

TECHNICAL REPORT

**Multimedia systems and equipment for metaverse -
Part 1: General**



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IEC TR 63614-1 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment. It is a Technical Report.

The text of this Technical Report is based on the following documents:

Draft	Report on voting
100/4450/DTR	100/4472/RVDTR

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this Technical Report is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 63614 series, published under the general title *Multimedia systems and equipment for metaverse*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

The term "metaverse" originated from the science fiction novel "Snow Crash", combining "meta" and "universe". It refers to a digital-based virtual world that extends the boundaries of the real world, allowing users to engage in various activities, including imagination and fantasy, within the virtual space. In the viewpoint of content/platform/network/device, the metaverse can also be defined as a technology in which a user (using a metaverse device) can access (through network) a virtual space (a metaverse platform) and experience all activities (metaverse contents) through an avatar.

At the time of writing, the global industrial metaverse market is experiencing significant growth. It is noted that the metaverse can be implemented and realized with multimedia systems and equipment. Accordingly, there is a crucial need of standardization on the subject of metaverse in IEC TC 100 as a leading standardization group in the area of multimedia systems and equipment.

The IEC 63614 series consists of the following parts:

- Part 1: General;
- Part 2: Classification;
- Part 3: Gap analysis; and
- Part 4: AI use case.

This document, IEC 63614-1, describes general considerations to take into account for standardization on multimedia systems and equipment for metaverse.

IEC 63614-2¹ describes the classification of metaverse in terms of C (contents), P (platform), N (network), D (device).

IEC 63614-3 describes the gap analysis for the existing standards on metaverse and the services/products in the metaverse-related industry.

IEC 63614-4² describes a survey and analysis on how to use AI technology for metaverse systems and services, including the relevant examples and expected benefits in terms of service providers and users.

¹ Under consideration.

² Under consideration.

1 Scope

This document describes general considerations to take into account for standardization on multimedia systems and equipment for metaverse, which include the concept of metaverse and the impacts of metaverse on multimedia systems and equipment.

2 Normative references

There are no normative references in this document.

Bibliography

ISO/IEC DIS 24931-1, *Information technology - Metaverse - Part 1: Concepts, definitions and terminology*⁶

ITU-T, *ITU Focus Group on metaverse (FG-MV), FGMV-02-WG2 Metaverse: an analysis of definitions*

⁶ Under preparation. Stage at time of publication: ISO/IEC DIS 24931-1:2025