



Information technology — Coding of audio-visual objects —

Part 30:

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

TECHNICAL CORRIGENDUM 1

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

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO/IEC 14496-30:2014 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

In subclause 4.1, replace:

Unless specified by an embedding environment (e.g. an HTML page), the track header box information (i.e. width, height) shall be used to size the subtitle or timed text track content with respect to the video; otherwise, it may be ignored by the embedding environment. The width and height of the subtitle or timed text track should be appropriate for the width and height of the video track (as declared in the track header) it is intended to overlay, even if the video is not stored in an ISOBMFF file or stored as a track in a different ISOBMFF file. A typical usage is that the timed text or subtitle track has the same width and height as the underlying video, and no translation. For some timed text documents, the region thus defined corresponds to the visual area filled by the rendering of the timed text documents.

with

Unless specified by an embedding environment (e.g. an HTML page), the track header box information (i.e. width, height) shall be used to size the subtitle or timed text track content with respect to the associated track(s) as follows:

- 1) If the flag `track_size_is_aspect_ratio` is not set, and the track width and height are set to values different from 0, the size of the timed text track shall be the track width and height.
- 2) If the flag `track_size_is_aspect_ratio` is not set, and the track width and height are set to 0, the size of the timed text track shall match the reference size.
- 3) If the flag `track_size_is_aspect_ratio` is set, it indicates that the content of the track was authored to an aspect ratio equal to the track header width/height. In this case, neither width nor height shall be 0. The timed text track shall be sized to the maximum size that will fit within the reference size and should equal its width or height, while preserving the indicated aspect ratio.f

If only one track is associated with the timed text track, the reference size is the size of the associated track. If multiple tracks are associated, the reference size is the size of the composition of tracks as described by the matrices in the track headers of the associated tracks.

Upon file creation, the width and height of the subtitle or timed text track should be set appropriately according to the width and height of the associated track(s), as declared in their track header. A typical usage is that the timed text or subtitle track has the same width and height as an associated visual track, and no translation.

If the track it is supposed to overlay is not stored in an ISOBMFF file or if it is stored as a track in a different ISOBMFF file, the values 0x0 may be used; or the `track_size_is_aspect_ratio` flag may be used and the width and height set to the desired aspect ratio.

For some timed text documents, the region as defined by the width, height and `track_size_is_aspect_ratio` corresponds to the visual area filled by the rendering of the timed text documents.

In subclause 4.1, replace:

Additional region positioning using the translation values `tx` and `ty` from the track header matrix, as defined for 3GPP Timed Text tracks, may be used (see 3GPP TS 26.245, section 5.7, for the definition of the text track region using `tx`, `ty`, and the track width and height).

With

When the track width and height attributes are set to a value different from 0 and the `track_size_is_aspect_ratio_flag` is not used, additional region positioning using the translation values `tx` and `ty` from the track header matrix, as defined for 3GPP Timed Text tracks, may be used (see 3GPP TS 26.245, section 5.7, for the definition of the text track region using `tx`, `ty`, and the track width and height).

In subclause 4.1, replace:

Note – timed text and subtitle tracks are normally stacked in front of the video.

with:

Note – timed text and subtitle tracks are normally stacked in front of the associated visual track(s).

In subclause 4.2, replace:

The timescale field in the media header box should be set appropriately to achieve the desired timing accuracy; it is recommended to be set to the value of the timescale field in the corresponding video track's media header box.

with:

The timescale field in the media header box should be set appropriately to achieve the desired timing accuracy. It is recommended to be set to the value of the timescale field in the media header box of (one of) the associated track(s).

Insert subclause 4.5, as follows:

○ **Associating timed text tracks**

Timed text tracks may be explicitly or implicitly associated with other tracks in the file. They are explicitly associated with a track when the timed text track uses a track reference of type 'subt' to that track, as defined in ISO/IEC 14496-12, or to a track in the same alternate group. If no 'subt' track reference is used, the timed text track is said to be implicitly associated to all tracks in the file. In particular, if track groups are not used, the timed text track is associated to all tracks in the file. Association is used to indicate which track(s) a timed text track is intended to overlay and may be used to determine the desired rendered size when that information is not provided in the track header of the timed text track, as defined in subclause 4.1. Timed text and subtitle tracks may be associated with any type of track, including visual tracks (e.g. video tracks, graphics tracks, image tracks) or audio tracks as determined by some external context.

In subclause 5.2, add the following sentence at the end of the first paragraph:

If the 'extent' attribute is not declared on the 'tt' element in the contained TTML document, the track header width and height may be set to 0 or to any desired size.

Note – this is used when the document is authored in a resolution-independent manner (e.g. using percentage layout).

Alternatively, when a resolution-independent document has been authored to a specific aspect ratio (whether or not the aspect ratio is explicitly signaled in the document) the track_size_is_aspect_ratio flag may be used to signal the authored aspect ratio. In this case, the track header width and height shall be set to values that indicate the authored aspect ratio (e.g. 16 by 9).