
**Information technology — Multimedia
content description interface —**

**Part 8:
Extraction and use of MPEG-7
descriptions**

**AMENDMENT 2: Extraction and use of
MPEG-7 perceptual 3D shape descriptor**

*Technologies de l'information — Interface de description du contenu
multimédia —*

Partie 8: Extraction et utilisation des descriptions MPEG-7

*AMENDEMENT 2: Extraction et emploi du descripteur de forme 3D
perceptuel MPEG-7*

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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.

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Amendment 2 to ISO/IEC TR 15938-8:2002 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

NOTE This document preserves the sectioning of ISO/IEC TR 15938-8:2002 and its amendments. The text and figures given below are currently being considered as additions and/or modifications to those corresponding sections in ISO/IEC TR 15938-8:2002 and its amendments.

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Add after 2.2.2.49:

2.2.2.50 Attributed Relational Graph (ARG)

A graph whose nodes (vertices) and edges (links) contain unary attributes and dyadic attributes (describing the relation between the nodes), respectively. The graph is described in the form of a vector.

2.2.2.51 Constrained Morphological Decomposition (CMD)

An algorithm, based on the mathematical concepts of morphology and convexity, to decompose a voxelized 3-D object into several parts.

2.2.2.52 Weighted Convexity (WC)

A volume-weighted sum of each part's convexity.

2.2.2.53 Weighted Convexity Difference (WCD)

A difference of two WCs before and after merging of two parts.

2.2.2.54 Initial Decomposition Stage (IDS)

The procedure of applying the CMD to a voxelized 3-D object, once.

2.2.2.55 Recursive Decomposition Stage (RDS)

The procedure of applying the CMD recursively to the result of the IDS or a previous RDS.

2.2.2.56 Iterative Merging Stage (IMS)

The procedure of merging parts in the result of the RDS iteratively using the WCD.

2.2.2.57 Earth Mover's Distance (EMD)

A kind of distance measure based on a solution [AMD2-2] to the transportation problem in graph theory.