DRAFT AMENDMENT
ISO/IEC 14496-30:2014 DAM 1

ISO/IEC JTC **1**/SC **29**

Secretariat: **JISC**

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Information technology — Coding of audio-visual objects —

Part 30:
Timed text and other visual overlays in ISO base media file format

AMENDMENT 1: Support for CTA-708 captioning in SEI messages

Technologies de l'information — Codage des objets audiovisuels —

Partie 30: Texte temporisé et autres recouvrements visuels dans le format ISO de base pour les fichiers médias

AMENDEMENT 1: .

ICS: 35.040.40

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INTERNATIONAL ORGANISATION FOR STANDARDISATION
ORGANISATION INTERNATIONALE DE NORMALISATION
ISO/IEC JTC1/SC29/WG11
CODING OF MOVING PICTURES AND ASSOCIATED AUDIO INFORMATION

ISO/IEC/JTC1/SC29/WG11/N16429

Chengdu, CN, October 2016

Title: ISO/IEC 14496-30 DAM1 Support for CTA-708 captioning in SEI messages

Editors: David Singer (Apple)

Add the following informative text as an informative Annex:

It is possible to carry captioning information embedded in a media stream of another type; the most notable example of this technique is the carriage of CTA-608/708 data in supplemental enhancement information (SEI) messages, as defined in SCTE 128-2.

This embedding technique is an important interoperability point, as there are many terminals and deployments using this captioning. However, it has a number of drawbacks, and it is not recommended for new deployments.

The expressive capability of this technique is limited. In addition, because the data is effectively carried character-by-character, the format is ill-suited to searching or being used to build indexes. This character-by-character nature also means that clean random access is not well-defined; there are no well-defined entry points ('sync points'), nor is there a defined 'pre-roll' distance, to ensure that the correct captions are displayed at any given point. It is also limited in the expressive capability of its tagging, especially in language identification using ISO 639 only (modern practice allows for identification of scripts, locales, and so on).

Most seriously, when captions are embedded into a media stream in this way, their presence and characteristics are not evident from simple inspection of the file itself: in the absence of external information, the file must be scanned in its entirety to discover what captions are present. There is no equivalent to the detection of the presence of a subtitle or text track, and there is no MIME parameter such as the 'codecs' parameter that can indicate the presence of captions in the file. This makes such files unsuitable for use in environments where the presence of captions needs to be detected by inspecting a file or its MIME type. The typical practice is that these files are used in managed environments where the presence of captions, and their characteristics, is known by some

out-of-band information such as a content management database, or manifest. CTA-708, section 4.5 defines the out-of-band metadata signalling requirements.

Add the following references into the Bibliography

CTA-708-E, *Digital Television (DTV) Closed Captioning*

ANSI/SCTE 128 2010-a, *AVC Video Systems and Transport Constraints for Cable Television*

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