



SLOVENSKI STANDARD

SIST ISO 14721:2025

01-december-2025

Nadomešča:
SIST ISO 14721:2013

Prakse sistemov za trajno ohranjanje podatkov - Referenčni model za odprti arhivski informacijski sistem (OAIS)

Space Data System Practices - Reference model for an open archival information system (OAIS)

Pratiques des systèmes de données spatiales - Modèle de référence pour un système ouvert d'archivage d'information (SOAI)

Ta slovenski standard je istoveten z: ISO 14721:2025

<https://standards.iteh.ai/catalog/standards/sist/e69f8023-f60c-4b06-aa7a-1af3314b004e/sist-iso-14721-2025>

ICS:

35.240.99	Uporabniške rešitve IT na drugih področjih	IT applications in other fields
49.140	Vesoljski sistemi in operacije	Space systems and operations

SIST ISO 14721:2025

en



**International
Standard**

ISO 14721

**Space Data System Practices —
Reference model for an open
archival information system (OAIS)**

*Pratiques des systèmes de données spatiales — Modèle de
référence pour un système ouvert d'archivage d'information (SOAI)*

**Third edition
2025-03**

ITh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST ISO 14721:2025](https://standards.iteh.ai/catalog/standards/sist/e69f8023-f60c-4b06-aa7a-1af3314b004e/sist-iso-14721-2025)

<https://standards.iteh.ai/catalog/standards/sist/e69f8023-f60c-4b06-aa7a-1af3314b004e/sist-iso-14721-2025>

ISO 14721:2025(en)

iTeh Standards (<https://standards.iteh.ai>) Document Preview

SIST ISO 14721:2025

<https://standards.iteh.ai/catalog/standards/sist/e69f8023-f60c-4b06-aa7a-1af3314b004e/sist-iso-14721-2025>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2025

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

ISO 14721:2025(en)

CCSDS RECOMMENDED PRACTICE FOR AN OAIS REFERENCE MODEL

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 document should be noted (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

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

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 www.iso.org/iso/foreword.html.

This document was prepared by the Consultative Committee for Space Data Systems (CCSDS) (as CCSDS 650.0-M-3, December 2024) and drafted in accordance with its editorial rules. It was assigned to Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 13, *Space data and information transfer systems* and adopted under the "fast-track procedure".

This third edition cancels and replaces the second edition (ISO 14721:2012), which has been technically revised.

The main changes are as follows:

- Changes from the current issue are too numerous to permit meaningful markup.
- This issue has additions to, and clarifications of, concepts and terminology, for example:
 - The relationship between Preservation Description Information (PDI) and Content Data Object has been clarified, emphasizing that, as has been stated since the original version of OAIS, any Information Object may serve as Content Information.

ISO 14721:2025(en)

CCSDS RECOMMENDED PRACTICE FOR AN OAIS REFERENCE MODEL

- The concept of Preservation Objectives has been introduced to allow “Independently Understandable” to be more consistently testable.
- Consistency with the Producer-Archive Interface Specification (PAIS) (CCSDS 651.1-B-1) has been improved.
- Diagram conventions have been clarified.
- Some definitions in the Glossary have been clarified.
- Consistency between the diagrams of the Functional Entities and supporting text has been improved.
- A Preservation Watch function has been added to the Preservation Planning Functional Entity.
- The definition of the Information Package has been updated for consistency.
- Additional preservation techniques have been described explicitly in addition to Migration.
- Additional types of Archive interaction have been added, including primary-supporting Archives.
- Annex A is marked as Informative. It had previously erroneously been marked as Normative.
- Annex B from the previous issue described the relationship of OAIS to other standards; but its contents were continually out of date as those other standards develop along different directions and timelines as compared to OAIS development. Also, subsection 1.5 from the previous issue, which provided a roadmap to related Standards which could be developed was removed since a number of those standards are now available. Both have been replaced by pointers in annex B to informative documents on the CCSDS web site which can be updated more rapidly.

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 www.iso.org/members.html.

ISO 14721:2025(en)

CCSDS RECOMMENDED PRACTICE FOR AN OAIS REFERENCE MODEL

CONTENTS

<u>Section</u>	<u>Page</u>
1 INTRODUCTION	1-1
1.1 PURPOSE AND SCOPE	1-1
1.2 APPLICABILITY	1-2
1.3 RATIONALE	1-3
1.4 CONFORMANCE	1-3
1.5 DOCUMENT STRUCTURE	1-4
1.6 DEFINITIONS	1-7
2 OAIS CONCEPTS	2-1
2.1 GENERAL	2-1
2.2 OAIS ENVIRONMENT	2-2
2.3 OAIS INFORMATION	2-3
2.4 PRESERVATION OBJECTIVES	2-8
2.5 SUPPLEMENTARY INFORMATION HELD BY THE ARCHIVE	2-9
2.6 OAIS HIGH-LEVEL EXTERNAL INTERACTIONS	2-10
3 OAIS RESPONSIBILITIES	3-1
3.1 OVERVIEW	3-1
3.2 MANDATORY RESPONSIBILITIES	3-1
3.3 EXAMPLE MECHANISMS FOR DISCHARGING RESPONSIBILITIES	3-2
4 DETAILED MODELS	4-1
4.1 OVERVIEW	4-1
4.2 FUNCTIONAL MODEL	4-1
4.3 INFORMATION MODEL	4-22
4.4 INFORMATION PACKAGE TRANSFORMATIONS	4-55
5 PRESERVATION PERSPECTIVES	5-1
5.1 OVERVIEW	5-1
5.2 DIGITAL MIGRATION	5-2
5.3 ADDING REPRESENTATION INFORMATION	5-11
5.4 HANDING OVER TO ANOTHER OAIS	5-16
6 ARCHIVE INTEROPERABILITY	6-1
6.1 GENERAL	6-1
6.2 LEVELS OF INTERACTION BETWEEN OAIS ARCHIVES	6-2