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Interested committees:

Title: Draft BS EN ISO/IEC 25098 Information technology - 3D printing and scanning - Overview and vocabulary on 3D scanning.

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Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

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- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT International Standard

ISO/IEC DIS 25098

Information technology — 3D printing and scanning — Overview and vocabulary on 3D scanning

ICS: 35.020

ISO/IEC JTC 1

Secretariat: **ANSI**

Voting begins on:
2025-06-19

Voting terminates on:
2025-09-11

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see <http://www.iso.org/directives>).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/IEC JTC 1/WG12.

INTRODUCTION

This document provides an overview of 3D printing and scanning along with a set of terms and definitions. The purpose of this document is to provide foundational standards for better understanding and for developing key ideas and practices on the Information and Communication Technology (ICT) aspect of 3D printing and scanning.

This document places an emphasis on the ICT aspects of terms used for 3D scanning. It clarifies and enhances definitions for generic workflows for 3D printing and scanning to emphasize the ICT perspective that aligns with the work scope of JTC 1. The definitions include terms related to 3D scanning devices, data, process, and its applications.

Information technology — 3D printing and scanning — Overview and vocabulary on 3D scanning

1 Scope

This document provides an overview of the ICT aspects of 3D scanning and its applications along with a set of terms and definitions. The applications is also related to the following processes: visualization, machining, inspection, product design, reverse engineering, and 3D printing.

The document provides a set of definitions which presents an extensive list of terms and definitions relevant to 3D scanning, categorized into general terms, attribute-related terms, processing of scanned data, 4D printing terminology, and abbreviated terms. The document then outlines the overall 3D scanning process, emphasizing the data flow from sensing to user-accessible outputs. Finally, the document provides diverse application scenarios and use cases across domains such as engineering, manufacturing, healthcare, retail, office environments, and emerging fields like the metaverse and 4D printing.

New terms from the future work within ISO/IEC JTC 1/WG 12 will be included in upcoming amendments of this document.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 19775-1:2023, *Computer graphics, image processing and environmental data representation — Extensible 3D (X3D) — Part 1: Architecture and base components*

ASTM E2544-11A(2019), *e1, Standard Terminology for Three-Dimensional (3D) Imaging Systems*

ISO 20685-1:2018, *3-D scanning methodologies for internationally compatible anthropometric databases — Part 1: Evaluation protocol for body dimensions extracted from 3-D body scans*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org>

3.1 General terms relating to 3D scanning

3.1.1

<3D scanning> accuracy

closeness of agreement between indications or measured quantity values obtained by 3D scanning on the same or similar objects under specified conditions

Note 1 to entry: accuracy defines how closely measured quantity values reflect the true size of the scanned object.