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# Information container for linked document delivery — Exchange specification

## Part 1: Container



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# Preface

This Standard was prepared by the Standards Australia Committee BD-104, Building Information Modelling.

The objective of this document is to define an open and stable container format to exchange files of a heterogeneous nature to deliver, store and archive documents that describe an asset throughout its entire lifecycle.

It is suitable for all parties dealing with information concerning the built environment, where there is a need to exchange multiple documents and their interrelationships, either as part of the process or as contracted deliverables. The format is intended to use resources either included in the container (such as documents) or referenced remotely (such as web resources). A key feature is that the container can include information about the relationships between the documents. Relevant use-cases reflect the need for information exchange during the entire life cycle of any built asset and can include, but are not limited to, the handover of the following:

(a) A published bidding package.

(b) Required project deliverables at a specific project stage (e.g. when proposing different design scenarios).

(c) Shared information as background or for further development.

(d) Published approval packages.

(e) Information about versions between partners to provide a means to reference particular states of the information and track changes.

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# Contents

**Preface** ii

**Foreword** iv

**Introduction** v

**1 Scope** 1

**2 Normative references** 1

**3 Terms, definitions and abbreviated terms** 2
3.1 Terms and definitions 2
3.2 Abbreviated Terms 4

**4 Specifications** 5
4.1 Use of RDF, RDFS and OWL constructs 5
4.2 Symbols and notations 7
4.3 Container structure 10
4.3.1 Overview 10
4.3.2 “Ontology resources” folder 11
4.3.3 “Payload documents” folder 11
4.3.4 “Payload triples” folder 11
4.4 Ontologies and datasets 12
4.4.1 Overview 12
4.4.2 Container ontology 12
4.4.3 Linkset ontology 16
4.4.4 Index dataset 20
4.4.5 Link dataset 20
4.5 Versioning 20
4.6 Additional properties in datasets 22

**5 Conformance requirements** 22

**Annex A** (informative) **Use cases** 24

**Annex B** (informative) **Dublin Core interoperability** 35

**Annex C** (informative) **Bidirectional conversion of the ICDD container representation from RDF(S)/OWL to XSD/XML** 36

**Annex D** (informative) **How to validate with SHACL** 37

**Annex E** (normative) **Ontologies** 40

**Bibliography** 41

# 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).

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 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 Technical Committee ISO/TC 59, *Buildings and civil engineering works*, Subcommittee SC 13, *Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM)*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 442, *Building Information Modelling (BIM)*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 21597 series can be found on the ISO website.

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.

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# Introduction

The ISO 21597 series has been developed in response to a recognized need within the construction industry to be able to handle multiple documents as one information delivery.

Information deliveries are often a combination of drawings, information models (representing built or natural assets in the physical world), text documents, spreadsheets, photos, videos, audiofiles, etc. Increasingly, this may also include datasets based on any ontology. An ability to specify relationships using links between information elements in those separate documents can contribute significantly to the value of an information delivery. The composition of such a package arises both from the requirements of the process, e.g. delivery of as-built information, and from the specific functional purpose e.g. performing a quantity take-off or communication about issues in 3D models.

In this document a specification is given for a container that stores documents, along with a means of linking otherwise disconnected data within those documents.

The container format includes a header file and optional link files that define relationships by including references to the documents, or to elements within them. The header file uniquely identifies the container and its contractual or collaborative intention. This information is defined using the RDF, RDFS and OWL semantic web standards.

The header file, along with any additional RDF(S)/OWL files or resources, forms a suite that may be directly queried by software. The link references may be interpreted by the recipient applications or reviewed interactively by the recipient. Where it includes link references into the content of documents that don't support standardized querying mechanisms, their resolution may depend on third party interpreters.

The format can also be used to deliver multiple versions of the same document.

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NOTES

# Australian Standard®

# Information container for linked document delivery — Exchange specification

## Part 1: Container

**IMPORTANT — The electronic file of this document contains colours which are considered to be useful for the correct understanding of the document. Users should therefore consider printing this document using a colour printer.**

## 1 Scope

This document defines an open and stable container format to exchange files of a heterogeneous nature to deliver, store and archive documents that describe an asset throughout its entire lifecycle.

It is suitable for all parties dealing with information concerning the built environment, where there is a need to exchange multiple documents and their interrelationships, either as part of the process or as contracted deliverables. The format is intended to use resources either included in the container (such as documents) or referenced remotely (such as web resources). A key feature is that the container can include information about the relationships between the documents. Relevant use-cases reflect the need for information exchange during the entire life cycle of any built asset and can include, but are not limited to, the handover of

1. a published bidding package,
2. required project deliverables at a specific project stage (e.g. when proposing different design scenarios),
3. shared information as background or for further development,
4. published approval packages, or
5. information about versions between partners to provide a means to reference particular states of the information and track changes.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 21320-1, *Information technology — Document Container File — Part 1: Core.*

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