BUREAU OF INDIAN STANDARDS
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मसौदा भारतीय मानक

सूचना प्रौद्योगिकी - कंप्यूटर ग्राफिक्स, इमेज प्रसंस्करण और पर्यावरण डेटा निरूपण
मिश्रित और संवर्धित वास्तविकता (एमएआर) में लाइव एक्टर और इकाई का निरूपण

Draft Indian Standard

Information technology – Computer graphics, image processing and environmental data representation Live actor and entity representation in mixed and augmented reality (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 with ISO/IEC 18040:2019 'Information technology Computer graphics, image processing and environmental data representation Live actor and entity representation in mixed and augmented reality (MAR)' issued by International Organization 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.

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.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their places, are listed below along with their degree of equivalence for editions indicated For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

International Standard	Corresponding Indian Standard	Degree of Equivalence
ISO/IEC 18039, Information technology — Computer graphics, image processing and environmental data representation — Mixed and augmented reality (MAR) reference model	Doc No. LITD/23/25592 Draft IS/ISO/IEC 18039:2019 Information technology Computer graphics image processing and environmental data representation Mixed and augmented reality MAR reference model	ISO/IEC 18039:2019

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 18040:2019 is as follows:

This document defines a reference model and base components for representing and controlling a single LAE or multiple LAEs in an MAR scene. It defines concepts, a reference model, system framework, functions and how to integrate a 2D/3D virtual world and LAEs, and their interfaces, in order to provide MAR applications with interfaces of LAEs. It also defines an exchange format necessary for transferring and storing LAE-related data between LAE-based MAR applications.

This document specifies the following functionalities:

a) definitions for an LAE in MAR;

b) representation of an LAE;

c) representation of properties of an LAE;

d) sensing of an LAE in a physical world;

e) integration of an LAE into a 2D/3D virtual scene;

f) interaction between an LAE and objects in a 2D/3D virtual scene;

g) transmission of information related to an LAE in an MAR scene.

This document defines a reference model for LAE representation-based MAR applications to represent and to exchange data related to LAEs in a 2D/3D virtual scene in an MAR scene. It does not define specific physical interfaces necessary for manipulating LAEs, that is, it does not define how specific applications need to implement a specific LAE in an MAR scene, but rather defines common functional interfaces for representing LAEs that can be used interchangeably between MAR applications.

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 18040:2019 or kindly contact.

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