FINAL
DRAFT

AMENDMENT

ISO/IEC 14496-2:2004 FDAM 5

ISO/IEC JTC **1**

Secretariat: **ANSI**

Voting begins on:
2009-03-13

Voting terminates on:
2009-05-13

Information technology — Coding of audio-visual objects —

Part 2: **Visual**

AMENDMENT 5: Simple studio profile levels 5 and 6

Technologies de l'information — Codage des objets audiovisuels —

Partie 2: Codage visuel

AMENDEMENT 5: Niveaux 5 et 6 de profil de studio simple

Please see the administrative notes on page iii

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

Reference number
ISO/IEC 14496-2:2004/FDAM 5:2009(E)

© ISO/IEC 2009

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS

Not for Resale

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

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.

© ISO/IEC 2009 – All rights reserved

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

In accordance with the provisions of Council Resolution 21/1986, this document is **circulated in the English language only**.

--`,,```,,,,````-`-`,,`,,`,`,,`---

© ISO/IEC 2009 – All rights reserved

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

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 5 to ISO/IEC 14496-2:2004 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 specifies two new Levels for the ISO/IEC 14496-2 Simple Studio Profile: Levels 5 and 6. These levels define increased capabilities of VMV size, VCV buffer size, VCV decoder rate, VBV buffer size, and bit rate for the Simple Studio Profile. In particular, Level 5 provides support for typical visual session sizes of 4Kx2K@24p/30p in rectangular-VOP luminance sample units. Level 6 provides support for typical visual session sizes of 4Kx2K@60p in rectangular-VOP luminance sample units.

© ISO/IEC 2009 – All rights reserved
Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

Information technology — Coding of audio-visual objects —

Part 2:
Visual

AMENDMENT 5: Simple studio profile levels 5 and 6

In 5.2.9, replace:

while (nextbits() != '0000 0000 0000 0000 0000 0001')		

with:

while (next_bits() != '0000 0000 0000 0000 0000 0001')		

In 6.2.8.14, replace:

while (nextbits() == texture_shape_layer_start_code) {		

with:

while (next_bits() == texture_shape_layer_start_code) {		

In 6.2.13.2.1, replace:

else if (nextbits() == "VLC Code Extension ID")		

with:

else if (next_bits() == "VLC Code Extension ID")		

In 6.2.13.2.1, replace:

if (nextbits() == "Quant Matrix Extension ID")		

with:

if (next_bits() == "Quant Matrix Extension ID")		

© ISO/IEC 2009 – All rights reserved

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

In 6.2.13.2.1, replace:

else if (nextbits() == “Copyright Extension ID”)		

with:

else if (next_bits() == “Copyright Extension ID”)		

In 6.2.13.2.1, replace:

else if (nextbits() == “Picture Display Extension ID”)		

with:

else if (next_bits() == “Picture Display Extension ID”)		

In 6.2.13.2.1, replace:

else if(nextbits() == “Camera Prameters Extension ID”)		

with:

else if(next_bits() == “Camera Parameters Extension ID”)		

In 6.2.13.2.1, replace:

else if (nextbits() == “ITU-T Extension ID”)		

with:

else if (next_bits() == “ITU-T Extension ID”)		

In 6.2.13.2.1, replace:

else if (nextbits() == “VLC Code Extension ID”)		

with:

else if (next_bits() == “VLC Code Extension ID”)		

© ISO/IEC 2009 – All rights reserved
Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

In 6.2.13.2.8, replace:

while (nextbits() != '0000 0000 0000 0000 0000 0001') {		

with:

while (next_bits() != '0000 0000 0000 0000 0000 0001') {		

In 6.2.13.5, replace:

while (nextbits() == ‘1’) {		

with:

while (next_bits() == ‘1’) {		

In 6.2.13.5, replace:

} while (nextbits() == slice_start_code)		

with:

} while (next_bits() == slice_start_code)		

In 6.2.13.7, replace:

macroblock_number	1-14	vlclbf

with:

macroblock_number	1-16	vlclbf

In 6.2.13.7, replace:

if (nextbits() == 1) {		

with:

if (next_bits() == ‘1’) {		

--`,,```,,,,````-`-`,,`,,`,`,,`---

© ISO/IEC 2009 – All rights reserved

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

In 6.2.13.7, replace:

while (nextbits() == 1) {		

with:

while (next_bits() == '1') {		

In 6.3.13.17, replace:

macroblock_number: This is a variable length code with length between 1 and 14 bits. It identifies the macroblock number within a VOP. The number of the top-left macroblock in a VOP shall be zero. The macroblock number increases from left to right and from top to bottom. The actual length of the code depends on the total number of macroblocks in the VOP calculated according to Table 6-99, the code itself is a binary representation of the macroblock number.

with:

macroblock_number: This is a variable length code with length between 1 and 16 bits. It identifies the macroblock number within a VOP. The value zero indicates the top-left macroblock in a VOP. The macroblock number increases from left to right and from top to bottom. The actual length of the code depends on the total number of macroblocks in the VOP calculated according to Table 6-99, the code itself is a binary representation of the macroblock number.

In 6.3.13.17, add the following row at the bottom of Table 6-99:

16	32769-65536

In Table G.1, after the following row,

Core Studio Profile/Level 4	11101000

Add the following rows:

Reserved	11101001 – 11101010
Simple Studio Profile/Level 5	11101011
Simple Studio Profile/Level 6	11101100

In Table G.1, replace:

Reserved	11101001 – 11101111

with:

Reserved	11101101 – 11101111

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
© ISO/IEC 2009 – All rights reserved
Not for Resale

In Table N.3, add the following rows:

Simple Studio	L6	4Kx2Kx60P :444	12	1	1 x Simple Studio	5308 4160	53084 160	159252 4800	159252 4800	11520	11520	N.A	N.A	N.A	3600	N.A
Simple Studio	L5	4Kx2Kx24P :444 4Kx2Kx30P :444	12	1	1 x Simple Studio	2654 2080	26542 080	796262 400	796262 400	5760	5760	N.A	N.A	N.A	1800	N.A

© ISO/IEC 2009 – All rights reserved

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

ICS 35.040

Price based on 5 pages

© ISO/IEC 2009 – All rights reserved
Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale