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मसौदा भारतीय मानक

सूचना प्रौद्योगिकी- कंप्यूटर ग्राफिक्स, इमेज प्रसंस्करण और पर्यावरण डेटा
निरूपण आभासी/मिश्रित तथा संवर्धित वास्तविक (वीआर/एमएआर) में इमेज-
आधारित प्रतिपादन हेतु उद्देश्य/पर्यावरण निरूपण

Draft Indian Standard

Information Technology – Computer Graphics, Image Processing and
Environment Data Representation Object/Environmental Representation
for Image-Based Rendering in Virtual/Mixed and Augmented Reality
(VR/MAR)

ICS: 35.140

LITD 23 Coding and Processing of
Audio, Picture, Multimedia and
Hypermedia Information Sectional
Committee

Last date for comments: 9 July 2024

NATIONAL FOREWORD

(Formal clauses will be added later)

This draft Indian Standard which is identical to ISO/IEC 23488:2022 ‘Information technology- Computer graphics, image processing and environment data representation Object/environmental representation for image-based rendering in virtual/mixed and augmented reality (VR/MAR)’ issued by International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards on the recommendation of the Coding and Processing of Audio, Picture, Multimedia and Hypermedia Information Sectional Committee, LITD 23 and approval of the Electronics and Information Technology Division Council.

The text of ISO/IEC Standard *may be* approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appears referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:2022 ‘Rules for rounding off numerical values (Second Revision)’. The number of significant places retained in the rounded off value should be same as that of the specified value in this standard.

Scope of ISO/IEC 23488: 2022 is as follows:

This document specifies an image-based representation model that represents target objects/ environments using a set of images and optionally the underlying 3D model for accurate and efficient objects/environments representation at an arbitrary viewpoint. It is applicable to a wide range of graphic, virtual reality and mixed reality applications which require the method of representing a scene with various objects and environments.

This document:

- defines terms for image-based representation and 3D reconstruction techniques;
- specifies the required elements for image-based representation;
- specifies a method of representing the real world in the virtual space based on image-based representation;
- specifies how visible image patches can be integrated with the underlying 3D model for more accurate and rich objects/environments representation from arbitrary viewpoints;

- specifies how the proposed model allows multi-object representation;
- provides an XML based specification of the proposed representation model and an actual implementation example (see Annex A)

Note: - The Technical content of this document has not been enclosed as these are identical with the corresponding ISO/IEC Standard. For details please refer to ISO/IEC 23488: 2022 or kindly contact.

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