 29 ; ISO/IEC JTC 1 Secretariat; ISO/IEC ITTF	
ACCESS LEVEL	Def	
ISSUE NO.	951	
FILE	NAME	
	SIZE	
	(KB)	
	PAGES	
	29n9459c.htm 29n9459t.pdf 29n9459att.zip	
	95.2 518.6	
	8	

Secretariat, ISO/IEC JTC 1/SC 29

IPSCJ/ITSCJ (Information Processing Society of Japan/Information Technology Standards Commission of Japan)*

Room 308-3, Kikai-Shinko-Kaikan Bldg., 3-5-8, Shiba-Koen, Minato-ku, Tokyo 105-0011 Japan

Telephone: +81-3-3431-2808; Facsimile: +81-3-3431-6493; E-mail: ogura@itscj.ipsj.or.jp

*Standard Organization Accredited by JISC

EXPLANATORY REPORT	ISO/IEC 14496-4:2004/FDAM 26
ISO/IEC JTC 1/SC 29 N 9459	

Will supersede: SC 29 N 8855

Secretariat: Japan (JISC)

This form should be sent to ITTF, together with the committee draft, by the secretariat of the joint technical committee or sub-committee concerned.

The accompanying document is submitted for circulation to member body vote as a FDAM, following consensus of the P-members of the committee obtained on:

2008-02-28

- ___ at the DATE, LOCATION meeting of ISO/IEC JTC 1/SC 29 (See resolution number ___ in document SC 29 N ___)
- X by postal ballot initiated on: 2007-10-29

P-members in favour: Australia, Canada, China, Finland, France, Italy, Japan, Rep. of Korea, Norway, Poland, Singapore, Spain, Sweden, Switzerland, Ukraine (15)

P-members voting against: USA (1)

P-members abstaining: Denmark, Germany, Morocco, Netherlands, UK (5)

P-members who did not vote: Belgium, Brazil, Czech Republic, India, Israel, Luxembourg, Portugal (7)

Remarks:

Approval of Project

In accordance with Resolution 4.3.1 taken at the 80th SC 29/WG 11 meeting, 2007-04-23/27, San Jose, USA (ref. [SC 29 N 8386](#)), WG 11 requested for approval of this project as a minor enhancement (ref. [SC 29 N 8387](#)), and SC 29 approved the proposal (ref. [SC 29 N 8406](#)).

PDAM Registration and PDAM Consideration

In accordance with Resolution 4.3.1 taken at the 80th SC 29/WG 11 meeting, 2007-04-23/27, San Jose, USA (ref. [SC 29 N 8386](#)), the SC 29 Secretariat issued the combined PDAM registration and PDAM consideration ballot (closing date: 2007-08-29). The result of the ballot on the PDAM registration is: Approval (15), Disapproval (0), Abstention (7), no vote (6), and PDAM consideration: Approval (15), Disapproval (0), Abstention (7), no vote (6) (ref. [SC 29 N 8738](#)). The Disposition of Comments report was not prepared.

FPDAM

In accordance with Resolution 3.4.1 taken at the 82nd SC 29/WG 11 meeting, 2007-10-22/26, Shenzhen, China (ref. [SC 29 N 8852](#)), the SC 29 Secretariat issued FPDAM ballot on 2007-10-29 (closing date: 2008-02-28). The result of the ballot is indicated above (ref. [SC 29 N 9233](#)). The Disposition of Comments report is in [SC 29 N 9458](#).

FDAM

In accordance with Resolution 3.4.1 taken at the 84th SC 29/WG 11 meeting, 2008-04-28/05-02, Archamps, France (ref. [SC 29 N 9371](#)), the SC 29 Secretariat submitted the accompanying text to the ITTF for FDAM ballot.

Ballot text: [29n9459t.pdf](#) (95,225 bytes)

Electronic attachments: [29n9459att.zip](#)

JTC 1.29.13.14.026 (14496-4/AMD26)

I hereby confirm that this draft meets the requirements of part 2 of the ISO/IEC Directives

Date: 2008-05-13

Name and signature of secretary: Yukiko Ogura (ogura@itscj.ipsj.or.jp)

ISO/IEC JTC 1/SC 29

Date: 2008-05-02

ISO/IEC 14496-4:2004/FDAM 26:2008(E)

ISO/IEC JTC 1/SC 29/WG 11

Secretariat:

**Information technology — Coding of audio-visual objects — Part 4:
Conformance testing, AMENDMENT 26: Conformance levels and
bitstreams for Open Font Format**

Élément introductif — Élément central — Partie 4: Titre de la partie

Document type: International Standard
Document subtype: Amendment
Document stage: (50) Approval
Document language: E

STD Version 2.1

Copyright notice

This ISO document is a Draft International Standard and is copyright-protected by ISO. Except as permitted under the applicable laws of the user's country, neither this ISO draft nor any extract from it may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission being secured.

Requests for permission to reproduce should be addressed to either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Reproduction may be subject to royalty payments or a licensing agreement.

Violators may be prosecuted.

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.

Amendment 26 to ISO/IEC 14496-4:2004 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information Technology*, Subcommittee SC 29, *Coding of Audio, Picture, Multimedia and Hypermedia Information*.

This Amendment defines the conformance test procedures for implementations compliant with ISO/IEC 14496-22 "Open Font Format" and ISO/IEC 14496-18 "Font compression and streaming".

Information technology — Coding of audio-visual objects — Part 4: Conformance testing, AMENDMENT 26: Conformance levels and bitstreams for Open Font Format

Create a new Subclause 4.16 “Open Font Format” and add the following text:

4.16 Font data conformance

4.16.1 Font data conformance levels

4.16.1.1 Open Font conformance levels

ISO/IEC 14496-22 “Open Font Format” (OFF) defines an extensible mechanism for font data representation that is based on the industry standard OpenType®¹ font format. The standard allows representation of font data with outline information encoded in one of the two basic formats – with TrueType™² outlines, and with outlines encoded using Compact Font Format (CFF, a compressed representation of Adobe PostScript®³ Type 1 fonts) developed by Adobe Systems Incorporated.

Font data may be represented using collections of tables, which include a set of required tables, a set of tables that are related to TrueType outlines, a set of tables that are related to CFF outlines, and a set of relevant optional tables, e.g. the tables that support advanced typographic features and advanced text layout for complex scripts. The five different OFF conformance levels are defined, which correspond to the following functionality of fonts:

- 1) Fonts that contain only required tables and the subset of tables related to TrueType outlines with no hints (i.e. unhinted TrueType outlines only). Conformance at this level shall be claimed if the following set of tables is supported: ‘cmap’, ‘head’, ‘hhea’, ‘hmtx’, ‘maxp’, ‘name’, ‘OS/2’, ‘post’, ‘loca’ and ‘glyf’ (where hint instructions that may be part of glyph outline data should be ignored).
- 2) Fonts that contain only required tables and the full set of tables related to TrueType outlines (including TrueType hints). Conformance at this level shall be claimed only if the following set of tables is supported: ‘cmap’, ‘head’, ‘hhea’, ‘hmtx’, ‘maxp’, ‘name’, ‘OS/2’, ‘post’, ‘cvt’, ‘fpgm’, ‘prep’, ‘loca’ and ‘glyf’.
- 3) Fonts that contain only required tables and the tables related to CFF outlines. Conformance at this level shall be claimed if the following set of tables is supported: ‘cmap’, ‘head’, ‘hhea’, ‘hmtx’, ‘maxp’, ‘name’, ‘OS/2’, ‘post’, ‘CFF’ and ‘VORG’. Please note that this level may include OFF TTC fonts with CFF outlines, however, support for TTC font collections is not required for terminals claiming compliance at this level.
- 4) Fonts supporting embedded bitmaps. Conformance at this level shall be claimed if a font supports any of the previously identified subsets of tables (Levels 1 – 3), plus the tables related to bitmap glyphs ‘EBDT’, ‘EBLC’ and ‘EBSC’.
- 5) Fonts supporting complex languages scripts. Conformance at this level shall be claimed if a font supports any of the previously identified subsets of tables (Levels 1 – 3), plus additional optional advanced typographic tables: ‘BASE’, ‘GDEF’, ‘GPOS’, ‘GSUB’ and ‘JSTF’.

¹ OpenType is a registered trademark of Microsoft Corporation.

² TrueType is a trademark of Apple Inc.

³ PostScript is a registered trademark of Adobe Systems Incorporated.

4.16.1.2 Font compression and streaming conformance levels

Clause 6 of ISO/IEC 14496-18 defines MPEG-4 Text profiles and levels. Simple and Advanced Simple text profiles limit font capabilities to using fonts with TrueType outlines only, while Main text profile provides for full-featured font data supporting either TrueType or CFF outlines.

MPEG terminals that claim compliance with Simple text profile SHALL be able to render OFF font data conformant to Level 1 defined in 4.16.1.1. MPEG terminals claim compliance with Advanced Simple text profile SHALL be able to render OFF font data conformant to Levels 1, 2 and 4. MPEG terminals that claim compliance to Main text profile SHALL be able to render OFF font data conformant with all four OFF conformance levels.

In addition to three different text profiles, ISO/IEC 14496-18 also defines different levels of text profile. In each Text Profile, Level 1 supports rendering of resident fonts only presented in OFF, while Level 2 and Level 3 provide additional support for streaming of uncompressed and compressed font data, correspondingly, in the format defined in Clause 5 of ISO/IEC 14496-18.

4.16.2 Bitstream conformance

4.16.2.1 Conformance requirements

Each font data bitstream shall comply with the syntactic and semantic requirements specified in ISO/IEC 14496-22 and ISO/IEC 14496-18 (where applicable).

4.16.2.2 Tolerance

There is no tolerance for bitstream syntax checking. The diagnosis is pass or fail.

4.16.3 Terminal conformance

4.16.3.1 Conformance requirements

This Subclause defines procedures to verify conformance of terminals. Each decoder that claims compliance to one of the conformance levels specified in 4.16.1 shall be able to decode all required and optional tables that are relevant to that conformance level.

4.16.3.2 Conformance test procedure

Tests are performed using error free input test sequences (bitstreams). Terminals shall test and verify the presence of necessary font tables and the validity of data within those tables. Should a test bitstream contain any additional (optional) tables that are not covered by the specific conformance level, the table should be ignored for the purpose of terminal conformance testing.

4.16.4 Test sequences

This paragraph describes the test sequences to be used for terminal conformance testing.

Table AMD26.1 – OFF Test Suite Information

Bitstream name	Number of glyphs	Character set	Supported tables	Conformance levels
courier_min.ttf	94	Latin 1 (partial subset)	OS/2 cmap glyf head hhea hmtx	This bitstream shall be used for terminal conformance tests of Open Font solutions at OFF level 1: Unhinted TrueType outlines only.

			loca maxp name post	
courier_complex.ttf	1127	Latin 1 Latin 1 supplement Latin Ext. A Greek Cyrillic Hebrew Arabic Arabic Presentation Forms A Arabic Presentation Forms B (partial subsets)	EBDT EBLC GDEF GSUB OS/2 VDMX cmap cvt fpgm gasp glyf head hhea hmtx loca maxp name post prep	This bitstream shall be used for terminal conformance tests of Open Font solutions at OFF levels 2, 4 and 5: Hinted TrueType outlines and advanced typographic features (tables related to advanced typographic features shall be ignored when testing OFF level 2 and OFF level 4 compliance).
courier_cff.otf	94	Latin 1 (partial subset)	CFF OS/2 cmap head hhea hmtx	This bitstream shall be used for terminal conformance tests of Open Font solutions at OFF level 3: CFF outlines only.

			maxp	
			name	
			post	

Table AMD26.2 –Test Suite Information for MPEG-4 Text profiles

Bitstream name	Name of the font file encoded within the bitstream	Content description and relevant conformance levels
courier_min_ttf.mp4	courier_min.ttf	This bitstream contains uncompressed font with TrueType outlines and shall be used for conformance testing of MPEG terminals claiming compliance to Simple, Advanced Simple and Main text profiles at Levels 2 and 3.
courier_min_cmp.mp4	courier_min.ttf	This bitstream contains compressed font with TrueType outlines (only 'glyf' table has been compressed) and shall be used for conformance testing of MPEG terminals claiming compliance to Simple, Advanced Simple and Main text profiles at Level 3.
courier_complex_ttf.mp4	courier_complex.ttf	This bitstream contains uncompressed font with TrueType outlines and shall be used for conformance testing of MPEG terminals claiming compliance to Advanced Simple and Main text profile at Levels 2 and 3.
courier_complex_cmp.mp4	courier_complex.ttf	This bitstream contains compressed font with TrueType outlines (only 'glyf' table has been compressed) and shall be used for conformance testing of MPEG terminals claiming compliance to Advanced Simple and Main text profile at Level 3.
courier_cff.mp4	courier_cff.otf	This bitstream contains uncompressed font with CFF outlines and shall be used for conformance testing of MPEG terminals claiming compliance to Main text profile at Levels 2 and 3.

NOTE The conformance testing of MPEG terminals claiming compliance to Level 1 of corresponding Text profiles should be done using the original font files defined in **Table AMD26.1**.