TECHNICAL REPORT ISO/IEC TR 13818-5:1997/Amd.1:1999
TECHNICAL CORRIGENDUM 1

Published 2003-11-01

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

Part 5:
Software simulation

AMENDMENT 1: Advanced Audio Coding (AAC)

TECHNICAL CORRIGENDUM 1

Technologies de l'information — Codage générique des images animées et des informations sonores associées —

Partie 5: Simulation de logiciel

AMENDEMENT 1: Codage audio avancé (AAC)

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO/IEC TR 13818-5:1997/Amd.1:1999 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

ICS 35.040

Ref. No. ISO/IEC TR 13818-5:1997/Amd.1:1999/Cor.1:2003(E)

Published in Switzerland

Replace items 2), 3), 4) and 5) with

"

2) Replace all of Clause 5 (Audio simulation) with:

"

5   Audio simulation

5.1   Layer 1, Layer 2 and Layer 3

This technical report contains the implementation of an ISO/IEC 13818-3 codec. The components of the audio codec software (distribution 10) are:

- full layer 2 multichannel decoder

- near-full layer 2 multichannel encoder (omits prediction with non-zero delay)

- full layers 1-3 low-sampling frequency encoder and decoder

More details are listed in the Tables 5-1 and 5-2.

5.1.1   Verification of the simulation software

All features which are supported by the multichannel and low sampling frequency encoders have been tested against the decoders for internal consistency.

Where possible, the test criterion was comparison of the decoder output with an external decoder, otherwise by informal listening in an audio test environment. The decoder was deemed to have passed when the decoded PCM samples differed from the reference output by at most one LSB.

Table 5-1: Summary of audio simulation features for low bitrate coding of multichannel audio

Feature	Encoder	Decoder
layer 1	no	no
layer 2	yes	yes
bit rates	all	all
sample rates	32, 44.1, 48 16, 22.05, 24	32, 44.1, 48 16, 22.05, 24
psychoacoustic model	1	not applicable
multilingual/commentary channels	yes	yes
lower sampling frequency commentary channels	yes	yes
low frequency enhancement channel	yes	yes
channel configurations	3/2, 3/1, 2/0, 2/1, 3+2, 2+2, 2/0, 1/0, 1+1	3/2, 3/1, 3/0, 2/1, 3+2, 2+2, 2/0, 1/0, 1+1
transmission channel allocations	0-7	0-7
dematrix procedures	0-3	0-3
dynamic crosstalk	yes	yes
prediction	non-zero delay	yes
phantom coding of centre channel	yes	yes
extension bitstream	yes	yes
ancillary data	yes	yes
CRC	yes	yes
predistortion	yes	not applicable
layer 3	no	no
compilation environment	Unix	Unix

Table 5-2: Summary of audio simulation features for extension to lower sampling frequencies

Feature	Encoder	Decoder
layers	1,2,3	1,2,3
bit rates	all	all
sample rates	16, 22.05, 24, 32, 44.1, 48	16, 22.05, 24, 32, 44.1, 48
psychoacoustic model	1	not applicable
channel configurations	2/0, 1/0, 1+1	2/0, 1/0, 1+1
joint stereo	yes	yes
ancillary data	no	no
CRC	yes	yes
compilation environment	Unix	Unix

5.1.2 Software listings

The ISO/IEC TR 13818-5 software for layer 1, layer 2 and layer 3 is included in electronic format with this document as dist10.tar.gz. It consists of the following parts:

- documentation

- low sampling frequency encoder

- low sampling frequency decoder

- multichannel encoder

- multichannel decoder

- tools

5.2 AAC

This technical report contains the implementation of an ISO/IEC 13818-7 codec. The ISO/IEC TR 13818-5 software for AAC is included in electronic format with this document as aac.tgz. It consists of the following parts:

- documentation

- aac encoder

- aac decoder

- conformance test tool

"

3) In Annex A, replace

"

This technical report contains C source code for Systems, Video and Audio codec on three floppy diskettes. They consists of the following tree of files:

Diskette 1 of 3   (number of files)

    /systems   (2 readme files)
       /src   (59, including 4 bitstreams)
    /video   (1 readme file)
       /doc   (3)
       /decoder   (28, including 1 bitstream)
       /encoder   (24)
       /par   (5)

Diskette 2 of 3

    /audio   (1 readme file)
       /doc   (12)
       /lsf   /decoder   (17)
          /tables   (35)
          /encoder   (34)
          /tables   (37)

Diskette 3 of 3

    /audio
       /mc   /decoder   (6)
           /tables   (21)
         /encoder   (13)
           /tables   (21)
       /tool   /pcm2aiff (3)

"

with

"

This technical report contains C source code for Systems, Video and Audio codec on three floppy diskettes. They consist of the following tree of files:

Diskette 1 of 3   (number of files)

    /systems   (2 readme files)

        /src   (59, including 4 bitstreams)

    /video   (1 readme file)

        /doc   (3)

        /decoder   (28, including 1 bitstream)

        /encoder   (24)

        /par   (5)

Diskette 2 of 3

        /audio/dist10.tar.gz

Diskette 3 of 3

        /audio/aac.tar.gz

"

4) Replace the content of Annex B (List of Patent holders) with the following:

"

The International Organization for Standardization and the International Electrotechnical Commission (IEC) draw attention to the fact that it is claimed that compliance with this part of ISO/IEC 13818 may involve the use of patents.

ISO and IEC take no position concerning the evidence, validity and scope of these patent rights.

The holders of these patent rights have assured the ISO and IEC that they are willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statements of the holders of these patent rights are registered with ISO and IEC. Information may be obtained from the companies listed in Table B-1.

Attention is drawn to the possibility that some of the elements of this part of ISO/IEC 13818 may be the subject of patent rights other than those identified in this annex. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Table B-1 – Companies who supplied patent statements

AT&T
BBC Research Department
Belgian Science Policy Office
Bellcore
BOSCH
CCETT (on behalf of France Telecom and TDF)
Columbia University in the City of New York
Compression Labs, Inc.
CSELT

David Sarnoff Research Center
Deutsche Thomson-Brandt GmbH
Dolby Laboratories
France Telecom S.A.
Fraunhofer Gesellschaft
Fujitsu Limited
GC Technology Corporation
GCL
General Instruments
Goldstar Co., Ltd.
Hitachi, Ltd.
International Business Machines Corporation
IRT
KDD Co., Ltd.
Lucent Technologies
Massachusetts Institute of Technology
Matsushita Electric Industrial Co., Ltd.
Mitsubishi Electric Corporation
National Transcommunications Limited
NEC Corporation
Nippon Hoso Kyokai
Nippon Telegraph and Telephone Corporation
Nokia Corporation
Norwegian Telecom
OKI Electric Industry Co., Ltd.
Philips Electronics N.V.
Qualcomm Incorporated
Royal PTT Nederland N.V., PTT Research (NL)
Samsung Electronics Co., Ltd.
Scientific-Atlanta, Inc.
Sharp Corporation
Siemens AG
Sony Corporation
Texas Instruments Incorporated
Thomson
Toshiba Corporation
TV/COM International
Victor Company of Japan Limited

5) Replace the content of diskette 2 with the file dist10.tar.gz

6) Replace the content of diskette 3 with the file aac.tgz

".

7