INTERNATIONAL STANDARD

ISO/IEC 14496-27

Information technology — Coding of audio-visual objects —

Part 27:
3D Graphics conformance

AMENDMENT 6: Pattern-based 3D mesh coding conformance

Technologies de l'information — Codage des objets audiovisuels —

Partie 27: Conformité aux graphiques 3D

AMENDEMENT 6: Conformité de codage d'un réseau 3D fondé sur un modèle

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/IEC JTC 1, *Information technology*, SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

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AMENDMENT 6: Pattern-based 3D mesh coding conformance

All the files required for conformance testing are available as electronic insert.

Name (for bitstream file-name, add .tri)	Attribute/Parameter
leaf_translation	File with a 3D mesh which contains 6 repeated tree leaves with the same size and orientation but with different positions. The instance transformation consists of translation transformations and is encoded in elementary instance data mode.
leaf_rotation	File with a 3D mesh which contains 6 repeated tree leaves with the same size but with different positions and different orientations. The instance transformation consists of translation and rotation transformations and is encoded in elementary instance data mode.
leaf_reflection	File with a 3D mesh which contains 2 repeated tree leaves with the same size but with different positions and different orientation (one being a reflection of the other). The instance transformation consists of translation and reflection transformations and is encoded in elementary instance data mode.
leaf_unique	File with a 3D mesh which contains a unique cube and 6 repeated tree leaves with the same size but with different positions and different orientations. The instance transformation consists of translation and rotation transformations and is encoded in elementary instance data mode. The unique part is coded on its own without any patterns usage.
leaf_scaling	File with a 3D mesh which contains 2 repeated tree leaves with the same orientation but with different sizes and different positions. The instance transformation consists of uniform scaling and translation transformations and is encoded in elementary instance data mode.
leaf_instagrouped	File with a 3D mesh which contains 12 repeated tree leaves with the same size but with different positions and different orientations. The instance transformation consists of translation and rotation transformations and is encoded in grouped instance data mode.
leaf_errorcompen	File with a 3D mesh which contains 2 repeated tree leaves with the same size but with different positions and different orientations. The instance transformation consists of translation and rotation transformations and is encoded in elementary instance data mode. Error compensation data is included in the compressed bitstream and shall be decoded by the decoder too.
leaf_texcoord & leaf_texture.jpg	Files with a textured 3D mesh which contains 3 repeated tree leaves with the same size but with different positions and different orientations. The instance transformation consists of translation and rotation transformation. Among the 3 textured leaves, 2 leaves have the same texture content while the other one has a different texture. The instance transformation and texture coordinate data are encoded in elementary instance data mode. Texture image is rearranged after the repeated parts are removed. leaf_textue.jpg contains the rearranged texture image that the decoder shall decode.

Name (for bitstream file-name, add .tri)	Attribute/Parameter
leaf_attribute	File with a 3D mesh with color attribute data, which contains 4 repeated tree leaves with the same size but with different positions, different orientations and different color properties. The instance transformation consists of translation and rotation transformation. The instance transformation and color attribute data are encoded in elementary instance data mode. Note: Normal and other attribute are encoded using the same method as for encoding color attribute data. Therefore no extra conformance test is needed for them.