



## Information technology — Multimedia application format (MPEG-A)

### Part 9: Digital Multimedia Broadcasting application format

AMENDMENT 1: Conformance and reference software

TECHNICAL CORRIGENDUM 2

*Technologies de l'information — Format pour application multimédia (MPEG-A)*

*Partie 9: Format pour application de diffusion générale multimédia numérique*

*AMENDEMENT 1: Logiciel de référence et conformité*

*RECTIFICATIF TECHNIQUE 2*

Technical Corrigendum 2 to ISO/IEC 23000-9:2008/Amd.1:2010 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

*Replace the conformance files and the reference software attached to ISO/IEC 23000-9:2008/Amd.1:2010 or ISO/IEC 23000-9:2008/Amd.1:2010/Cor.1:2011 with the corresponding ones attached to this document.*

*In 8.5, replace the description tables for the conformance files 02, 04, 06, 09, 10 and 13 with the following:*

In 8.5 of ISO/IEC 23000-9:2008/Amd.1:2010

|                               |                                       |                                                                                                                            |
|-------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>File name</b>              |                                       | <b>02_T-DMB-1_AV_r1.dmb</b>                                                                                                |
| Description                   |                                       | the same as file '01'                                                                                                      |
| Major brand                   |                                       | dv1b                                                                                                                       |
| Compatible brands             |                                       | dmb1, dv1a, avc1, mp42                                                                                                     |
| Components<br>Inside the file | AVC, ER-BSAC                          | - each stream is stored as separate track<br>- AVC as AVCSampleEntry('avc1')<br>- ER-BSAC as MP4AudioSampleEntry('mp4a')   |
|                               | A DID XML<br>(containing TVA and REL) | - a TVA for content description and segment information<br>- a REL for defining a simple license                           |
|                               | 14 JPEG images related to TVA         | - each image is stored as an item<br>- a program title image<br>- a segment group title image<br>- 12 segment title images |

In ISO/IEC 23000-9:2008/Amd.1:2010/Cor.1:2011

|                               |                                           |                                                                                                                                                                                                                                                                                            |
|-------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>File name</b>              |                                           | <b>04_T-DMB-1_BIFS(ES)_r2.dmb</b>                                                                                                                                                                                                                                                          |
| Description                   |                                           | a golf program with BIFS in a separate track                                                                                                                                                                                                                                               |
| Major brand                   |                                           | dv1a                                                                                                                                                                                                                                                                                       |
| Compatible brands             |                                           | dmb1, dv1b, avc1, mp42                                                                                                                                                                                                                                                                     |
| Components<br>Inside the file | AVC, ER-BSAC, OD, BIFS and<br>JPEG images | - each stream is stored as a separate track<br>- AVC as MP4VisualSampleEntry('mp4v')<br>- ER-BSAC as MP4AudioSampleEntry('mp4a')<br>- IOD as ObjectDescriptorBox('iods')<br>- OD as MpegSampleEntry('mp4s')<br>- BIFS as MpegSampleEntry('mp4s')<br>- JPEG as MP4VisualSampleEntry('mp4v') |

In 8.5 of ISO/IEC 23000-9:2008/Amd.1:2010

|                               |                                             |                                                                                                                                                                                                                                                      |
|-------------------------------|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>File name</b>              |                                             | <b>06_T-DMB-1_IPMP(ES)_r1.dmb</b>                                                                                                                                                                                                                    |
| Description                   |                                             | the same as file '02'                                                                                                                                                                                                                                |
| Major brand                   |                                             | dv1b                                                                                                                                                                                                                                                 |
| Compatible brands             |                                             | dmb1                                                                                                                                                                                                                                                 |
| Components<br>Inside the file | AVC, ER-BSAC                                | - each streams is stored as separate track<br>- each ES is encrypted with AES-128 CTR (key: "key1")                                                                                                                                                  |
|                               | A DID XML (containing TVA, REL<br>and IPMP) | - a TVA for content description and segment information (the<br>same TVA as is in the conformance file 02)<br>- an REL for defining a simple license (the same TVA as in the<br>conformance file 02)<br>- an IPMP for describing the protection tool |
|                               | 14 JPEG images related to TVA               | - each image is stored as an item<br>- a program title image<br>- a segment group title image<br>- 12 segment title images (one of the images is protected with<br>the same tool and key as for the ESs)                                             |

In ISO/IEC 23000-9:2008/Amd.1:2010/Cor.1:2011

|                               |                                                                         |                                          |
|-------------------------------|-------------------------------------------------------------------------|------------------------------------------|
| <b>File name</b>              |                                                                         | <b>09_T-DMB-2_TS_r2.dmb</b>              |
| Description                   |                                                                         | a T-DMB Profile 2 program (Visual Radio) |
| Major brand                   |                                                                         | dv2a                                     |
| Compatible brands             |                                                                         | dmb1, dv2b                               |
| Components<br>Inside the file | An MPEG-2 TS (containing HE-<br>AAC2, AVC, OD, BIFS and JPEG<br>images) | - stored as an 'rm2t' hint track         |

In 8.5 of ISO/IEC 23000-9:2008/Amd.1:2010

|                               |                                           |                                           |
|-------------------------------|-------------------------------------------|-------------------------------------------|
| <b>File name</b>              |                                           | <b>10_T-DMB-2_AV_r1.dmb</b>               |
| Description                   |                                           | a T-DMB Profile 2 program (Visual Radio)  |
| Major brand                   |                                           | dv2a                                      |
| Compatible brands             |                                           | dmb1, dv2b, avc1, mp42                    |
| Components<br>Inside the file | AVC, HE-AAC2, OD, BIFS and<br>JPEG images | - each stream is stored as separate track |