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

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION
INTERNATIONAL ELECTROTECHNICAL COMMISSION • МЕЖДУНАРОДНАЯ ЭЛЕКТРОТЕХНИЧЕСКАЯ КОМИССИЯ • COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

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

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

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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

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3) In Annex A, replace

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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)

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with

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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: