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STANDARDS
Australia



Information container for linked document delivery — Exchange specification

Part 2: Link types

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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 provide the opportunity to add information about the contents of a container by further specializing the generic types of links specified in AS ISO 21597.1. The defined link types have been chosen to enhance the use of the container by allowing the addition of semantic relationships that are human interpretable to provide greater clarity about those links.

This document is identical with, and has been reproduced from ISO 21597-2:2020, *Information container for linked document delivery — Exchange specification — Part 2: Link types*.

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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).

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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.

Introduction

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

In ISO 21597-1, a specification is given for a generic container format that stores documents using various formats and structures, along with a means of linking otherwise disconnected data within those documents (including individual parts). These documents can have any syntax and semantics.

This document extends that specification by the addition of common link types (that define relationships) as specializations of the generic types provided in ISO 21597-1. This provides the ability to add information about the contents of a container, rather than extending the contents.

The link types provide the ability to express comparison, ordering and dependency relationships between the documents and entities within documents that form part of the payload of a container. This contributes greatly to the value of the container by providing commentary, guidance and explanation of the relationships between link elements which could otherwise be unclear or ambiguous, without making any assumptions about, nor being dependent on the specific type of the link elements.

The specification of link types in this document deliberately uses only a notation to add further details or meta data to the defined link types. This allows the container to be machine readable and human interpretable while noting that machine reasoning is not within the scope of this document. The concern is to avoid the risk of reading too much into the intention behind the expressed relationships. If machine reasoning is needed, further specifications would be required that are not in the current scope of this document.

The International Organization for Standardization (ISO) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent.

ISO takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured ISO that he/she is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with ISO. Information may be obtained from the patent database available at www.iso.org/patents.

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NOTES

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Part 2: Link types

1 Scope

This document provides the opportunity to add information about the contents of a container by further specializing the generic types of links specified in ISO 21597-1. The defined link types have been chosen to enhance the use of the container by allowing the addition of semantic relationships that are human interpretable to provide greater clarity about those links.

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 21597-1:2020, *Information container for linked document delivery — Exchange specification — Part 1: Container*

W3C-OWL2-SPEC. Motik B., Patel-Schneider P.F., Parsia P. eds. OWL 2 Web Ontology Language: Structural Specification and Functional-Style Syntax (Second Edition). W3C Recommendation, 11 December 2012 [viewed July 22nd 2019]. Latest version available at <http://www.w3.org/TR/owl2-syntax/>

W3C-RDF11-CONCEPTS. Cyganiak R., Wood D., Lauber M. RDF 1.1 Concepts and Abstract Syntax. W3C Recommendation, 25 February 2014 [viewed July 22nd 2019]. Latest version available at <http://www.w3.org/TR/rdf11-concepts/>

W3C-RDF11-SCHEMA. Brickley D., Guha R.V. RDF Schema 1.1. W3C Recommendation, 25 February 2014 [viewed July 22nd 2019]. Latest version available at <http://www.w3.org/TR/rdf-schema/>

W3C-RDF11-XML. Gandon F., Scheiber G. RDF 1.1 XML Syntax. W3C Recommendation, 25 February 2014 [viewed July 22nd 2019]. Latest version available at <http://www.w3.org/TR/rdf-syntax-grammar/>

3 Terms and definitions

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21597-1 apply.

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

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

3.2 Abbreviated terms

For the purposes of this document, the abbreviated terms given in ISO 21597-1 apply.