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AMENDMENT 1
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Information technology — Coding of audio-visual objects —

Part 1: **Systems**

AMENDMENT 1: Text profile and level indication

Technologies de l'information — Codage des objets audiovisuels —

Partie 1: Systèmes

AMENDEMENT 1: Profil de texte et indication de niveau

Reference number
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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.

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 14496-1:2004 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

ISO/IEC 14496 specifies a system for the communication of interactive audio-visual scenes. The specification includes the following elements:

1. the coded representation of natural or synthetic, two-dimensional (2D) or three-dimensional (3D) objects that can be manifested audibly and/or visually (audio-visual objects) (specified in part 1, 2 and 3 of ISO/IEC 14496);

2. the coded representation of the spatio-temporal positioning of audio-visual objects as well as their behaviour in response to interaction (scene description, specified in parts 11 and 20 of ISO/IEC 14496);

3. the coded representation of information related to the management of data streams (synchronization, identification, description and association of stream content, specified in parts 11 and 20 of ISO/IEC 14496);

4. a generic interface to the data stream delivery layer functionality (specified in part 6 of ISO/IEC 14496);

5. an application engine for programmatic control of the player: format, delivery of downloadable Java byte code as well as its execution lifecycle and behaviour through APIs (specified in part 11 of ISO/IEC 14496); and

6. a file format to contain the media information of an ISO/IEC 14496 presentation in a flexible, extensible format to facilitate interchange, management, editing, and presentation of the media.

The information representation, specified in ISO/IEC 14496-1, ISO/IEC 14496-11 and in ISO/IEC 14496-20, describes the means to create an interactive audio-visual scene in terms of coded audio-visual information and associated scene description information. The encoded content is presented to a terminal as the collection of elementary streams. Elementary streams contain the coded representation of either audio or visual data or scene description information or user interaction data. Elementary streams may as well themselves convey information to identify streams, to describe logical dependencies between streams, or to describe information related to the content of the streams. Each elementary stream contains only one type of data.

Elementary streams are decoded using their respective stream-specific decoders. The audio-visual objects are composed according to the scene description information and presented by the terminal's presentation device(s). All these processes are synchronized according to the systems decoder model (SDM) using the synchronization information provided at the synchronization layer.

The scene description stream identifies different types of objects, such as audio, visual, 2D and 3D graphics, etc. that define a scene composition of the content. Among these objects, the essential part of almost any multimedia presentation is text objects that are created utilizing specific custom fonts. Font selection determines the appearance of a text in multimedia content and it's the most critical factor that assures text legibility and readability. It also plays critical role in the overall scene composition since the metric properties of a font are used for textual parts of multimedia content layout. Many thousands of fonts are available today for use in content creation and in order to assure correct appearance and layout of a content the font data have to be included (embedded) with the text objects as part of the multimedia presentation.

ISO/IEC 14496-18 defines new set of tools for font streaming and text rendering. In order to enable faithful and reliable reproduction of textual content in MPEG-4 presentations the font data format, font stream, its stream type and its configuration is defined. The document also establishes new dimension of MPEG-4 Text profiles and defines the text profiles and levels.

New text profiles and levels shall be signalled on the MPEG-4 Systems to insure the conformance. The scope of this amendment is to define new tools that will enable the signalling of the newly established Text Profile dimension and to specify Text Profile and Level Indication values.

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In clause 2 Normative References, add the following reference:

ISO/IEC 14496-18:2004, *Information technology — Coding of audio-visual objects — Part 18: Font compression and streaming.*

In subclause 7.2.6.19.1 Syntax (of Extension Profile Level Descriptor), replace the definition of the `ExtensionProfileLevelDescriptor` *with the following:*

```
class ExtensionProfileLevelDescriptor() extends BaseDescriptor : bit(8)
ExtensionProfileLevelDescrTag {
   bit(8) profileLevelIndicationIndex;
   bit(8) ODProfileLevelIndication;
   bit(8) sceneProfileLevelIndication;
   bit(8) audioProfileLevelIndication;
   bit(8) visualProfileLevelIndication;
   bit(8) graphicsProfileLevelIndication;
   bit(8) MPEGJProfileLevelIndication;
   bit(8) TextProfileLevelIndication;
}
```

In subclause 7.2.6.19.2 Semantics (of Extension Profile Level Descriptor), add the following paragraph and Table:

`TextProfileLevelIndication` – an indication as defined in AMD1-1 of the Text Profile and Level specified in ISO/IEC 14496-18 and required to process the content associated with the InitialObjectDescriptor containing this Text Profile and Level descriptor.

AMD1-1 — TextProfileLevelIndication Values

Value	Profile	Level
0x00	Reserved for ISO use	-
0x01	Simple Text profile	L1
0x02	Simple Text profile	L2
0x03	Simple Text profile	L3
0x04	Advanced Simple Text profile	L1
0x05	Advanced Simple Text profile	L2
0x06	Advanced Simple Text profile	L3
0x07	Main Text profile	L1
0x08	Main Text profile	L2
0x09	Main Text profile	L3
0x0A-0x7F	reserved for ISO use	-
0x80-0xFD	user private	-
0xFE	no Text profile specified	-
0xFF	no text rendering capability required	-
Note: Usage of the value 0xFE may indicate that the content described by this descriptor does not comply to any conformance point specified in ISO/IEC 14496-18.		