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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

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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 18670

Information technology — SoftWare Hash IDentifier (SWHID) Specification V1.2

ICS: 35.040.10

ISO/IEC JTC 1

Secretariat: **ANSI**

Voting begins on:
2024-09-04

Voting terminates on:
2024-11-27

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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 <https://www.iso.org/directives>).

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For an explanation of the voluntary nature of standards, 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 <https://www.iso.org/iso/foreword.html>.

This document was prepared by the SWHID Core Team and the SWHID Working Group [<https://www.swhid.org/>], and was submitted to Joint Technical Committee ISO/IEC JTC 1, *Information technology*, under the "PAS Transposition Process."

This edition is the first.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at <https://www.iso.org/members.html>.

Introduction

Modern software relies heavily on open source components that are developed collaboratively in a distributed setting, and that are assembled to create complex systems that evolve at a fast pace.

This has strengthened the need to precisely track, ensure availability, and guarantee integrity of the components that go into a given system for a variety of stakeholders. Academia needs to ensure that research results are reproducible, industry needs to improve the traceability of the software supply chain, and developer communities need tools to cope with the increasing complexity.

A key building block for addressing this issue is a system of intrinsic identifiers that allows users to precisely pinpoint the exact version of any software artifact, at all levels of granularity, without relying on any central registry or naming authority.

With this specification, the SWHID working group makes such a system of intrinsic identifiers, originally developed for the Software Heritage universal source code archive [1], available to all stakeholders.

For the sake of clarity, examples have been drawn directly from the Software Heritage archive; however, it is important to note that systems for the persistent archival of software artifacts, as well as resolution of SWHIDs, are outside the scope of this specification, which does not require the use of Software Heritage.

