

BUREAU OF INDIAN STANDARDS
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मसौदा भारतीय मानक

सूचना प्रौद्योगिकी - कंप्यूटर ग्राफिक्स, इमेज प्रसंस्करण और
पर्यावरण निरूपण, मिश्रित तथा संवर्धित वास्तविकता में सेंसर
निरूपण

Draft Indian Standard

**Information technology – Computer graphics, image
processing and environmental representation Sensor
representation in mixed and augmented reality**

ICS: 35.140

NATIONAL FOREWORD

(Formal clauses will be added later)

This draft Indian Standard which is identical with ISO/IEC 18038:2020 ‘Information technology Computer graphics, image processing and environmental representation Sensor representation in mixed and augmented reality’ 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.

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 18038:2020 is as follows:

This document defines the framework and information reference model for representing sensor-based 3D mixed-reality worlds. It defines concepts, an information model, architecture, system functions, and how to integrate 3D virtual worlds and physical sensors in order to provide mixed-reality applications with physical sensor interfaces. It defines an exchange format necessary for transferring and storing data between physical sensor-based mixed-reality applications.

This document specifies the following functionalities:

- a) representation of physical sensors in a 3D scene;
- b) definition of physical sensors in a 3D scene;
- c) representation of functionalities of each physical sensor in a 3D scene;
- d) representation of physical properties of each physical sensor in a 3D scene;
- e) management of physical sensors in a 3D scene;
- f) interface with physical sensor information in a 3D scene.

This document defines a reference model for physical sensor-based mixed-reality applications to represent and to exchange functions of physical sensors in 3D scenes. It does not define specific physical interfaces necessary for manipulating physical devices, but rather defines common functional interfaces that can be used interchangeably between applications.

This document does not define how specific applications are implemented with specific physical sensor devices. It does not include computer generated sensor information using computer input/output devices such as a mouse or a keyboard. The sensors in this document represent physical sensor devices in the real world.

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 18038:2020 or kindly contact.

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