
**Information technology — Generic
coding of moving pictures and
associated audio information —**

**Part 7:
Advanced Audio Coding (AAC)**

**AMENDMENT 1: Embedding of bandwidth
extension**

*Technologies de l'information — Codage générique des images
animées et du son associé —*

Partie 7: Codage du son avancé (AAC)

AMENDEMENT 1: Scellement d'extension de largeur de bande

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.

© ISO/IEC 2004

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from 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

Published in Switzerland

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 1 to ISO/IEC 13818-7:2003 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

Information technology — Generic coding of moving pictures and associated audio information —

Part 7: Advanced Audio Coding (AAC)

AMENDMENT 1: Embedding of bandwidth extension

Page 8, Clause 2

Add the following normative reference:

“ISO/IEC 14496-3:2001/Amd.1, *Information technology — Coding of audio-visual objects — Part 3: Audio — Amendment 1: Bandwidth extension*”

Page 31, subclause 6.3

Replace Table 28 with the following:

Table 28 — Syntax of extension_payload()

extension_payload(cnt)		
{		
extension_type;	4	uimbsf
switch (extension_type) {		
case EXT_DYNAMIC_RANGE:		
n = dynamic_range_info();		
return n;		
case EXT_SBR_DATA:		
return sbr_extension_data(id_aac, 0);		NOTE 1
case EXT_SBR_DATA_CRC:		
return sbr_extension_data(id_aac, 1);		NOTE 1
case EXT_FILL_DATA:		
fill_nibble; /* must be '0000' */	4	uimbsf
for (i = 0; i < cnt-1; i++)		
fill_byte[i]; /* must be '10100101' */	8	uimbsf
return cnt;		
case default:		
for (i = 0; i < 8*(cnt-1)+4; i++)		
other_bits[i];	1	uimbsf
return cnt;		
}		
}		

NOTE 1 id_aac is the id_syn_ele of the corresponding AAC element (ID_SCE or ID_CPE) or ID_SCE in case of CCE.

Page 58, subclause 8.7.3

Replace Table 41 with the following:

Table 41 — Values of the extension_type data element

Symbol	Value of extension_type	Purpose
EXT_FILL	'0000'	Bitstream filler
EXT_FILL_DATA	'0001'	Bitstream data as filler
EXT_DYNAMIC_RANGE	'1011'	Dynamic range control
EXT_SBR_DATA	'1101'	SBR enhancement
EXT_SBR_DATA_CRC	'1110'	SBR enhancement with CRC
-	all other values	reserved

Page 60

Add the following subclause after subclause 8.7.4:

8.7.5 Bandwidth Extension (SBR)

Fill elements containing an extension_payload with an extension_type of EXT_SBR_DATA or EXT_SBR_DATA_CRC are reserved for SBR enhancement data. In this case, the fill_element count field must be set equal to the total length in bytes, including the SBR enhancement data plus the extension_type field.

sbr_extension_data() and the decoding process are defined in ISO/IEC 14496-3:2001/Amd.1.

The SBR fill elements shall be handled according to ISO/IEC 14496-3:2001/Amd.1, subclause 4.5.2.8.2.2 "SBR Extension Payload for the Audio Object Types AAC main, AAC SSR, AAC LC and AAC LTP". The signaling of SBR shall be done implicitly as outlined in ISO/IEC 14496-3:2001/Amd.1, subclause 1.6.5.