



**Information and documentation—Data  
exchange protocol for interoperability  
and preservation**



AS ISO 20614:2018

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- Australian Computer Society
- Australian Library and Information Association
- Charles Darwin University
- CSIRO
- Institute for Metadata Management
- Northern Territory Library
- NSW Department of Education
- University of Southern Queensland

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# Information and documentation—Data exchange protocol for interoperability and preservation

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## Preface

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee IT-019, Information and Documentation, Information Technology — Learning, Education, Training and Research.

The objective of this Standard is to specify a standardized framework for the various data (including both data and related metadata) exchange transactions between an archive and its producers and consumers. This Standard defines five transactions (transfer, deliver, dispose, modify and retribute), which the partners can use to exchange data objects. This Standard also specifies the syntax and semantics of the messages that are exchanged during these transactions.

This Standard is identical with, and has been reproduced from, ISO 20614:2017, *Information and documentation — Data exchange protocol for interoperability and preservation*.

As this document has been reproduced from an International Standard, a full point substitutes for a comma when referring to a decimal marker.

Australian or Australian/New Zealand Standards that are identical adoptions of international normative references may be used interchangeably. Refer to the online catalogue for information on specific Standards.

The terms 'normative' and 'informative' are used in Standards to define the application of the appendices or annexes to which they apply. A 'normative' appendix or annex is an integral part of a Standard, whereas an 'informative' appendix or annex is only for information and guidance.

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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 [www.iso.org/directives](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](http://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 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 46, *Information and documentation*, Subcommittee SC 4, *Technical interoperability*.

## Introduction

The Data Exchange Protocol for Interoperability and Preservation (DEPIP) aims at facilitating interoperability between a digital archive and information systems of its partners: producers who have created the documents themselves (Originating Agency), intermediaries who are acting on behalf of producers and are not responsible for the intellectual content per se (Transferring Agency), consumers (Consumer) and control authorities (Control Authority). This document provides a framework for data exchange between systems. It is based on the OAIS Reference model. It is generic and may be adapted to all types of information, whether printed or in a born-digital format.

DEPIP is intended for:

- commercial software vendors, in order to complete and/or improve their applications;
- archives, in order to standardize ingest of data destined for preservation; to provide access to archived data; and to facilitate the exchange of data between archives;
- application programmers, in order to enable interoperable data transactions between Archives and the information systems they are developing;
- third parties responsible for transferring documents to Archives;
- data storage service suppliers.

The parties to data exchange may rely on this document to:

- define their archiving/preservation processes or harmonize their existing processes with the best practices;
- organize the management of the archiving/preservation processes; and
- control the creation and management of metadata, whatever descriptive models are used.

Note that DEPIP may be implemented either in its entirety or only partially. However, it is impossible to foresee what the implementations will be like in different domains such as libraries, archives or museums. Domain-specific or generic International Standardized Profiles specifying different levels of interoperability may be developed in the future to support the implementers of this document. The minimum implementation, or level 0, is: Transfer and Delivery, including at least mandatory metadata. Note that in level 0, existing metadata is not redefined and that the initial request and the final reply are required.

Note that DEPIP is a conceptual standard to be considered as a data dictionary. The model defined in DEPIP is independent of implementation issues. In different implementations, DEPIP can be supplemented by relevant technical protocols (like HTTP) allowing implementers to handle technical exchanges between systems.

# Australian Standard®

## Information and documentation—Data exchange protocol for interoperability and preservation

### 1 Scope

DEPIP specifies a standardized framework for the various data (including both data and related metadata) exchange transactions between an archive and its producers and consumers. Interchanges between archives (including archives integrated in organizations, public archives, storage service suppliers) are also considered. This document defines five transactions (Transfer, Deliver, Dispose, Modify and Restitute), which the partners can use to exchange Data Objects. It also specifies the syntax and semantics of the messages that are exchanged during these transactions.

Internal organization of the information systems of the partners is excluded. Information received in conformance with the data exchange model is intended to be handled by various software components. These applications, however, are not the object of this document. The impacts of major risks (for instance, disappearance or incapacitation of the producer of the data) are also excluded.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

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

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

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

#### 3.1

##### Access

transmission of information by an *Archive* (3.2) to a *Consumer* (3.5), with the authorization, if required, of the *Originating Agency* (3.11) and of the relevant *Control Authority* (3.6)

#### 3.2

##### Archive

organization that intends to preserve information for *Access* (3.1) and use by a designated community in accordance with the current legal, regulatory or contractual conditions

Note 1 to entry: The DEPIP Archive is not fully equivalent to the OAIS Archive as the latter does not check the compliance with the contractual conditions.

Note 2 to entry: The DEPIP Archive is not necessarily the same as an archive in a traditional sense in which legal custody is permanently transferred. It may temporarily offer preservation services for content, in accordance with a legal agreement that has a set time frame. At the end of that time frame, or in accordance with some other stipulation of the legal agreement that would permit it, the *Data Objects* (3.7) that had been transferred to the archive could be returned to the *Originating Agency* (3.11) or a third party appointed by it.

#### 3.3

##### Binary Data Object

digital item which contains information, for instance, an electronic file, i.e. a named and ordered sequence of bytes that the file system of an operating system may handle as a unit

#### 3.4

##### Business Identifier

identifier used to identify the *Archive* (3.2) and its partners, messages, *Submission Agreements* (3.18), etc.