SLOVENSKI STANDARD
SIST ISO 14721:2013

01-junij-2013

Trajno ohranjanje podatkov in sistemi za prenos informacij - Odprti arhivski informacijski sistem (OAIS) - Referenčni model

Space data and information transfer systems -- Open archival information system (OAIS) -- Reference model

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Systèmes de transfert des informations et données spatiales -- Système ouvert d'archivage d'information (SOAI) -- Modèle de référence

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Ta slovenski standard je istoveten z: ISO 14721:2012

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49.140	Vesoljski sistemi in operacije	Space systems and operations

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2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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INTERNATIONAL STANDARD

ISO 14721

Second edition
2012-09-01

Space data and information transfer systems — Open archival information system (OAIS) — Reference model

Systèmes de transfert des informations et données spatiales — Système ouvert d'archivage d'information (SOAI) — Modèle de référence

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 14721 was prepared by the Consultative Committee for Space Data Systems (CCSDS) (as CCSDS 650.0-M-2, June 2012) and was adopted (without modifications except those stated in Clause 2 of this International Standard) by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 13, *Space data and information transfer systems*.

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This second edition cancels and replaces the first edition (ISO 14721:2003), which has been technically revised.

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Space data and information transfer systems — Open archival information system (OAIS) — Reference model

1 Scope

This International Standard defines the reference model for an open archival information system (OAIS). An OAIS is an archive, consisting of an organization, which may be part of a larger organization, of people and systems that has accepted the responsibility to preserve information and make it available for a designated community. It meets a set of such responsibilities as defined in this International Standard, and this allows an OAIS archive to be distinguished from other uses of the term "archive". The term "open" in OAIS is used to imply that this International Standard, as well as future related International Standards, are developed in open forums, and it does not imply that access to the archive is unrestricted.

This International Standard

— provides a framework for the understanding and increased awareness of archival concepts needed for long term digital information preservation and access,

— provides the concepts needed by non-archival organizations to be effective participants in the preservation process,

— provides a framework, including terminology and concepts, for describing and comparing architectures and operations of existing and future archives,

— provides a framework for describing and comparing different Long Term Preservation strategies and techniques,

— provides a basis for comparing the data models of digital information preserved by archives and for discussing how data models and the underlying information may change over time,

— provides a framework that may be expanded by other efforts to cover long term preservation of information that is not in digital form (e.g. physical media and physical samples),

— expands consensus on the elements and processes for long term digital information preservation and access, and promotes a larger market which vendors can support, and

— guides the identification and production of OAIS-related standards.

The scope and field of application are furthermore detailed in subclauses 1.1 and 1.2 of the enclosed CCSDS publication.

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2 Requirements

Requirements are the technical recommendations made in the following publication (reproduced on the following pages), which is adopted as an International Standard:

CCSDS 650.0-M-2, June 2012, *Reference model for an open archival information system (OAIS).*

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For the purposes of international standardization, the modifications outlined below shall apply to the specific clauses and paragraphs of publication CCSDS 650.0-M-2.

Pages i to v

This part is information which is relevant to the CCSDS publication only.

Page D-1

Add the following information to the reference indicated:

[D6] Document CCSDS 620.0-B-2, May 1992, is equivalent to ISO 12175:1994.

[D7] Document CCSDS 644.0-B-2, November 2000, is equivalent to ISO 15889:2003[1)].

[D8] Document CCSDS 647.1-B-1, June 2001, is equivalent to ISO 21961:2003.

[D9] Document CCSDS 647.2-B-1, June 2001, is equivalent to ISO 21962:2003.

[D11] Document CCSDS 661.0-B-1, September 2008, is equivalent to ISO 13527:2010.

3 Revision of publication CCSDS 650.0-M-2

It has been agreed with the Consultative Committee for Space Data Systems that Subcommittee ISO/TC 20/SC 13 will be consulted in the event of any revision or amendment of publication CCSDS 650.0-M-2. To this end, NASA will act as a liaison body between CCSDS and ISO.

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1) Cancelled and replaced by ISO 15889:2011.

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The Consultative Committee for Space Data Systems

Recommendation for Space Data System Practices

REFERENCE MODEL FOR AN OPEN ARCHIVAL INFORMATION SYSTEM (OAIS)

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RECOMMENDED PRACTICE

CCSDS 650.0-M-2

MAGENTA BOOK

June 2012

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AUTHORITY

Issue:	Recommended Practice, Issue 2
Date:	June 2012
Location:	Washington, DC, USA

This document has been approved for publication by the Management Council of the Consultative Committee for Space Data Systems (CCSDS) and represents the consensus technical agreement of the participating CCSDS Member Agencies. The procedure for review and authorization of CCSDS documents is detailed in *Organization and Processes for the Consultative Committee for Space Data Systems* (CCSDS A02.1-Y-3), and the record of Agency participation in the authorization of this document can be obtained from the CCSDS Secretariat at the address below.

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STATEMENT OF INTENT

The Consultative Committee for Space Data Systems (CCSDS) is an organization officially established by the management of its members. The Committee meets periodically to address data systems problems that are common to all participants, and to formulate sound technical solutions to these problems. Inasmuch as participation in the CCSDS is completely voluntary, the results of Committee actions are termed **Recommendations** and are not in themselves considered binding on any Agency.

CCSDS Recommendations take two forms: **Recommended Standards** that are prescriptive and are the formal vehicles by which CCSDS Agencies create the standards that specify how elements of their space mission support infrastructure shall operate and interoperate with others; and **Recommended Practices** that are more descriptive in nature and are intended to provide general guidance about how to approach a particular problem associated with space mission support. This **Recommended Practice** is issued by, and represents the consensus of, the CCSDS members. Endorsement of this **Recommended Practice** is entirely voluntary and does not imply a commitment by any Agency or organization to implement its recommendations in a prescriptive sense.

No later than five years from its date of issuance, this **Recommended Practice** will be reviewed by the CCSDS to determine whether it should: (1) remain in effect without change; (2) be changed to reflect the impact of new technologies, new requirements, or new directions; or (3) be retired or canceled.

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In those instances when a new version of a **Recommended Practice** is issued, existing CCSDS-related member Practices and implementations are not negated or deemed to be non-CCSDS compatible. It is the responsibility of each member to determine when such Practices or implementations are to be modified. Each member is, however, strongly encouraged to direct planning for its new Practices and implementations towards the later version of the Recommended Practice.

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FOREWORD

This document is a technical Recommended Practice for use in developing a broader consensus on what is required for an archive to provide permanent, or indefinite Long Term, preservation of digital information.

This Recommended Practice establishes a common framework of terms and concepts which make up an Open Archival Information System (OAIS). It allows existing and future archives to be more meaningfully compared and contrasted. It provides a basis for further standardization within an archival context and it should promote greater vendor awareness of, and support of, archival requirements.

CCSDS has changed the classification of Reference Models from Blue (Recommended Standard) to Magenta (Recommended Practice).

Through the process of normal evolution, it is expected that expansion, deletion, or modification of this document may occur. This Recommended Practice is therefore subject to CCSDS document management and change control procedures, which are defined in the *Procedures Manual for the Consultative Committee for Space Data Systems*. Current versions of CCSDS documents are maintained at the CCSDS Web site:

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Questions relating to the contents or status of this document should be addressed to the CCSDS Secretariat at the address indicated on page i.

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– China National Space Administration (CNSA)/People's Republic of China.
– Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)/Germany.
– European Space Agency (ESA)/Europe.
– Federal Space Agency (FSA)/Russian Federation.
– Instituto Nacional de Pesquisas Espaciais (INPE)/Brazil.
– Japan Aerospace Exploration Agency (JAXA)/Japan.
– National Aeronautics and Space Administration (NASA)/USA.
– UK Space Agency/United Kingdom.

<u>Observer Agencies</u>

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– CSIR Satellite Applications Centre (CSIR)/Republic of South Africa.
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DOCUMENT CONTROL

Document	Title	Date	Status
CCSDS 650.0-B-1	Reference Model for an Open Archival Information System (OAIS)	January 2002	Original issue (superseded)
CCSDS 650.0-M-2	Reference Model for an Open Archival Information System (OAIS), Recommended Practice, Issue 2	June 2012	Current issue: – updates document based on input from user community (note).

NOTE – This issue includes: clarifications to many concepts, in particular Authenticity with the concept of Transformational Information Property introduced; corrections and improvements in diagrams; addition of Access Rights Information to PDI. Annex A from the previous issue, describing existing archives, has been removed. A security annex has been added as required by CCSDS. Substantive changes are indicated by change bars in the inside margin.

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