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AMENDMENT 3
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Information technology — Multimedia application format (MPEG-A) —

Part 12:
Interactive music application format

AMENDMENT 3: Conformance and reference software and conformance

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

Partie 12: Format d'application musicale interactive

AMENDEMENT 3: Conformité et logiciel de référence et conformité

Foreword

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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.

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Amendment 3 to ISO/IEC 23000-12:2010 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 — Multimedia application format (MPEG-A) —

Part 12:
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AMENDMENT 3: Conformance and reference software and conformance

After 8.1, add the following:

- Conformance point 4 provides capability of parsing compact representation of dynamic volume change in preset boxes, and generating volume curve for individual audio tracks.

- Conformance point 5 provides capability of parsing audio equalization parameters in the preset boxes, and processing audio tracks according to the EQ parameters.

In 8.2 before Table AMD1.1, add the following:

- C4: conforming to the conformance point 4

- C5: conforming to the conformance point 5

Replace:

Table AMD1.1 — Conformance files with conformance points

No	File structure						Audio				Metadata	Image	Text
	ISO-BMFF	Brand	'grco'	'prst'	'rusc'	'rumx'	MP3	AAC	PCM	SAOC	MDS	JPEG	3GPP TT
1	C1	C1	-	C1	-	-	C1	-	-	-	-	-	-
2	C1	C1	-	C1	C2	C2	-	C1	-	-	C3	C3	C3
3	C1	C1	-	C1	C2	C2	-	-	C1	-	-	-	-
4	C1	C1	C2	C1	C2	C2	C1	-	-	-	-	-	-
5	C1	C1	-	C1	-	-	-	C1	-	C1	-	-	-
6	C1	C1	-	C1	-	-	C1	-	-	C1	-	-	-

with:

Table AMD1.1 — Conformance files with conformance points

No	File structure						Audio				Metadata	Image	Text
	ISO-BMFF	Brand	'grco'	'prst'	'rusc'	'rumx'	MP3	AAC	PCM	SAOC	MDS	JPEG	3GPP TT
1	C1	C1	-	C1	-	-	C1	-	-	-	-	-	-
2	C1	C1	-	C1	C2	C2	-	C1	-	-	C3	C3	C3
3	C1	C1	-	C1	C2	C2	-	-	C1	-	-	-	-
4	C1	C1	C2	C1	C2	C2	C1	-	-	-	-	-	-
5	C1	C1	-	C1	-	-	-	C1	-	C1	-	-	-
6	C1	C1	-	C1	-	-	C1	-	-	C1	-	-	-
7	C1	C1	-	C1	C4 C5	-	-	-	C1	-	-	-	-

Replace:

Table AMD1.2 — Description of conformance files

No.	File name	Brand (Covered Brand)	# of audio tracks	Components	Preset	# of groups	Rule	
							Selection	Mixing
1	example_01.ima	im01 (im02, im03, im11)	4	- MP3	- static/dynamic track volume preset - static/dynamic object volume preset	-	-	-
2	example_02.ima	im02 (im01, im03, im11, im21)	6	- AAC - JPEG - MDS	- static track volume preset	-	implication rule	- equivalence rule - limit rule
3	example_03.ima	im11 (im21)	6	- PCM	- static track volume preset	-	- exclusion rule - not mute rule	upper rule
4	example_04.ima	im11 (im01, im02, im03)	14	- MP3	- static track volume preset	3	- min/max rule	lower rule
5	Example_05.ima	im04 (im12)	2	- AAC - SAOC	- static object volume preset	-	-	-
6	Example_06.ima	im04 (im12)	2	- MP3 - SAOC	- static object volume preset	-	-	-

[Remark01] Major brand of conformance file 1 is 'im01' and it can be also 'im02', 'im03' and 'im11' because difference between them is only *the maximum number of simultaneously decoded audio tracks* and it depends on the *player performance*. Hence conformance file 1 covers the conformance test for 'im02', 'im03' and 'im11' with MP3 audio tracks.
[Remark02] As the previously mentioned in [Remark01], conformance file 2 covers the conformance test for 'im01', 'im03', 'im11' and 'im21' with AAC audio tracks.
[Remark03] As the previously mentioned in [Remark01], conformance file 3 covers the conformance test for 'im21' with PCM audio tracks.
[Remark04] As the previously mentioned in [Remark01], conformance file 4 covers the conformance test for 'im01', 'im02' and 'im11' with MP3 audio tracks.
[Remark05] As the previously mentioned in [Remark01], conformance file 5 covers the conformance test for 'im12' with AAC and SAOC audio tracks.
[Remark06] As the previously mentioned in [Remark01], conformance file 6 covers the conformance test for 'im12' with MP3 and SAOC audio tracks.

with:

Table AMD1.2 — Description of conformance files

No.	File name	Brand (Covered Brand)	# of audio tracks	Components	Preset	# of groups	Rule Selection	Rule Mixing
1	example_01.ima	im01 (im02, im03, im11)	4	- MP3	- static/dynamic track volume preset - static/dynamic object volume preset	-	-	-
2	example_02.ima	im02 (im01, im03, im11, im21)	6	- AAC - JPEG - MDS	- static track volume preset	-	implication rule	- equivalence rule - limit rule
3	example_03.ima	im11 (im21)	6	- PCM	- static track volume preset	-	- exclusion rule - not mute rule	upper rule
4	example_04.ima	im11 (im01, im02, im03)	14	- MP3	- static track volume preset	3	- min/max rule	lower rule
5	Example_05.ima	im04 (im12)	2	- AAC - SAOC	- static object volume preset	-	-	-
6	Example_06.ima	im04 (im12)	2	- MP3 - SAOC	- static object volume preset	-	-	-
7	Example_07.ima	Im11 (im21)	6	- PCM	- static track volume preset - dynamic track approximated volume preset - static track volume preset with EQ	-	-	-

[Remark01] Major brand of conformance file 1 is 'im01' and it can be also 'im02', 'im03' and 'im11' because difference between them is only *the maximum number of simultaneously decoded audio tracks* and it depends on the *player performance*. Hence conformance file 1 covers the conformance test for 'im02', 'im03' and 'im11' with MP3 audio tracks.
[Remark02] As previously mentioned in [Remark01], conformance file 2 covers the conformance test for 'im01', 'im03', 'im11' and 'im21' with AAC audio tracks.
[Remark03] As previously mentioned in [Remark01], conformance file 3 covers the conformance test for 'im21' with PCM audio tracks.
[Remark04] As previously mentioned in [Remark01], conformance file 4 covers the conformance test for 'im01', 'im02' and 'im11' with MP3 audio tracks.
[Remark05] As previously mentioned in [Remark01], conformance file 5 covers the conformance test for 'im12' with AAC and SAOC audio tracks.
[Remark06] As previously mentioned in [Remark01], conformance file 6 covers the conformance test for 'im12' with MP3 and SAOC audio tracks.

In 9.25, replace:

The mixer executes mixing multiple decoded audio tracks according to the gains of audio tracks for a preset or user's direct control.

with:

The mixer executes mixing multiple decoded audio tracks according to the gains and EQ settings of audio tracks for a preset or user's direct control.